## v. XIII <br> Copy 3 <br> PITT MMMUNITY COLLEGE



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# PITT COMMUNITY COLLEGE 

Greenville<br>North Carolina

Recognized and Approved By<br>North Carolina State Board of Community College North Carolina State Board of Nursing<br>Radiologic Technology Joint Review Committee of the American Medical Association

Accredited by
Southern Association of Colleges and Schools

## CATALOG OF COURSES DAY AND EVENING PROGRAMS

Volume XIII


Pitt Community College publishes this catalog to provide students and other interested persons with information about the College and its programs.

The provisions of the catalog are not to be regarded as an irrevocable contract between students and Pitt Community College. The College reserves the right to change any provisions, requirements, or schedules at any time or to add or withdraw courses or program offerings. Every effort will be made to minimize the inconvenience such changes create for students.

Students having questions not answered in this publication may secure additional information from the Dean of Students, Pitt Community College, P. O. Drawer 7007, Greenville, North Carolina 27835-7007; telephone: (919)756-3130.

It is the policy of Pitt Community not to discriminate against any person on the basis of race, color, handicap, sex, religion, age, or national origin in the recruitment and admission of students; the recruitment, employment, training, and promotion of faculty and staff; and the operation of any of its programs and activities, as specified by federal laws and regulations.

Pitt Community College is an equal opportunity/affirmative action institution.


## PRESIDENT'S MESSAGE

Welcome to Pitt Community College. We are delighted that you are interested in our College and look forward to serving you. Our wide range of programs and courses, designed with learning experiences to provide a practical education, and support services, will assist you in achieving success in your chosen career.

This catalog provides you with a detailed description of the College's requirements, procedures, and offerings. What it cannot convey, however, is the satisfaction that comes from attending Pitt Community College where the staff and faculty have a genuine concern for the welfare and future success of its students. The opportunity is here for you. I urge you to take full advantage of the College's total resources in the development of your skills and in your chosen field.


Dr. Charles E. Russell President

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# PITT COMMUNITY COLLEGE ACADEMIC CALENDAR 1986-87 

## FALL QUARTER

Registration: Day and Evening and Faculty Orientation Thursday, September 4
Registration: Day Classes . . . . . . . . . . . . . . . . . . . . . . . . . Friday, September 5
Day and Evening Classes and Drop/Add Begin. ..... Monday, September 8
Last Day and Evening to Drop/Add . ........... Wednesday, September 10
Preregistration and Prepayment for Winter Quarter:
Day Classes . . . . . . Wednesday thru Friday, October 29 thru October 31
Preregistration and Prepayment for Winter Quarter:
Evening Classes ..............Wednesday \& Thursday, October 29 \& 30
Last Day to Remove Incompletes . . . . . . . . . . . . . . . . . . . . . Friday, October 31
Last Day to Officially Withdraw . . . . . . . . . . . . . . . . . . . . . . . Friday, Octobter 31
Last Evening of Classes . . . . . . . . . . . . . . . . . . . . . . . . Thursday, November 20
Last Day of Classes . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Friday, November 21

## WINTER QUARTER

Registration: Day and Evening . . . . . . . . . . . . . . . . . . . Monday, December 1
Day and Evening Classes and Drop/Add Begin ..... Tuesday, December 2
Lasy Day and Evening to Drop/Add ..... Thursday, December 4
First Day of Christmas Holidays ..... Tuesday, December 23
Classes Begin After Christmas Holidays Monday, January 5
Preregistration and Prepayment for Spring Quarter:
Day Classes Wesnesday thru Friday, February 4 thru February 6
Preregistration and Prepayment for Spring Quarter:
Evening Classes Wednesday \& Thursday, February 4 \&-5
Last Day to Remove Incompletes. Friday, February 6
Last Day to Officially Withdraw ..... Friday, February 6
Last Evening of Classes ..... Thursday, February 26
Last Day of Classes. Friday, February 27SPRING QUARTER
Registration: Day and Evening Wednesday, March 4
Day and Evening Classes and Drop/Add Begin ..... Thursday, March 5
Last Day and Evening to Drop/Add Monday, March 9
Easter Holiday .Friday, April 17
Easter Holiday Monday, April 20
Preregistration and Prepayment for Summer Quarter:
Day Classes Wednesday thru Friday, April 29 thru May 1
Preregistation and Prepayment for Summer Quarter:
Evening Classes Wednesday \& Thursday, April 29 \& 30
Last Day to Remove Incompletes ..... Friday, May 1
Last Day to Officially Withdraw ..... Friday, May 1
*Last Evening of Classes ..... Thursday, May 21
Last Day of Classes ..... Friday, May 22
Graduation ..... Friday, May 22
*Note - Monday evening classes and Monday-Wednesday evening classes meet on Thursday, May 21.

## SUMMER QUARTER

Registration Summer Quarter and
First Summer Session: Day and Evening ................... . Monday, June 1
Day and Evening Classes and Drop/Add Begin ...............Tuesday, June 2
Last Day and Evening to Drop/Add........................ . . Thursday, June 4
Last Day to Officially Withdraw - First Session . . . . . . . . . . . Monday, June 29
Independence Day Holiday . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Friday, July 3
First Summer Session Ends . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Friday, July 10
Summer Break . .......................... . . Monday thru Friday, July 13 thru 17
Registation Second Summer Session . . . . . . . . . . . . . . . . . . . . Monday, July 20
Evening Classes Begin . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Monday, July 20
First Day of Classes - Second Session . . . . . . . . . . . . . . . . . . . . . Tuesday, July 21
Last Day to Drop/Add . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Thursday, July 23
Last Day to Officially Withdraw - Full Session ........... . Tuesday, August 4
Last Day to Remove Incompletes ............................. Tuesday, August 4
Preregistration and Prepayment for Fall Quarter:
Day Classes . . . . . . . . . . . . . . . . . . Wednesday thru Friday, August 5 thru 7
Preregistration and Prepayment for Fall Quarter:
Evening Classes ..................... Wednesday \& Thursday, August 5 \& 6
Last Day to Officially Withdraw - Second Session. ..... . Monday, August 17
Last Evening of Classes ....................................... Monday, August 24
Last Day of Classes ............................................. . Tuesday, August 25
Graduation . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Tuesday, August 25


## PITT COMMUNITY COLLEGE ACADEMIC CALENDAR 1987-88

FALL QUARTER
Registration: Day and Evening and Faculty Orientation Wednesday, September 2
Registration: Day and Evening Classes and Evening Drop/Add Thursday, September 3
Day Classes and Day Drop/Add Begin
Friday, September 4
Friday, September 4
Labor Day Monday, September 7
Last Day and Evening to Drop/Add Thursday, September 10
Preregistration and Prepayment for Winter Quarter:
Day Classes . .Wednesday thru Friday, October 28 thru 30
Preregistration and Prepayment for Winter Quarter:
Evening Classes Wednesday \& Thursday, October 28 \& 29
Last Day to Remove Incompletes Monday, November 2
Last Day to Officially Withdraw .....  Monday, November 2
*Last Evening of Classes Thursday, November 19
Last Day of Classes . Friday, November 20
*Note - Monday evening classes and Monday-Wednesday evening classes meet on Thursday, November 19.
WINTER QUARTER
Registration: Day and Evening Monday, November 30
Day and Evening Classes and Drop/Add Begin Tuesday, December 1
Last Day and Evening to Drop/Add Thursday, December 4
First Day of Christmas Holidays. Wednesday, December 23
Classes Begin After Christmas Holidays .Monday, January 4
Preregistration and Prepayment for Spring Quarter:
Day ClassesWednesday thru Friday, February 3 thru 5
Preregistration and Prepayment for Spring Quarter:
Evening Classes Wednesday \& Thursday, February 3 \& 4
Last Day to Remove Incompletes .Thursday, February 4Last Day to Officially Withdraw.Thursday, February 4
Last Day and Evening of Classes Thursday, February 25
SPRING QUARTER
Registration: Day and Evening Wednesday, March 2
Day and Evening Classes and Drop/Add Begin. ..... Thursday, March 3
Last Day and Evening to Drop/Add . Monday, March 7
Easter Holiday .Friday, April 1
Easter Holiday ..... Monday, April 4
Preregistration and Prepayment for Summer Quarter:
Day Classes Wednesday thru Friday, April 27 thru 29
Preregistration and Prepayment for Summer Quarter:
Evening ClassesWednesday \& Thursday, April 27 \& 28
Last Day to Remove Incompletes ..... Friday, April 29
Last Day to Officially Withdraw . ..... Friday, April 29
*Last Evening of Classes ..... Thursday, May 19
Last Day of Classes. ..... Friday, May 20
Graduation ..... Friday, May 20
*Note - Monday evening classes and Monday-Wednesday evening classes meet on Thursday, May 19.

## SUMMER QUARTER

| egistration Summer Quarter and |  |
| :---: | :---: |
| First Summer Session: Day and E | 30 |
| Day and Evening Classes and Drop/Add Begin | Tuesday, May 31 |
| Last Day and Evening to Drop/Add | Thursday, June 2 |
| Last Day to Officially Withdraw - F | Monday, June 27 |
| Independence Day Holiday | Monday, July 4 |
| First Summer Session Ends | Friday, July 8 |
| Summer Break . . . . . . . . . . . . . . . . . . . . Monday thru Friday, July 11 thru 15 |  |
| Registration Second Summer Session . . . . . . . . . . . . . . . . . . . Monday, July 18 |  |
| Evening Classes Begin . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Monday, July 18 |  |
| First Day of Classes - Second Session . . . . . . . . . . . . . . . . . . . . . Tuesday, July 19 |  |
| Last Day to Drop/Add . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Thursday, July 21 |  |
| Last Day to Officially Withdraw - Full Session . . . . . . . . . Tuesday, August 2 |  |
| st Day to Remove Incompl | day, August 2 |

Preregistration and Prepayment for Fall Quarter:
Day Classes . . . . . . . . . . . . . . . . . Wednesday thru Friday, August 3 thru 5 Preregistration and Prepayment for Fall Quarter:

Evening Classes .....................Wednesday \& Thursday, August 3 \& 4
Last Day to Officially Withdraw - Second Session. .... . . Monday, August 15
Last Day of Classes . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Tuesday, August 23
*Last Evening of Classes .......................................... Tuesday, August 23
Graduation . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Tuesday, August 23
*Note - Monday evening classes and Monday-Wednesday evening classes meet on Tuesday, August 23.


# ORGANIZATION BOARD OF TRUSTEES 

C. W. Everett, Sr.<br>Chairman<br>Mrs. Kay V. Whichard<br>Vice Chairman

| R. E. Davenport, Jr. | Joseph M. Taft |
| :--- | ---: |
| G. Henry Leslie | William F. Tyson |
| Richard J. McKee | Joan B. Warren |
| Raymond Reddrick | Vernon E. White |
| Ephraigm H. Smith | A. B. Whitley, Jr. |

## PITT COUNTY BOARD OF COMMISSIONERS

Kelly Barnhill<br>Charles P. Gaskins<br>Eugene James

Charles L. McLawhorn Bruce Strickland Burney L. Tucker

## OFFICE OF THE PRESIDENT

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Eleanor S. Fulford . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Secretary
Frances D. Elks ................................. . . . Switchboard Operator
James H. Young, Ed.D. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Director of
Institutional Development
Earl L. Keel, A.A.S. . . . . . . . . . . . . . . . . . . . . . . . . Chief Security Officer
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Rachel B. Davis . ...................................... . . Personnel Assistant
Earl L. Aiken, A.B. . . . . . . . . . . . . . . . . . . . . Public Information Officer
William D. Lewis, M.A. . . . . . . . . . . Computer Systems Administrator
Susan D. Counterman, A.A.S. . . . . . . . . . . . . . Computer Programmer

## OFFICE OF INSTRUCTION

Edward B. Bright, Ed.D. ...................... Dean of Instruction
Willard C. Finch, M.A. ................ Assistant Dean of Instruction
Ola L. Porter, M.A. .............. Assistant Dean of Instruction for
Continuing Education


## LEARNING RESOURCES CENTER

Barbara C. Clark, Ed.D. ............ Assistant Dean of Instruction for | Learning Resources |
| ---: |

Cecilia M. Boklage, M.L.S. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Librarian John L. Griffin, M.F.A. . . . . . . . . . . . . . . . . Instructional Designer and Media Production Specialist Linda C. Leighty, M.A., M.S. . .Librarian and Director of Audiovisual and Media Production Services
Ann N. Whitehurst, M.L.S. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Librarian
Kathy S. Clark LRC Technical Assistant for Audiovisual Services
Bruce L. Dolin . . . . . . . . . . . . . . . . Audiovisual Equipment Technician
Mary K. Godley, A.A.S. ................... LRC Technical Assistant for Library Services
Zina F. Harrington. . . . . . . . . . . . . . . . . . . . . . . LRC Technical Assistant Rita B. Harris, A.A.S. . . . . . . . . . . . . . LRC Acquisitionist/Bookkeeper and Secretary to the Assistant Dean of Instruction for Learning Resources, and Word Processor Operator

## LEARNING CENTER

Joy B. Sasser, M.A. ................... Learning Center Coordinator
Sidney M. Posey, A.A.S. .... Assistant Learning Center Coordinator

## OFFICE OF STUDENT SERVICES

Edgar L. Boyd, Ed.D. . . . . . . . . . . . . . . . . . . . . . . . . . . . Dean of Students
Norma S. Barrett, M.S. . . . . . . . . . . . . . . . . . . . Director of Counseling
Sylvia Corey, A.A.S. . . . . . . . . . . Director of Admissions and Records
James O. Deans, M.A. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Counselor
Yvonne George, M.S. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Counselor
Kathy Kinlaw, B.S. . . . . . . . . . . . . . . . . . . . . . . . . . . . . Assistant Registrar
Leslie Rogers, M.A.Ed. . . . . . . . . . . . . . . . . . . . . . . . . . Placement Officer
Nancy Taylor . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Financial Aid Officer
Linda Wall, M.A.Ed. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Counselor
Hal Smith, M.A.Ed. . . . . . . . . . . . . . . . . . . . . . . . . . Recruiter/Counselor
Donna A. Wilson, A.A.S. . . . . . . . . . . . . . . . . . . . Financial Aid Assistant
Marietta Cannon, A.A.S. . . . . . . . . . . . . . . . Data Processing Technician
Carlettie Campbell, A.A.S. ...................... . Secretary, Counselors
Jean King ................................... . Secretary, Dean of Students
Sandra B. Mayo, Diploma ....Secretary, Director of Admissions and Records
Phyllis Townsend, A.A.S. . . . . . . . . . . . . . . Secretary, Student Services
Rudy Lloyd, A.A.S. . . . . . . . . . . . . . . . . . . . . . . Veterans Affairs Officer and Asst. Placement Officer
Charles Coburn, A.A.S. . . . . . . . . . . Coordinator of Student Athletics

## OFFICE OF ADMINISTRATIVE SERVICES

. W. Hunniecutt, B.S. ....... . Dean of Administrative Services
Connie S. Harrell, A.A.S. . . . . . . . . . . . . . . . . . . . . . . . . . . . Comptroller
Doris D. Baker, A.A.S. . . . . . . . . . . . . . . . . . . . . . . . . . Purchasing Officer
Hazel Clift. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Clerk, College Store
Bryon Dickens, B.S. . . . . . . . . . . . . . . . . . . . . . . College Store Manager
Renee Daw, A.A.S................................. . . . Accounts Receivable
Lisa Carroll ......................................... . . Clerk, Graphic Arts
Jenny B. Edwards, A.A.S. ................................... . . Cashier/Travel
Terry E. Green . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Mail Clerk
Judy Harris . . . . . . . . . . . . . . . . . . . . . . . . . . . Secretary, College Store
Marvin B. Lewis ................. Equipment and Inventory Control
Jewel L. Lloyd, A.A.S. ................................... . . . Receiving Clerk
Janice B. McGowan, B.S. .......................................... . Payroll
Alberta M. Moye ........Secretary, Dean of Administrative Services
Brenda I. Smith, A.A.S. ...................... . Graphic Arts Technician
Paul Suggs, Diploma ........................ . Graphic Arts Technician
Helen J. Vandiford .................................. Accounts Payable

## MAINTENANCE STAFF

WilliM Dinkins, A.A.S. ...Superintendent of Buildings and Grounds
Ella Mae Barnhill .......................................... . . Housekeeping
Owen Burney . ............................................... . . . Maintenance
Tommy Bowen ..... Maintenance
Dennis Camp, B.S. Grounds Keeper
Douglas Jobes, A.A.S. Maintenance
Wade Johnson Maintenance
SPECIAL STAFF
Hazel S. Barrow Instructor, Human Resources Development Program
Charles M. Dickens, M.A. Coordinator of Human Resources Development Program
AJ Tyson, B.A. Instructor, Human Resources Development Program
INSTRUCTIONAL STAFF
*J. Kelly Adams, M.F.A. Commercial Art and Graphic Design J. Sam Arnett, M.A. . . . . . . . . . . . . . . . . . . . . . . . Architectural Drafting
Gregory P. Baldwin, M.A. Arts and Sciences
*William Roy Boyd, Diploma Air Conditioning, Heating, and Refrigeration
Michael L. Bridgers, M.S. ..... TRIO
Lanny Joe Brittain, Certificate Industrial Maintenance: Electromechanical
Timothy J. Broadwell, M.B.A. Business and Secretarial Education *James T. Brooks, Diploma ...........Carpentry and CabinetmakingSherry M. Broussard, M.M. . . . . Electronic Data Processing: BusinessAngela T. Buck, B.S.N. . . . . . . . . . . . . . . . . . . . . . . . . Nursing Education*Catherine S. Bullock, M.Ed. ............ . English and Social Sciences*Ann B. Byrd, M.A. . . . . . . Accounting and Business AdministrationSally A. Byrd, B.S.N. . . . . . . . . . . . . . . . . . . . . . . . . . . Nursing Education
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*Lyman C. Craft, Certificate . ..... Diesel Engine and Farm MachineryMechanics
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Christopher J. Grill, CRTT, RRT Respiratory Therapy
*Katherine C. Hammond, B.S. Greenhouse and Grounds Maintenance
*James A. Harris, Diploma Masonry
D. Gene Hemby, B.S ..... Machinist
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*James N. Hoover, M.S. Electronics Engineering
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Sherry M. Horton, M.A. Arts and Sciences
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Jane H. Keller, M.A. Arts and Sciences
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*Edwin F. Martin, Jr., M.A.Ed. Architectural Drafting
Robert W. May, M.S Agricultural Programs
R. Patsy McAllister, M.A. Arts and Sciences
Dwight B. McGowan, Diploma Automotive MechanicsJimmy C. McLamb, A.A.S. . . . . Electronic Data Processing: BusinessCarolyn E. Means, M.A. . . . . . . . . . . . . . . . . . . . . . . . . . Human Services*Garrie W. Moore, R.T.-R., B.S. . . . . . . . . . . . Radiologic Technology
Shirley H. Moore, M.Ed. Business and Secretarial Education
Kenneth D. Morey, M.S. Criminal Justice and ParalegalMarcia J. Moye, M.A. . . . . . . . . . . . . . . . . . . . . . . . . . . Arts and SciencesLaverne K. Olrogge, B.S. . . . . . . . . . . . . . . . . . . Electronics EngineeringKathryn W. Pacha, M.A.T.Arts and Sciences
Helen M. Parks, M.S. Electronic Data Processing: Business
Thomas W. Parrish, Juris Doctor Criminal Justice and Paralegal
*Constance L. Rhem, M.A. Math and Sciences
*Harold R. Smith, M.A.Ed. Agricultural Programs
*Roland A. Smith, B.S. Automotive Mechanics
Sylvia H. Smith, B.S.N. Nursing Education
*Hugh P. Stanley, M.A., M.A.Ed. Industrial Management
R. Bruce Steinbach, CRTT, RRT Respiratory Therapy
Carol C. Stevens, B.S.N., M.S. Nursing Education
Charissa F. Stroud, M.S.N. Nursing Education
**Frank Sutton, M.B.A., C.P.A. ...Business and Secretarial Education
*Jarvis E. Tripp, Diploma Electrical Installation and MaintenanceThelma K. Turner, B.S.N.Nursing Education
Carolyn C. Tyndall, M.A.Ed Business and Secretarial Education
Elaine F. Umphlett, M.A Business and Secretarial Education
Charles P. White, Ph.D. ..... Arts and Sciences
Lynda B. Wilms, M.A. ..... TRIO
*Barbara B. Wilson, M.A.Ed. Secretarial Sciences
Linwood Woodard, M.A. Arts and Sciences
Travis M. Wooten, Certificate Manufacturing Engineering
Darlene Smith-Worthington, M.A. ..... Arts and Sciences
*Katherine G. Yopp, M.S.H.E. Teacher Assistant, EarlyChildhood Associate
PRESCHOOL LABORATORY
Brenda H. Ernest, M.S. Director
Barbara C. Carson ..... Secretary
Lois A. Barrett, B.S.P. ..... Teacher
Betty Lou Carson, A.A.S. ..... Teacher
Toni Strayhorn Jawoh, B.S. ..... Teacher
Anna A. Modlin, A.A.S. ..... Lead Teacher
Donna D. Staton, B.S. ..... Teacher
Ruby L. Taylor ..... Cook
*Departmental Chairman
**Division Director



## GENERAL INFORMATION

## HISTORY OF THE COLLEGE

In March, 1961, Pitt Community College was chartered and designated by the State Board of Education as an Industrial Education Center. The College began its operation as Pitt Industrial Education Center during the same year. The programs developed and expanded, and in 1964, the school was designated a technical institute by the State Board of Education. The name was changed in July, 1964, to Pitt Technical Institute, and it opened in its new facilities in September, 1964, with nine curricula and 96 students.

In 1970, a second building was completed, providing an additional 31,458 square feet to serve the citizens of Pitt County. The White Building and the Humber Building have approxiamtely 120,000 square feet of usable space with well designed laboratories, shops, and classrooms.

In 1975, an addition was made to the White Building, adding a new student lounge with various recreational facilities. This addition also provided facilities for the Nursing and Electronic Data Processing curricula.

The summer of 1979 brought about two important changes to Pitt Technical Institute. The Whichard Building, a 26,000 square foot classroom/shop facility, was completed on campus. Also, the North Carolina General Assembly enacted a bill that changed Pitt Technical Insitute to Pitt Community College. The change brought about the addition of the two-year college transfer programs.

A new Learning Resources Center (LRC) building currently under construction will provide approximately 31,200 square feet of space for Library, Audiovisual, and Media Production services and for individualized Learning Center services. Occupancy of this new facility is scheduled for Spring, 1987.

Today, Pitt Community College offers twenty-three technical programs, twelve vocational programs, three certificate programs, and three college transfer programs.

## LOCATION

The College is located on Highway 11, South, between Greenville and Winterville.

## MISSION STATEMENT

Established by and for the people of Pitt County, Pitt Community College is dedicated to meeting the educational needs of the local
citizenry by providing a comprehensive range of occupational, career, college level, and personal growth programs.

The institution is committed to the maximum development of the innate potential of its students in order to enhance initial employment skills, occupational advancement, discovery of new and emerging technology, pursuit of fundamental knowledge, and commitment to lifelong learning.

In pursuit of these ends, Pitt Community College seeks to privide relevant and high quality instruction, a caring and knowledgeable faculty, a variety of personal and academic support services, and a continuing responsiveness to the expressed needs and interests of business, industry, and the community at large.

Its doors shall be open to all who can benefit regardless of income; race; sex; cultural, economic, or occupational station; or previous educational preparation.

The essence of the college's efforts shall be to contribute, in cooperation with other local educational systems and institutions, to the quality of life, the growth of knowledge, and the economic development, and the building of a stronger future for the community it serves.

## AREAS OF STUDY AT PITT COMMUNITY COLLEGE

## ASSOCIATE IN APPLIED SCIENCE DEGREE (Two-year Programs)

Accounting
Agricultural Business Technology
Agricultural Science
Architectural Drafting Technology
Banking and Finance***
Business Adminstration
Commercial Art and Graphic Design
Criminal Justice: Corrections
Criminal Justice: Law Enforcement
Early Childhood Associate
Electronic Data Processing: Business
Electronics Engineering Technology
General Office Technology
Human Services Technology
Industrial Maintenance Technology**
Indistrial Management Techology**
Manufacturing Engineering Technology
Medical Secretary
Nursing Education Options*

Paralegal Technology
Radiologic Technology*
Respiratory Therapy*
Secretarial Science
*Satisfactory admissions test results, interview, high school record, and physical examination are some of the requirements for enrollment.
**Evening programs only.
***Evening programs for employees of banking institutions only.

## Diploma (One-year Programs)

Air Conditioning, Heating, and Refrigeration
Automotive Mechanics (Two-year Option)
Carpentry and Cabinetmaking
Cosmetology
Diesel Engine and Farm Machinery Mechanics
Elect ical Installation and Maintenance
Electronic Servicing (Two-year Option)
Industrial Maintenance: Electromechancial
Machinist
Masonry
Teacher Assistant
Welding

## CERTIFICATE

Hospital Ward Secretary (Three-Month Program)
Nursing Assistant (Three-Month Program)
Surveying (Technical Specialty)

## ASSOCIATE IN ARTS DEGREE (Two-year College Transfer Programs)

Pre-Business Adminstration
Pre-Education (Secondary)
Pre-Liberal Arts

## SPECIAL CREDIT

Students may enroll in available courses from different curricula for possible transfer or self-improvement.

## ADMISSIONS

Pitt Community College operates under the open-admissions policy established by the North Carolina General Assembly. All technical institutes and community colleges maintain an open-door
admissions policy for all applicants who are high school graduates of high school leavers 18 years of age or older. The College has the right to selectively place these applicants.

## General Admissions

The basic requirements for curricular programs (Allied Health Admissions excepted) follow:

1. The College requires high school graduation or the high school equivalency diploma for all technical, college transfer, and certificate programs. For vocational programs, the College requires students to have at least eight units of high school work.
2. Each applicant must submit a completed Application for Admission.
3. All students take placement tests with the exception of those making satisfactory scores on the SAT and transfer students who have successfully completed appropriate units in mathematics and English.
4. Applicants for Electronics Engineering Technology and Architectural Drafting Technology should have completed one unit of algebra and one unit of geometry.
5. Each applicant should make an appointment with an admissions counselor for a personal interview prior to enrollment in the College. The counseling session is designed to acquaint the student with the College and to help the student make a wise choice in program selection.

## Allied Health Education Admissions

Allied Health programs have additional entrance requirements including a preadmission test. Guidelines for admission into the following programs may be obtained from an Admissions Counselor:

Nursing Education Options<br>Radiologic Technology<br>Respiratory Therapy<br>Hospital Ward Secretary<br>Nursing Assistant

The Allied Health Admissions Committee will review each completed application and consider criteria including admissions test scores, past academic achievement, references and other such factors deemed appropriate by the committee.

## Transfer Admissions

Pitt Community College will accept students from other post secondary institutions provided applicants

1. Submit formal applications, and
2. Submit high school transcript and furnish transcript from each post secondary institution attended.
The dean of students may refuse admission to transfer students not in good standing at previously attended post secondary institutions.

## Readmission of Curricular Students

Students re-entering after one or more quarters out of school, with the exception of summer quarter, will follow normal admission procedures. Students out of school as a result of disciplinary action must appear before the dean of students and petition for readmission to the College.

## Provisional Admissions

A student applying too late to complete pre-entrance requirements may be admitted as a provisional student. In such cases, all requirements should be completed within the first quarter of attendance, including mailing of official transcripts (high school and post secondary) directly to the registrar's office.

Students not completing admission requirements by the end of the quarter will be reclassified as "Special Credit". This will preclude their receiving financial aid and/or VA benefits.

## High School Admissions (Dual Enrollment)

The College admits selected high school students to appropriate courses as space permits under the following conditions:

1. The student is 16 years old or older;
2. Admission is approved by the Board of Trustees of the College and the appropriate local board of education upon recommendation by the College President and the applicable school unit superintendent; and
3. The student is taking at least three courses at the high school and is making appropriate progress toward garaduation as determined by the school principal.
Individual student programs are jointly approved by the principal of the secondary school and the admissions office of the College.
High school students will pay regular tuition and fees and shall be treated as all other students.

## International Student Admissions

Pitt Community College has been approved by the U. S. Immigration and Naturalization Service to enroll international students from three categories: permanent residents with the Alien Registration ("green card"), refugees, or student visa holders ("F-1" Student Visa). International students present in the United States on a student visa ("F-1") are considered nonresidents for the purpose of tuition payments. Length of stay, payment of taxes, or ownership of property, in themselves, do not qualify international students for the status of legal residence or domicile. For further information concerning international students' admissions, contact the office of the dean of students.

## TUITION, FEES AND OTHER EXPENSES

Financial support from local, state, and federal sources allows each student an educational opportunity at minimum cost. Tuition is set by the North Carolina State Board of Community Colleges and is subject to change without notice. Textbooks, fees, and supplies are additional expenses which vary according to the program of study. The payment of all fees is required at the time of registration. Students may not attend class until tuition is paid.

## Tuition

## Full Time Students

All North Carolina residents enrolled for twelve (12) or more curricular credit hours are charged a maximum tuition of $\$ 66.00$ per quarter. For the school year 1987-88, the maximum tuition will be $\$ 75.00$ per quarter.

## Part Time Students

The tuition charge for curricular credit students and audit students is $\$ 5.50$ times the number of credit hours for which the student is enrolled. Example: 9 credit hours $\times \$ 5.50$ equals $\$ 49.50$. For the school year 1987-88, the tuition cost per credit hour will be $\$ 6.25$.

## Senior Citizens

North Carolina rsidents 65 years of age and older shall be exempted from the payment of curricular tuition and extension registration fees.

## Audit Students

Audit students must pay the same tuition rates as other students.

## Out-of-State Students

The entrance requirements and admission procedures for persons who reside outside North Carolina are the same as for residents. Tuition for nonresidents is $\$ 504.00$ per quarter for full-time enrollment. For part-time students, the fee is $\$ 42.00$ per credit hour. For the school year 1987-88, tuition will be $\$ 702.00$ per quarter for fulltime students. For part-time students the fee will be $\$ 58.50$ per credit hour.

## Residence Classification for Tuition Purposes

Under North Carolina law, a person may qualify as a resident for tuition purposes in North Carolina, thereby being eligible for a tuition rate lower than that for nonresidents. Copies of the applicable law and of implementing regulations are available for inspection in the office of the dean of students and also in the Learning Resources Center where they may be examined upon request.

## Fees and Expenses

## Student Activity Fee (Day Students Only)

The student activity fee for each full time student (12 credit hours or more) is $\$ 6.00$ per quarter. Those students registered for nine through eleven credit hours are charged $\$ 4.00$ per quarter. Students registered for six through eight credit hours are charged $\$ 2.00$ per quarter and students registered for less than six credit hours are charge $\$ 1.00$ per quarter.

## Accident Insurance Fee

Accident insurance, covering hours in school and transportation to and from school, is available for $\$ 10.00$ per year. This insurance is strongly recommended, though not required. Students must submit claims for injury covered under the accident insurance provisions immediately, but in no instance later than 30 days, in order to expect coverage.

The premium for accident insurance is subject to change annually.

## Parking Fee

There is a $\$ 4.00$ annual charge for parking permits for day students who enroll in fall quarter. Charges for students beginning in a later quarter are prorated.

## Textbooks and Supplies

The cost of textbooks and supplies varies according to the program of study. These items may be purchased from the bookstore.

## Lab Fees for EDP Courses

Lab fees are charged for classes which require equipment or supplies. These fees are indicated in course listings in the catalog. See course descriptions for actual fee per course.

## REFUND POLICY

The College will refund tuition if the student is, in the judgment of the dean of students, compelled to withdraw from school for unavoidable reasons. In such cases, two-thirds of the student's tuition may be refunded if the student withdraws within ten calendar days after the first day of classes as published in the school calendar. Tuition refunds will not be considered for tuitions of $\$ 5.00$ or less, unless a course or curriculum fails to materialize due to no fault of the student.

Activity and insruance fees are nonrefundable.
Students desiring a tuition refund are asked to follow the steps listed below:

1. Contact a counselor for approval to offically withdraw from classes (see Official Withdrawal) and obtain the appropriate withdrawal form,
2. Complete the withdrawal form,
3. Submit the completed withdrawal form to the registrar's office,
4. Contact the dean of administrative services for approval and a written request to receive a tuition refund.
Students prepaying may receive a full refund of tuition and fees if the official withdrawal is completed by 3:00 p.m. of the day before registration of the quarter involved.

## ACADMIC REGULATIONS

## REGISTRATION

The College year consist of four quarters. Students who are pursuing a curriculum must preregister or register at the beginning of each quarter as they progress toward their educational objectives. Returning students must make satisfactory settlement with the College for all indebtedness. All students will register during the prescribed registration period for that quarter (refer to College calendar).

## Preregistration and Prepayment

Preregistration and prepayment are held the eighth week of each quarter at a time when students and advisors can review students' academic progress and plan courses for the coming quarter.

This opportunity is an important part of each student's program. Students and their advisors have an opportunity to discuss academic problems on an individual basis and keep abreast of progress.

Those students failing to preregister at the designated time must complete registration on registration day.

## Late Registration (Second day of classes through drop/add)

A student may register for class(es) provided;

1. The class is not cancelled or closed:
2. The student convinces the advisor and the dean of students that it was impossible or would have involved extreme hardship to register at the appointed time; and
3. The student pays a late registration fee of $\$ 5.00$.

## Auditing Courses

Students who wish to audit courses must register for such courses on a special audit registration card. Auditors receive no credit but are expected to adhere to the same attendance policy as credit students. Participatition in class discussion and examinations is at the option of the student. Fees for auditors are the same as for regular students. In the event of limited classroom space, first priority will be give to regular credit students.

AN AUDIT CANNOT BE CHANGED TO CREDIT NOR CREDIT TO AUDIT AFTER THE DEADLINE FOR ADDING COURSES.
FINANCIAL AID RECIPIENTS WILL NOT RECEIVE PAY FOR AUDITING A COURSE.

## DROPPING AND/OR ADDING COURSES

In some instances it is necessary for students to make adjustments in their schedules. To insure that the student receives proper credit, a Drop-Add card should be completed and returned to the registrar's office. The College calendar (published in the Student Handbook and the General Catalog) indicates the last day to drop or add courses. This date is subject to change with proper notification.

NO COURSE IS OFFICIALLY DROPPED OR ADDED UNTIL THE REQUIRED PROCEDURE IS COMPLETED. This also applies to classes cancelled by the College.

The procedure to be followed is:

1. Obtain drop-add form from the registrar's office,
2. Complete and have instructor(s) involved initial the form,
3. Have advisor sign the form,
4. Have registrar sign the form, and
5. Have the form validated by the cashier.

## WITHDRAWAL FROM CLASSES

## Official Withdrawal

During the first eight weeks of a quarter, a student may withdraw from courses without penalty. (See College calendar for applicable date each quarter) NO OFFICIAL WITHDRAWALS WILL BE PERMITTED DURING THE LAST THREE (3) WEEKS OF ANY QUARTER. ANY EXCEPTIONS TO THIS POLICY MUST BE AGREED UPON BY BOTH THE STUDENT'S CURRICULUM DEPARTMENT CHAIR AND THE DEAN OF STUDENTS. Official withdrawals do not count as hours attempted.

Students applying for an official withdrawal during the first eight weeks of a quarter must use the following procedure:

1. Obtain a withdrawal card from a counselor,
2. Complete and have instructor and advisor sign card,
3. Submit completed card to the registrar's office.

After the first eight weeks, the student should see his curriculum department chair.

Students who officially withdraw from courses will receive no grade for those courses. Only the course(s) for which they registered and
the official withdrawal designation will appear on the transcript. For more information, see the counselors or the registrar.
NOTE: The first and second sessions for summer quarter are exceptions. Please see academic calendar for specific dates for withdrawal.

## Unofficial Withdrawal

An unofficial withdrawal from one or more classes is given to students who leave school or stop attending classes without qualifying for or following procedures for official withdrawal status. This includes students dropped for excessive absences (see Attendance) and not reinstated. Unofficial withdrawals count as hours attempted with quality points of " 0 " in determining the grade point average. Students who leave school without officially withdrawing will lower their GPA and jeopardize future readmission to the College. For more information see the counselors or the registrar.
VETERANS NOTE: Any course for which an unofficial withdrawal or an " 1 " (Incomplete) is received may not be retaken for pay purposes under Title 38, U.S. Code as amended by Public Law 93-508.

## CREDIT BY EXAMINATION

A student who evidences prior proficiency for a course due to previous work or educational experience may apply for credit by examination provided the student is currently enrolled in the College.

Application for approval to take the examination must be made through the academic advisor and approved by the department chairman, using the Permit for Credit by Examination form. If approved, the chairman will make arrangements for the student to take an appropriate test administered by a department instructor.

Exams will be scheduled at the discretion of the department chairman. No student may be permitted to take an exam without presenting the course instructor the properly executed Permit for Credit by Examination.

[^0]Students applying for credit by examination must use the following procedure:

1. Contact the advisor and the department chairman to obtain the Permit for Credit by Examination,
2. Contact and have registrar's office sign the permit,
3. Pay additional nonrefundable tuition, if applicable, and
4. Present Permit to instructor who will administer the test.

The instructor administers and reports the results of the examination to the registrar's office within one week of the date of approval of the Permit by that office. Credit hours will count toward graduation; these will be computed in grade point average as grades and quality points will be recorded.

## CHALLENGE EXAMINATION

Students enrolled in a course may feel they have become proficient in course subject matter before the scheduled time for completion of the course. In that event, if they can demonstrate prior knowledge of subject matter based on work or educational experience, they may, with the instructor's approval, "challenge" the course by taking the challenge examination during the first eight weeks of the quarter. A student may not challenge a course more than once.

THIS DOES NOT APPLY TO AUDIT STUDENTS (See Audit).

## TRANSFER CREDIT

Curricular students are responsible for requesting transcripts from all previously attended institutions (secondary and postsecondary).
Transcripts for all students enrolled in a curricular program will be evaluated automatically.
Students transferrring to Pitt Community College may transfer all courses with comparable course content so long as the GPA of all courses being transferred does not fall below a 2.0. EXCEPTION: Students transferring into Allied Health curriculums may not transfer any Allied Health courses with a grade below "C".

A maximum of sixty ( 60 ) credit hours may be transferred from institutions outside the North Carolina Community College System toward completing an associate degree or diploma program. Transfer students must complete a minimum of twelve (12) quarter hours of major course work (departmental prefix designation) at Pitt Community College.

Pitt Community College awards credit for appropriate scores on various exams of the College-Level Examination Program (CLEP). The chairman of the department in which the courses will be taught determines credit to be awarded.

College transfer or technical credit for work experience cannot be allowed except through the organized and supervised cooperative education program. Academic credit is not allowed for previous work experience outside of the supervision of the College: however, a student may challenge relevant courses by examination.

Work at institutions which are not regionally accredited is evaluated on the basis of the current issue of "Transfer Credit Practices of Designated Educational Institutions" published by the AACRAO or similar publications.

## GRADE POINT AVERAGE (GPA)

The grade point average is determined by dividing the total number of quality points by the total number of credit hours of work attempted.

## DEAN'S LIST AND HONOR ROLL

All full-time technical, vocational, and college transfer students maintaining a quarterly grade point average between 3.50 and 4.00 will be recognized on the Dean's List. Those maintaining a quarterly grade point average between 3.00 and 3.49 will be recognized on the Honor Roll.

The Dean's List and Honor Roll are prepared by the registrar's office and mailed to all local or area newspapers of the students who qualify for either.

A student with an "Incomplete" grade is not eligible for the Dean's List or Honor Roll in the quarter the "Incomplete" is received.

## GRADING SYSTEM

The following grading system is used by Pitt Community College.

| Letter | Numerical <br> Equivalent |  | Quality Points Per <br> Quarter Hour |
| :---: | :---: | :---: | :---: |
| A |  |  | 4 |
| B | $83-100$ |  | 3 |
| C | $77-82$ | 2 |  |
| D | $70-76$ | 1 |  |
| F | Below 70-Failing | 0 |  |
| W | Unofficially Withdrew | 0 |  |
| *OW | Official Withdrawal | 0 |  |
| *NA | Never Attended | 0 |  |
| *I | Incomplete | 0 |  |
| *AUD | Audit |  | 0 |

*Not included in computing grade point average.

## INCOMPLETE

An "Incomplete" is given at the discretion of the instructor when a student demonstrates progress in a course but needs more than one quarter to complete the requirements of the course. To qualify for a grade of " l ", a student must be enrolled in a course the last ten days of the quarter. No grades or quality points are awarded because of incomplete work.

The student and instructor (or if unavailable, the department chairman) must fill out a "Requirements to Remove Incomplete" form indicating what the student must do to earn a final grade. This should be signed by both instructor and student with a copy to student's advisor.

## REMOVAL OF INCOMPLETE

An " l " must be removed during the next quarter immediately following receipt of the " 1 ". The instructor has two options for requiring the student to remove the " 1 ":

1. Re-enroll in the class or
2. Complete the work during the first eight weeks (See College Calendar).

At the discretion of the instructor, a student may be granted an extension of time under the following provisions:

1. A student must request the extension from the instructor.
2. A student may be given an extension of up to 12 months to remove an " 1 ".

Extensions must be approved by the department chairman and submitted to the registrar's office prior to the deadline for removal.

If the student fails to take action as and when prescribed, a grade of " $F$ " will be automatically computed in the student's cumulative grade point average. After that date, no change in grade will be made because of this failure.

A student receiving an "I" in a prerequisite course may not proceed to the sequential course without permission of the instructor or, if absent, the department chairman. No student can graduate with an " 1 "on his records if the course is required in his curriculum for graduation.

## ACADEMIC PROGRESS

The policy governing academic progress at Pitt Community College is intended to assist the student in successfully completing a chosen program of study within a given period of time. A cumulative or overall grade point average of 2.00 is required for graduation in all curricular programs.

Academic Probation: A student is on academic probation when the cumulative grade point average falls below the academic probation level according to the standards of academic progress.

Unsatisfactory Academic Progress: A student who remains on academic probation for the second consecutive quarter is considered making unsatisfactory progress during that quarter.
Satisfactory Academic Progress: A student is considered making satisfactory academic progress until placed on academic probation for the second consecutive quarter; then the student is considered making unsatisfactory academic progress as of the beginning of that quarter. Federal regulations require that a student receiving federal financial aid of any kind be making satisfactory academic progress. (See Financial Aid Section)

Good Academic Standing: A student who is not on academic probation is considered in good academic standing.

## Standards of Academic Progress Scale

The following scales establish standards of academic progress to ensure that the student will attain a cumulative grade point average of 2.00 required for graduation.
Scale for Diploma and Certificate ProgramsHours Toward Degree GPA
0-15 ..... 1.00
16-30 ..... 1.35
31-40 ..... 1.75
41- ..... 2.00
Scale for Associate Degree Programs
Hours Toward Degree ..... GPA
0-15 ..... 1.00
16-30 ..... 1.25
31-45 ..... 1.50
46-60 ..... 1.75
61-75 ..... 1.90
76- ..... 2.00

This policy does not apply to students classified as Special (those students not working toward a degree or diploma). When a student enrolls in a regular curriculum, all credit hours previously attempted will be computed in the grade point average.

## TRANSCRIPTS

Student transcripts are available under the provisions of The Family Educational Rights and Privacy Act of 1974 (P.L. 93-380). Under this Act, written consent from the student is required before the student records can be released to anyone. Additional information may be obtained from the registrar's office. Pitt Community College requires a written request 24 hours prior to release of a transcript.

The first two transcripts are free; subsequent transcripts will cost $\$ 1.00$ each.

All financial obligations to the College must be cleared before any transcript will be released.

## TRANSFER TO OTHER INSTITUTIONS

Students planning to transfer to four-year colleges or universities are responsible for becoming acquainted with that institution's departmental requirements in the intended major and being guided by those requirements in selecting curriculum and electives. The College maintains a file of catalogs of many other colleges and universities in the counselors' office. The counselors and the faculty advisors will assist students in selecting an appropriate institution and interpreting its requirements.

## COURSE LOAD

Full-time curricular students must take a minimum of 12 credit hours. Normally students take 15 to 18 hours. In addition to 12 credit hours, vocational students must take a minimum of 22 contact hours to be classified full-time. Students registering for more than 20 credit hours must have a cumulative grade point average of 2.0 or above or permission of the department chairman.

Students who are employed more than 15 hours per week should reduce their class load accordingly. Beginning students who have fulltime employment are urged to limit class loads to 9 to 12 credit hours until they have demonstrated ability to carry a heavier schedule.

## ATTENDANCE

Regular and punctual class attendance is expected of all students in order for them to achieve their highest potential in the curriculum they have chosen and to develop desirable personal traits necessary to obtain employment after graduation. Students who anticipate absence should contact their instructors prior to the absence if possible. It is the students' responsibility to make up work missed as soon as possible if the instructors' course guidelines permit.

Instructors will drop students from class rolls (see Unofficial Withdrawal) for the following reasons:

- Students will be dropped from class rolls when their absences from the class begin to affect the quality of their work and their class grades as determined by the class instructor.
- Any student absent five consecutive class meetings will be dropped from the class roll.
- For evening students, any student absent two consecutive class meetings must secure permission from the director of evening programs or the dean of students to continue in the class.
Students who have been dropped and have a valid reason for the absences may be reinstated at the discretion of the instructor. Should the instructor deny reinstatement, the student has recourse to appeal to the dean of students.


## CLASS SCHEDULE

Pitt Community College offers classes between the hours of 8:00 A.M. and 10:00 P.M. five days per week, except on Friday when all classes end at 6:00 P.M. The majority of the credit courses are offered between the hours of 8:00 A.M. and 6:00 P.M. When demand justifies, at least one section of each curricular course is offered during the evening hours.

Noncredit courses for personal, occupational, and community improvement are offered during both day and evening hours.

With careful planning a person can complete most of the work required for a degree or diploma in certain programs by attending evening class.

## CHANGES IN REGULATIONS

Pitt Community College reserves the right to make changes in the regulations, courses, fees, and other matters of policy and procedure as deemed necessary.

## CHANGE IN MAJOR COURSE OF STUDY

Students desiring to change major course of study must receive counseling. A request for change of curriculum is initiated with a student counselor, signed by both previous and new advisors, and returned to the registrar's office. No registration schedule should be completed by an advisor until this is done.

## STUDENT CLASSIFICATIONS

Freshman ..................... A student who has earned fewer than 54 quarter hours of credit.

Sophomore................... A student who has earned 54 or more quarter hours of credit.

Full-time Technical or
College Transfer Student.... A student who is registered for twelve or more quarter hours of credit.

Part-time Student ............ A student who is registered for eleven quarter hours of credit or fewer.

Special Student
A full-time or part-time student not seeking a degree or diploma.
Full-time Vocational Student . A student who is registered for twelve or more credit hours and at least 22 contact hours.

## GRADUATION REQUIREMENTS

Upon recommendation of the faculty and the approval of the Board of Trustees, appropriate degrees, diplomas, or certificates will be awarded to students successfully completing the requirements of the curricula in which they were enrolled.

All students must

1. Complete required and elective courses as prescribed in the catalog of record of the candidate for graduation,
2. Earn a minimum of 2.0 grade point average ("C" average) in the required courses of the curriculum for which they are applying for graduation,
3. Clear all financial obligations to the College,
4. Complete a minimum of 12 quarter hours of major course work (departmental prefix designation) at the College (See Transfer Policy), and
5. Apply for graduation.

Students should meet with their advisors and complete their graduation checklists during preregistration for the candidiates' last quarter of attendance. When the checklists have been completed and signed by both students and advisors, the advisors will present them to the registrar. After a complete check, the registrar will notify the dean of students of candidates' eligibility for graduation. Those students determined ineligible will be notified by their advisors.
Students are eligible to graduate with honors if their cumulative GPA is 3.50 the quarter prior to graduation in the curriculum from which they are graduating.

Graduation exercises are held in late May and August. Presence at graduation is required except when permission for graduation in absentia has been granted by the dean of students. Requests for such permission must be made in writing 30 days prior to graduation.
Students pay for their caps and gowns. The Student Government Association provides degrees, diplomas, and certificates. A reception for graduates and their guests is held immediately following graduation exercises.

## CATALOG OF RECORD

Students in continuous attendance (summer quarter excepted) may graduate under the provisions of the catalog in effect on their dates of entry, or they have the option of choosing the requirements of a subsequently revised issue. Students not in continuous attendance must graduate under the provisions of the catalog in effect on their last reentry dates or subsequent issues.

## REPETITION OF COURSE WORK

Students may repeat any course, but each attempt will be recorded and counted in determining the students' grade point averages. No course may be counted more than once toward graduation. When students receive " F 's" in courses not offered during the remainder of those students' residence, equivalent courses may be substituted for purposes of meeting program requirements upon recommendation of the appropriate department chairman and the assistant dean of instruction.

Veterans should be aware that they cannot receive VA benefits for repeating courses passed.

## FINANCIAL AID

The goal of Pitt Community College's Financial Aid Office is to provide assistance to students having financial needs. Need is the difference between the cost of education and the amount the student and family can afford to pay, as determined by a standard formula. This amount is called "Family Contribution." Need is determined by evaluating the information provided on an aid application. Factors such as income, assets and benefits are all considered in determining the need for aid. All financial awards are determined by the institution's financial aid office.

Financial aid is awarded on an annual basis; therefore, students must submit new financial aid applications each year.
To receive financial aid students must be enrolled for at least 6 credit hours in an eligible curriculum (degree or diploma). A student must maintain satisfactory acadmeic progress according to the standards of the college and not owe a refund on a grant or be in default on a loan.

The financial aid office will mail an awards letter explaining the award amounts and dates of disbursement to each student applying for financial aid.

## ACADEMIC REQUIREMENTS FOR SATISFACTORY PROGRESS TO MAINTAIN FINANCIAL ASSISTANCE

Federal regulations require Pitt Community College to define minimum standards of satisfactory academic progress which students must meet in order to receive Title IV Financial Aid which includes Pell Grant, Supplemental Educational Opportunity Grant, College Work-Study, Guaranteed Student Loan, North Carolina Student Incentive Grant, and funds from other federal or state administered programs.

## A. Measurable Satisfactory Academic Progress

1. Full-time students are defined as those who are registered for 12 or more credit hours each quarter; three-quarter time students, 9 to 11 credit hours; and one-half time students, 6 to 8 credit hours. Students enrolled for five or less credit hours are exempt from this requirement since they are not eligible for Title IV Financial Aid.
2. To continue receiving financial aid, recipients must meet the requirements of the Measurable Time Frame Chart and have earned a cumulative GPA according to the total number of quarter hours attempted as indicated below:

## DIPLOMA AND CERTIFICATE PROGRAMS

| Hours Toward Degree | GPA | Hours Toward Degree | GPA |
| :--- | ---: | :--- | :--- |
| $0-15$ | 1.00 | $0-15$ | 1.00 |
| $16-30$ | 1.35 | $16-30$ | 1.25 |
| $31-40$ | 1.75 | $31-45$ | 1.50 |
| 41 and above | 2.00 | $46-60$ | 1.75 |
|  |  | $61-75$ | 1.90 |
|  |  | 76 and above | 2.00 |

16-30
31-40
41 and above

## ASSOCIATE DEGREE PROGRAMS

$$
76 \text { and above }
$$

3. Students who complete the graduation requirements for a degree, diploma, or certificate program and re-enroll to pursue those course requirements for a second degree may request from the financial aid officer an extension of the time limitation covering only that part actually necessary to complete the second degree.
B. Financial Aid Probation

Students who fail to meet the requirements on the Measurable Time Frame Chart for any quarter are placed on Financial Aid Probation. Students in this category may continue to receive financial aid for one additional trial quarter and if the requirements are not met at the end of the trial quarter his/her financial aid will be terminated until the requirements are met for reinstatement.

## C. Appeal Process

1. Student may appeal their suspension/termination of eligibility for financial aid only for "extraordinary circumstances" to the Academic Appeals Committee.
2. Appeals must be in writing and accompanied by appropriate documentation and presented to the financial aid officer for
action by the Academic Appeals Committee, which is composed of the dean of student services, the director of counseling, and the financial aid officer.
3. Students must submit written appeals and documentation no later than the third week of classes of the quarter immediately following the quarter for which financial aid eligibility was terminated.
D. Unsatisfactory Progress

Unsatisfactory progress occurs when financial aid recipients fail to meet all of the Measurable Satisfactory Academic Progress definitions specified.
E. Procedures For Reinstatement

1. Students who have their financial aid eligibility supended/ terminated may be reinstated in one of the following ways:
a. By the appeal process
b. By enrolling at the College without the benefit of financial aid and meeting the requirements on the Measurable Time Frame Chart.
2. Retroactive payments of financial aid for quarters when students were on suspension is prohibited.
F. Repeated and Remedial Courses

Any student who is required by the College to repeat or enroll in remedial courses will be given up to two additional quarters of financial aid eligibility, provided the student is enrolled in the TRIO Program.
G. Withdrawals

1. Consideration will be given to students who withdraw for medical reasons or extreme family hardships. Written verification will be necessary to prove such cases. The financial aid officer will review each case.
2. When a student recipient of Title IV financial aid funds withdraws or is dismissed from Pitt Community College prior to the end of an academic period, the financial aid office will determine whether and to what extent such student received overpayment from such funds. This determination will be based upon any discrepancy between the amount of allowable costs (educational cost including room, board, books, supplies, transportation, and miscellaneous expenses) incurred by the student up to the date of withdrawal and the amount of Title IV funds received by said student prior to that date. Overpayment
funds reimbursed to the institution by the student shall be credited to the specific Title IV program from which they were originally allocated.
3. Financial aid will not be disbursed to any student who received 0.00 GPA for their last quarter of enrollment.

## GRANTS

## Pell Grant (Formerly Basic Educational Opportunity Grant)

Pell Grants are awards to help undergraduates pay for their education after high school. For many students these grants provide a "foundation" of financial aid to which aid from other Federal and non-Federal sources may be added. Students should contact the financial aid office for an application.

## Supplemental Educational Opportunity Grant (SEOG)

The Supplemental Educational Opportunity Grant is an award to college students of exceptional financial need, who, without this grant, would be unable to continue their education. It is for undergraduates who are enrolled full-time in an eligible program of study.

## North Carolina Student Incentive Grant

Legal residents of North Carolina accepted for enrollment or enrolled full-time in good standing may apply for North Carolina Student Incentive Grants to help pay their educational expenses. Students must demonstrate "substantial financial need" as determined through the need analysis system of the College Scholarship Service.
Students may apply for this grant by checking the appropriate block and enclosing an additional fee of $\$ 2.50$ with the Financial Aid Form.

## LOANS

## Guaranteed Student Loan

The Guaranteed Student Loan's central lender is College Foundation, Inc. located in Raleigh, North Carolina. To be eligible, students must be a United States citizen or eligible non-citizen who is a permanent legal resident of North Carolina. Students must be enrolled or accepted for enrollment and making satisfactory academic progress in an eligible academic program.

Undergraduates may borrow up to $\$ 2,500$ per year, however, you cannot borrow more than the cost of education at your school less any other financial aid that you receive. The interest rate for new
borrowers is $8 \%$ and you must begin repaying 6 months after you graduate or leave school.

## Out-of-State Loans

Out-of-state students should contact their family banks or state higher education assistance agencies concerning state administered guaranteed student loan programs.

## Burroughs Wellcome Loan Fund

Pitt Community College administers a loan fund which is supported by the Burroughs Wellcome Company. Eligible students may secure short-term loans at no interest (if paid in full by the due date). Money obtained through this fund must be used for direct educational expenses which are limited to the costs of tuition, insurance fees, or supplies and books. These loans must be repaid before the end of the quarter in which the student received the loan. All Loans must be secured by a promissory note with the signature of one other person as a surety. Please note that this loan is only for students who have no other sources of financial assistance. Students should contact the dean of students' office for an application.

## Doris Hall Phelps Memorial Loan Fund

This fund was established in memory of Mrs. Doris Hall Phelps, who for several years was a loyal and devoted employee of the Learning Resources Center at Pitt Community College.

Eligible students may borrow money to pay tuition only. There will be $5 \%$ interest assessed on any money loaned. These loans are for short terms not to exceed two quarters. A cosigner will be required before any of these funds can be loaned. Students should contact the dean of students' office for more information.

## Phillip L. Clark NOW Fund

A student should contact the Human Services Techology advisors for information concerning this loan fund.

## PCC Memorial Scholarship/Loan Program for Vocational and Technical Students

This loan was established to provide intermediate term loans for PCC students who desire financial assistance in order to continue college and thereby achieve their career goals. Students must be in a technical or vocational curriculum and not receiving adequate financial assistance to meet their needs. The amount to be loaned will not exceed $\$ 250$ per year. All loans must be paid in full fourteen
months after graduation or termination of studies. Students should contact the dean of students' office for more information.

## PCC Nursing Loan Fund

A PCC Nursing Loan Fund has been established to assist needy students, without sufficient amounts of financial assistance, with short-term loans in order that they may continue college and thereby achieve their career goals. The amount to be loaned will normally not exceed $\$ 250$. All loans must be paid in full nine months after graduation. Nursing students may obtain a loan application from the financial aid office.

## SCHOLARSHIPS

## Carolina Telephone Scholarship Program

Two scholarships in the amount of $\$ 500$ each will be awarded to North Carolina residents enrolled or intending to enroll in a course of study leading to a technical degree or vocational diploma. The purpose of the scholarship is to make educational funds available primarily to those persons who are hardest hit by recession and chronic unemployment-minorities such as blacks, Indians/native Alaskans, or orientals; and "displaced worker" such as a person who has lost his/her job because of obsolete job skills or because of economic recession in his/her former field of employment.

The student must maintain a passing grade average at or above the level for graduation and must continue where he/she was enrolled at the time of the scholarship for the duration of the scholarship. Students may contact the financial aid office for an application.

## Carolina Telephone College Transfer Scholarship

This scholarship was formed for the purpese of providing educational funds to residents of North Carolina enrolled in a college transfer program. There will be one scholarship awarded annually in the amount of $\$ 500.00$. Priority will be given to minorities. Carolina Telephone defines minorities as blacks, Spanish surname Americans, American Indians/native Alaskans, and Orientals; and "displaced worker" as a person who has lost his/her former field of employment. Contact the financial aid office for additional criteria and an application.

## Arlene Collins Memorial Scholarship

This scholarship was formed in memory of Arlene Collins for the purpose of providing financial assistance in the form of tuition only for a first year nursing student progressing into the second year of the
nursing program. Students should contact the financial aid office for an application.

## Diesel Engine and Farm Machinery Mechanics Scholarship

The farm equipment dealers of Pitt County and eastern North Carolina have made available to students enrolled in the Diesel Engine and Farm Machinery Mechanics program at PCC, scholarships in the amount of $\$ 200$ each. The number of scholarship awards made annually is determined by the amount of scholarship funds available. Recipients are selected based on need, academic achievement, performance, and a proven interest toward pursuit of diesel engine and farm machinery mechanics as a career. Students may contact the dean of students' office for more information.

## PCC Institutional General Scholarship

This scholarship has been established for full or part-time students enrolled in a technical, vocational, or college transfer program. Selection is based on academic performace as well as need. Students may contact the financial aid office for an application.

PCC Memorial Scholarship/Loan Program for Vocational and Technical Students (A scholarship for high school graduates in Greenville and Pitt County to attend PCC, one per school)

This scholarship has been established to reward and encourage academic excellence in pursuit of vocational and technical education at Pitt Community College by providing financial assistance in the form of scholarships for outstanding high school graduates, and is awarded annually.

Greenville and Pitt County school systems' high school seniors who plan to attend Pitt Community College and enroll in vocational or technical programs are eligible to apply. Scholarships valued at $\$ 250$ each will be awarded to one graduate of each of the following high schools:

> J. H. Rose High School
> Ayden-Grifton High School
> D. H. Conley High School
> Farmville Central High School
> North Pitt High School

The scholarship recipient will be initially selected on the basis of high school academic achievement, interest in pursuing a vocational/ technical career, and financial need. Students should contact the director of counseling at their high school for an application.

## Scholarship for Current Pitt Community College Students

This scholarship has been established to reward and encourage academic excellence in pursuit of vocational and technical education at Pitt Community College by providing financial assistance in the form of scholarships for current PCC students, and is awarded annually.

Current full-time PCC students who have completed at least three (3) quarters of college work at PCC and plan to pursue the completion of a two-year vocational or technical program at PCC are eligible to apply. Three scholarships valued at $\$ 250$ each will be awarded. The scholarship recipient will be initially selected on the basis of academic achievement at PCC, demonstrated interest in pursuing a vocational/ technical career, and financial need. Contact the director of counseling for an application.

## Prepshirt Scholarship

Prepshirt Manufacturing Corporation has donated funds for scholarships to be used by Prepshirt employees and their families. Contact the Prepshirt Corporation for an application.

## Tar Heel Chapter of RSES (Scholarship for Air Conditioning, Heating, and Refrigeration Students)

The Tar Heel Chapter of RSES (Refrigeration Servicing Engineering Society) has made available to students enrolled in this curriculum one scholarship annually in the amount of $\$ 200$ to a second quarter student in this four-quarter program. The scholarship will be awarded based on academic performance, need, and proven interest in the air conditioning, heating, and refrigeration field. Recipients are expected to become members of the Tar Heel Chapter (membership fees will be paid by the chapter). Students may contact the dean of students' office for an application.

## Wachovia Technical Scholarship

Wachovia Bank and Trust Company has made available to students enrolled in technical programs at PCC, two scholarships annually in the amount of $\$ 500$ each to second year students. The scholarships will be awarded based on need and the student's performance in the first year of a two-year technical program. Students should contact the financial aid office for an application.

## Weyerhaeuser Scholarship

The Weyerhaeuser Company has made available to students enrolled in an industrial related field of study two scholarships
annually in the amount of $\$ 900$ each to either technical or vocational students. The scholarships will be awarded based on academic achievement, need, performance, and participation in outside activities coupled with a proven interest toward an industrial career. Students may contact the financial aid office for an application.

## Vernon E. White Scholarship

This endowment program was established by the people of Pitt County to honor the service and contribution of Senator Vernon E. White to the Pitt County community. Through this endowment a scholarship was established at Pitt Community College. Its purpose is to reward and encourage academic excellence in pursuit of vocational and technical education by providing financial assistance in the form of a scholarship to be awarded to an outstanding student annually. Contact the financial aid office for an application.

## Danny K. Woods Scholarship

Alpha Omega Chapter of Epsilon Sigma Alpha International sponsors a scholarship to provide fiancial assistance in the form of tuition and required fees for a J. H. Rose High School graduate who is a first year accounting student at Pitt Community College. The scholarship recipient will be initially selected on the basis of high school academic performance, financial need, and professionalism. Students should contact the J. H. Rose High School director of counseling for an application.

## COLLEGE WORK STUDY PROGRAM

The College Work Study Program provides jobs for undergraduates and graduates who have a financial need as determined by College Scholarship Service (FAF) or American College Testing Program (ACT). Students may be allowed to work up to 15 hours per week as funds permit. The financial aid office tries to place students in a position related to their chosen curriculum when possible. Students cannot work during class hours and the job should not jeopardize the student's time or ability to make satisfactory progress in all classes. Students are paid monthly and will receive minimum wage for hours of satisfactory work completed.

Students should first complete the Financial Aid Form (FAF) to determine a need for the college work study program If there is a need, then the student should complete an institutional work study application. This application may be obtained from the financial aid office.

## OTHER SOURCES OF ASSISTANCE

## Job Training Partnership Act

This program is a source of financial aid which can be utilized to offset cost of training for individuals deemed eligible. For further information, contact the director of occupational extension in the Office of Continuing Education.

## Migrant and Seasonal Farmworkers Assocation

For inforamtion concerning this program write or contact: Migrant and Seasonal Farmworkers Association, Inc., District I Office, P. O. Box 970, Bethel, N.C. 27812.

## Vocational Rehabilitation

Any person who has a substantial physical or mental condition which prevents employment may be eligible for services from the North Carolina Division of Vocational Rehabilitation Services. If eligibility is determined, financial assistance for educational costs may be provided as part of a total rehabilitation program. For further information contact any Vocational Rehabilitation unit office. The Greenville unit office is located at 226-A Commerce Street.

## North Carolina National Guard Tuition Assistance Program

Active North Carolina National Guard members who have a minimum of two years remaining as a member of the Guard from the end of the academic period for which tuition assistance is requested may be eligible for tuition assistance. Persons desiring information or applications for this assistance should contact their unit representative.

## Local Sources of Financial Aid

Students are encouraged to keep in touch with their respective high school guidance counselors in order that they may be aware of the various kinds of scholarships granted by hometown civic clubs, church groups, or other nonprofit associations or foundations.

## Veterans Benefits

The Veterans Benefits Laws provide financial assistance to any veteran enrolled in an approved curriculum and eligible for benefits. To be eligible, the veteran student must be enrolled in an approved curriculum and taking (for pay) only those classes required for graduation in the chosen curriculum. Veteran students must maintain
satisfactory attendance, conduct, and academic progress, according to the school standards, for continuing eligibility for payment.
V. A. payments for veterans in a technical or college transfer program are based on credit hours per quarter as indicated below:

$$
\begin{array}{ll}
12 \text { or more credit hours } & \text { full time } \\
9-11 \text { credit hours } & \text { three qua } \\
6-8 \text { credit hours } & \text { half time } \\
\text { Below } 6 \text { credit hours } & \text { no pay }
\end{array}
$$

V. A. payments for veterans in a vocational program are based on a combination of credit hours per quarter and contact (clock hours in school) hours per week as follows:

$$
\begin{array}{ll}
12 \text { credit and } 22 \text { contact hours } & \text { full time } \\
9-11 \text { credit and } 16-21 \text { contact } & \\
\text { hours } & \text { three quarter time } \\
6-8 \text { credit and } 11-15 \text { contact } & \\
\text { hours } & \text { half time } \\
\begin{array}{l}
\text { Below } 6 \text { credit and } 11 \text { contact } \\
\text { hours }
\end{array} & \text { no pay }
\end{array}
$$

## Dependents of Veterans

The veterans administration offers up to 45 months of educational benefits for qualified dependents of certain disabled or deceased veterans. An allowance of up to $\$ 376.00$ per month is made to students under the program.

For further information on V. A. benefits, the student should contact the College veterans affairs office, the N.C. Division of Veterans Affairs, of the V.A. Regional Office at Winston-Salem.

## THE FACULTY ADVISOR SYSTEM

The faculty advisor system is designed to make a contribution to the students' educational progress. Students who have declared curriculums are assigned a faculty advisor. Students may know their advisors not only as instructors, but also as one to whom they may go and receive assistance in program planning, scheduling, and registration. The objectives of the faculty advisors are as follows:

- To have a conference with each new advisee as soon as possible to get acquainted.
- To be alert to student problems in order to assist the student in both academic and personal matters. (Problems which the advisor feels unqualified to handle should be referred to the counselors' office.)
- To assist the individual student in planning an academic schedule to meet course prerequisites and curriculum requirements.
- To maintain an academic progress file on each advisee. (This file should include grade reports, a graduation checklist, and an information sheet.)
- To post office hours, showing when available for consultation with students.
- To serve, upon request of the student, as the student's representative in conferences where decisions affecting status are made.


## STUDENT SERVICES

## Counseling

Counseling services are provided by trained personnel and are available to every curriculum student from pre-admission through graduation. There is no charge for these services.

Students may come to a counselor's office any time a problem arises which could affect progress in school. The counselor will try to have at least one conference per year with each student. A counselor is on duty from Monday through Thursday nights until 8:30 P.M.

Tests are administered by the counsleors on a group or individual basis for admission, placement, career development, and personal problem solving (interest inventories or personal interviews). Test results are available and are interpreted by the counselors at the request of faculty members or students.

The department of counseling remains in touch with a student throughout his college years to facilitate the fulfillment of his plans and to make his educational endeavors meaningful and optimally productive.

## Additional Academic Support Program (Trio)

The Trio program is a federally funded program, providing free tutoring, special academic counseling, and other special services to first-generation college students who meet low-income eligibility criteria or who have a physical or learning disability.

## Career Planning and Placement Center

The career planning and placement center assists students and graduates in career decision-making, planning for marketability, and job search. There is no charge for any of the services.

The staff offers assistance to individuals and groups in the development of career goals by examining interests, aptitudes, values, and exploration of career interests. Individuals may also use SIGI PLUS or CHOICES-computerized career planning programs. Educational and career resources available include information on careers such as educational requirements, personal qualities, job prospects, locations, details on the nature of the work, salary ranges, and opportunities for advancement as well as 4 -year college catalogs, employer information and applications, and job opportunity listings.

Placement services are provided for Pitt Community College students and alumni who register with the center. Up-to-date information on job openings from private, governmental, and eduational institutions is available. The staff offers help in resume preparation, completing job applications, interview skills, and creative job search strategy.

The career planning and placement center is the liaison between Pitt Community College and potential employers. All students and alumni are encouraged to register with the center.

## Health Services

Pitt Community College maintains no health facilities other than first aid supplies, which are located in the office of the dean of students and in the laboratories and shops. The responsibility for medical services rests with students and their parents or guardians. Emergency facilities are available at Pitt Memorial Hospital. Entering students are required to answer the health questionnaire on the application for admittance form. Student accident insurance is available at a cost of $\$ 10.00$ per year.

## Food Service

The College has a hot food service operated in the student lounge. Hot sandwiches, other short-order items, and fountain drinks are available in the student lounge. Also, vending machines for soft drinks, cigarettes, and sundries are located in each building.

## Housing

The College does not provide housing facilities for students either on or off campus. It does, however, maintain a list of housing available in the Greenville area. There is no other involvement on the part of the College. Students are responsible for obtaining their own housing.

## Student Government Association

Pitt Community College has a Student Government Association. Each curriculum has one representative and one alternate in the Association. Officers are elected from this body annually. Activities supported by the SGA include the Pitt Community College athletic teams, field days, dances, cookouts, community projects, and intramural sports.

## Air Force ROTC

All students enrolled in a two-year college transfer or technical associate degree program as full-time students are eligible candidates for enrollment in the East Carolina University Air Force ROTC porgram by cross-town agreement. Students will receive two credit hours per quarter or six credit hours per year which could apply as electives toward degree requirements at Pitt Community College dependent on the program. If a student should desire to continue their education beyond the associate degree program and transfer to ECU, they would receive four semester hours of ROTC credit per year. This opportunity is for both male and female students who met AFROTC screening requirements.

AFROTC classes will be held on the campus of ECU. Uniforms will be furnished at no cost to students. There will not be additional tuition charged for students who are full-time. Interested students should contact ECU for ROTC class schedule.

## Identification Cards

All day students must have a valid Pitt Community College ID card while on campus. ID cards will be made for students during the second or third week of each quarter (see Student Services Office for schedule).

The ID card will admit students to social, cultural, and eductional events sponsored by the College.

## Gamma Beta Phi

Gamma Beta Phi is an honor society chartered in 1975. Membership is based upon a GPA of 3.0 Gamma Beta Phi comes under the supervision of the SGA.

## Student Publications

Pitt Community College publishes the following:

- College Catalog
- Student Handbook
- Program Brochures
- New Student Information Guide
- Co-op Newsletter
- PCC Newsclips


## Guided Tours

Many groups visit Pitt Community College during the year for the purpose of investigating the facilities and opportunities available in vocational, technical, and college transfer education.

Groups are assembled in the lobby where they are greeted by the dean of students. Large groups are divided into smaller groups and taken on a guided tour of the College. All programs are explained to the groups as the tour progresses. In addition to seeing classes and shops, the groups are also taken to the Learning Resources Center and the Learning Center.

## Class Rings

All orders for class rings will be made with the dean of students. Notices will be posted relevant to dates for measurements. Students are urged to be prompt when making these orders.

## TRAFFIC REGULATIONS

All automobiles operated on the campus by day students and College personnel must be registered with the chief of security. Parking permits are issued for each registered vehicle and must be displayed on the rear bumper, left side. The operators of automobiles on the campus are subject to specific parking and traffic regulations. The College reserves the right to withdraw the privilege of operating an automobile on the campus for failure to abide by the regulations.

## INCLEMENT WEATHER

The College President will make the decision as to whether or not classes will be held during periods of inclement weather. Announcements will be made on local radio and television stations.

## FIRE DRILLS

Fire drills will be held once a quarter. The fire alarm consists of a pulsating, repeated sounding of a bull horn. Personnel will exit at the outsided door closest to where they are at the time the alarm is sounded and proceed in an orderly manner to a safe distance from the building. The all clear signal is a long sounding of the bell system.

## STUDENT RIGHTS AND RESPONSIBILITIES

Students are responsible for the proper completion of their academic program, for familiarity with all requirements of the curriculum from which they intend to graduate, for maintaining the grade average required and at all times knowing their academic standing, and for meeting all other degree requirements. Their advisors will counsel them, but the final responsibility remains that of the student.

Students are required to have knowledge of and observe all regulations pertaining to campus life and student behavior. They are responsible for maintaning communications with Pitt Community College by keeping on file with the register's office at all times their current address and telephone number.

Copies of the Rights and Freedoms of Students can be obtained from the office of the dean of students.

## DISCIPLINARY ACTION

## Student Conduct

It is expected that at all times the student will conduct himself as a responsible adult. Destruction of school property, stealing, cheating, gambling, use of profane language, engaging in personal combat, possession of dangerous weapons, or the possession and/or use of alcoholic beverages and/or the possession and/or use of any drug as defined under the North Carolina Controlled Substance Act, G. S. 9089 through G. S. 90-94 in or on any part of the Pitt Community College campus will not be tolerated. Any violation of these regulations will result in expulsion from the College. In addition, any infraction which is a violation of N. C. law may be turned over to the local authorities.

## Due Process

Students who question the fairness of disciplinary action taken against them are entitled to due process by submitting a written notice of appeal. The appeal is heard by the Hearing Committee (Judicial Review Board), which is composed of the President and the Vice-President of the Student Government Association and two faculty members appointed by the President of the College. The decision of the committee is final, subject only to the student's right of appeal to the President of the College or ultimately to the Board of Trustees. Additional information may be obtained from the dean of students.

## Dismissal

A student may be dismissed from a class or from the College for conduct or personal habits which are not in the best interest of the student and of the College.

Information on dismissal and reinstatement procedure may be obtained from the office of the dean of students.

The provisions of due process will be applicable to all actions involving suspensions, extensions, probation, and dismissal.

## LEARNING RESOURCES CENTER

The Learning Resources Center (LRC) at Pitt Community College includes Library Services, Audiovisual Services, and Media Production Services. The primary purpose of the LRC is to provide learning resources and services to support and enrich the educational programs of the College. These resources and services are available to students, faculty, and staff of Pitt Community College and to the adult citizens of Pitt County.

LRC resources and services include a wide variety of print and nonprint materials, technical equipment, supportive facilities, and specilized services. The print materials collection includes books, magazines, newspapers, pamphlets, government publications, and other printed materials. Audiovisual materials in the LRC collection include films, filmstrips, filmloops, transparencies, slides, audio and video tapes, and records. Microfilm copies of back issues of selected magazines and newspapers and certain historical records of the Pitt County area are also available for use in the LRC. Equipment needed for the utilization and duplication of certain instructional materials is provided by the LRC.

A staff of professional librarians, media speicalists, technicians, and assistants provide instruction and assistance in the use of LRC materials, equipment, and services at all hours the LRC is open.
The LRC is open Monday through Thursday from 7:45 A. M. to 9:30 P. M. and on Friday from 7:45 A. M. to 4:00 P. M. (closed Saturdays, Sundays and holidays). Located on the third floor of the Humber Building (easily reached by elevator), the LRC is arranged and furnished to provide a pleasant atmosphere conducive to study and to leisure-time use of the variety of resources and services available.
A new Learning Resources Center (LRC) is currently under construction, with occupancy planned for Spring, 1987. This expansion of LRC facilities will provide much-needed additional space for learning resources and services available for student use.

## COOPERATIVE EDUCATION (Co-op)

The cooperative education program is designed to give students the opportunity to integrate their classroom study with practical experience in their major fields by working and attending school in optional plans.

## Eligibility

All students enrolled in programs offering Co-op for academic credit who have completed one quarter or who are already employed in work-related jobs are eligible to enter the cooperative education program if they meet the following requirements:

1. Students must have a 2.0 GPA and/or approval of the department chairperson and director of cooperative education.
2. Students must plan to graduate from Pitt Community College.

## Application Procedure

Students interested in the cooperative education program should follow the procedure outlined below:

1. The student will obtain an application form from the cooperative education office and make an appointment with the Co-op office to review the completed application.
2. The director or the coordinator will conduct an interview with the student with regard to career goals and possible cooperative assignments.
3. If the student is accepted, the director of cooperative education and the department chairperson or advisor will be prime resources in locating and/or approving an appropriate co-op assignment.

## Academic Credit

1. One (1) credit hour will be given for the satisfactory completion of each quarter's cooperative training assignment of each ten hours per week. Grades given by the faculty advisor will be based on reports and evaluations submitted by the student and the employer. Reports of credit will be made to the registrar's office by the director of cooperative education.
2. A student may receive a maximum of two credit hours during any one quarter. Each curriculum program specifies the maximum number of credit hours possible toward degree or diploma requirements.
3. Credits earned with the approval of the department chairperson are used as substitutes for required or elective courses within the curriculum guidelines. Specified programs require cooperative education credits.
4. Students enrolled in a college transfer program can earn up to six (6) credit hours of add-on credit.

Students interested in cooperative education should visit the Co-op Office or contact their faculty advisors. The Co-op office is open on Monday evenings from 6:45-8:30 p.m. for the convenience of evening students.

## CONTINUING EDUCATION

The Continuing Education Division at Pitt Community College is committed to serve adults from the general community, business, and industry. Various programs are offered for the individual to meet particular needs and interests. Opportunities exist to upgrade occupational skills, to acquire new skills, to complete high school, and to pursue activities for personal enrichment.

Classes are held on campus and in off-campus facilities such as public schools, community buildings, churches, civic centers, industrial plants, and fire stations.

Each course is open to adults who are not enrolled in a secondary school. However, high school students 16 years or older are permitted to enroll with approval from the appropriate public school official.

## Schedule of Courses

A schedule of Continuing Education classes is published quarterly and distributed throughout Greenville and surrounding areas. Classes are organized upon demonstration of sufficient interest and availability of the required facilities and instructors. Newspaper radio, and television are utilized to announce course offerings. Classes are usually held from 7:00 P.M. to 10.00 P.M. however, classes can be scheduled for mornings or afternoons.

## Course Credit

Generally courses offered in Continuing Education are noncredit; however, credit will be given in the Adult High School Diploma Program. CEU's (Continuing Education Units) are also awarded for certain courses and seminars. (Ten contact hours of class earn one CEU.) Written acknowledgement of course completion or participation may be provided to individuals upon request.

## Registration and Attendance

Registration for classes is normally completed at the first class meeting on a first-come, first-served basis. A minimum of 14 persons is usually needed to begin classes. If regular attendance falls below six people, the class may be discontinued.

## Fees

A small registration fee is required for all noncredit courses (for Adult Driver Training there is an additional fee) and must be paid at the first class meeting. There is no charge for registration to senior citizens 65 years of age or older. Accident insurance is available to all students. Students in laboratory courses requiring the use of equipment and machinery must either purchase insurance or sign a waiver form.

## Course Descriptions

Course descriptions are available upon request by calling or visiting the Division of Continuing Education. Individuals who desire counseling or other special assistance may contact either the instructor or the directors in the Continuing Education Division.

## Books and Supplies

Most continuing education courses do not require textbooks. When a text is required, students will be notified at the first class meeting. Students are generally responsible for their class supplies.

## General Adult Education

The General Adult Education Program consists of noncredit courses which enable the adult to develop a skill or an art in an area of interest.

## Adult Basic Education

Adult Basic Education is designed to improve the reading and math skills of persons who seek self improvement through organized classes. The goal of the program is to help the student function more effectively in day-to-day life. Computer-based instruction is available as an added incentive for students working towards reaching their goals. Classes may be established throughout the Pitt County area and may be co-sponsored with churches, schools, or community organizations. Groups interested in developing a class (at least 10 people) may contact the adult basic education coordinator at Pitt Community College. There are no charges for the classes or materials.

## Adult High School

Adult High School classes are designed to prepare the adult to take the General Educational Development Test (GED). Adults may enroll in morning, afternoon, or evening classes at specified locations in Greenville and Pitt County areas. Program content covers reading and writing skills, mathematics, social studies, and science. There are no charges for the classes.

## General Interest Offerings

The following are examples of general interest courses:

Art: Painting, Drawing, and Sketching
Arts and Crafts
Auto Care and Tune-up
Baking and Decorations
Calligraphy
Conversational French, German, Spanish
Creative Writing
Crewel Embroidery
Crochet
Investments and Securities

Knitting
Macrame
Needlepoint
Prenatal Education (Lamaze
Method of Prepared Childbirth)
Pottery
Rug Hooking
Seasonal Decorations
Sewing
Sign Language
Spinning and Natural Dyes
Weaving

## The Learning Center

Adult Basic Education classes (reading and math improvement), GED preparation classes, and general interest courses are offered in the Learning Center located on the Pitt Community College campus. Instructors may choose books, computers, or other teaching resources. Courses are available during the designated Pitt Community College hours of operation, day and night.

The GED test program by which adults may earn a high school equivalency diploma, is administered in the Learning Center by appointment. The state of North Carolina requires a $\$ 5.00$ fee to take the GED. Persons interested in further information or in taking the GED tests should contact the Learning Center at 756-3130.

The Learning Center provides instruction for the Adult High School Diploma Program. Upon satisfactory completion of the program requirements, a Greenville City/Pitt County Schools diploma is awarded.

## High School Equivalency

Adult Residents of North Carolina who have not completed high school may earn a High School Diploma Equivalency by passing a
battery of five tests. These tests, the General Educational Development tests, are also known as the high school diploma equivalency tests.

A High School Diploma Equivalency is recognized by employers and educational institutions and is issued by the North Carolina Department of Community Colleges. Pitt Community College is one of 71 official GED testing centers in the state and is the only one in Pitt County.

Persons interested in further information or in taking the GED tests should contact the Learning Center. The center administers the tests by appointment. There is a $\$ 5.00$ fee for taking the GED tests.

## Adult High School Diploma Program

The Adult High School Diploma program provides instruction designed to qualify a student for a Greenville City-Pitt County Schools diploma. To enter, a coordinator explains the procedures and options and also conducts or schedules admission tests. The results of the tests are reviewed, and the appropriate level of instruction is identified. Students must successfully complete all required courses and pass the N. C. Competency Tests in order to receive the diploma.

## Occupational Extension

Occupational courses are offered for employed persons needing to upgrade their skills or for persons seeking employment at the skilled technical and vocational level.

## General Occupational Courses

The following are examples of general occupational courses:
Activity Coordinator Training Estimating for the Building Trades

Aviation Ground School
Blueprint Reading
CPR
Chore Service Provider
Emergnecy Medical Technician (Basic)

## Specialty Occupational Programs

## Fire Service Training

Fire Service Training is designed to provide firemen the opportunity to gain technical information and skill in modern fire fighting through a variety of learning experiences. Usually these courses are conducted in the local fire departments for the volunteer firemen, who train as an organized group utilizing equipment and
methods they would ordinarily use in preventing and suppressing fire.

Some of the subject areas for volunteer firemen are as follows: arson detection, compressed gas emergencies, fire apparatus practices, hazardous materials, introduction to fire fighting, ladder practices, hose practices, protective breathing equipment, and fire fighting procedures.

Courses such as Home Safety, Fire Prevention, and Industrial Fire Brigade Training are available to the public and industry as well as fire service personnel.

## Hospitality Training

This program is provided to train hotel-motel managers, food service personnel, waiters, waitresses, cooks, and maids or any other individual or group in the hospitality field.

Hospitality education has three objectives: (1) to develop, within individuals, skills that will qualify them for better employment opportunities in the hospitality field; (2) to provide employers with well-trained personnel to operate their businesses: and (3) to provide better hospitality. Some of the courses are as follows: Front Office Procedures, Human Relations, Communication, Basic Nutrition and Menu Planning, Overview of School Food Service, Use and Care of Equipment, Quantity Cooking, and Quantity Food Preparation.

## Law Enforcement Training

Several short courses and seminars are conducted to upgrade and train law enforcement officers. Some courses are as follows: Introduction to Police Science, Courts and Law, Laws of Arrest, Search and Seizure, and General Crinimal Investigation.

The College also offers two-year associate degrees in criminal justice.

## Management Development Training

Management Development Training Courses are designed for potential and active supervisors who want to prepare for more effective leadership and advancement. Courses are offered both on and off campus. The courses are flexible in terms of content and meeting times. Every effort is made to fit course content to particular individual, industrial, or business needs.

## Professional In-Service Programs

Teacher Certificate Renewal: Local superintendents responsible for providing in-service upgrading and training for teachers
coordinate with the division of continuing education to develop special courses designed to meet the needs of the local school unit. The division assists in the development and presentation of approved courses by providing needed personnel, facilities and services in coordination with the local school unit.
Other Professional In-Service: Various institutions and agencies require employee upgrading through the offering of in-service classes. The division of continuing education coordinates with each agency to develop the in-service program most appropriate to its needs.

## Special Industrial Training

Classes may be in the immediate area in which the industry is located.

In addition, special classes may be developed for training of personnel for a new industry locating in the area or an expanding industry.

Courses are designed to meet specific group needs. New programs and classes are scheduled at the time and place convenient to the interested group or individuals.

For information and assistance in developing occupational extension classes, call the assistant dean for continuing education.

## Small Business Center

The Small Business Center at Pitt Community College is designed to respond to the training needs of the area's small business owners, managers, personnel, and others in business as well as those who plan to start a small business. Training sessions are offered continuously in the form of workshops, seminars, and courses. Pertinent topics such as management, marketing, advertising, accounting, and salesmanship are covered in the training sessions.

Specific courses offered continuously are
Starting a Small Business
Recordkeeping for Small Business
Small Business Sales
Small Business Supervision
Financial Planning for Small Business
Customer Relations
Marketing
Microcomputers
Other courses are scheduled as needed.

The Center serves as a resource center to provide publications and video viewing to help with small business problems.

Management aids provided by the Small Business Administration are available, as well as the SBA Starting-Out series for people planning a new business.

The Center also provides consulting by appointment.
An important function of the Small Business Center is to create within the business community an awarness of the business-related curricular programs which are offered on a regular basis.

## Workshops, Seminars, and Conferences

Workshops, seminars, and conferences are planned and offered by Pitt Community College on a variety of topics in cooperation with civic groups, nonprofit organizations, or by special request from the citizens of Pitt County.

The workshops and seminars may carry CEU credit if arrangements have been made in advance with Pitt Community College, and if participants meet necessary requirements for receiving credit.

## The Visiting Artist Program

The Visiting Artist Program is a cooperative effort between the North Carolina Arts Council and the Department of Community Colleges. Pitt Community College is one of the many institutions throughout the state which employs full-time artists representing a variety of different art forms.

The purpose of the program is to enhance the appreciation and cultivation of the arts within the College and the surrounding areas. This unique program presents to students, faculty, and the community at large an opportunity to experience first hand the work of creative and performing artists.

During the residency, the artist presents performances, lectures, demonstrations, and workshops as well as providing assistance to organizations such as civic clubs, public schools, arts councils, and church groups. The artist also organizes exchange programs with artists from other schools in the Visiting Artist Program in order to bring a variety of artistic experience to the College and community.




## COLLEGE TRANSFER



## REQUIREMENTS FOR THE ASSOCIATE IN ARTS DEGREE

The Associate in Arts degree is awarded upon completion of at least 96 quarter hours of credit with an overall grade point average of 2.0 (C) or better, to include:

## Credit Hours

COMMUNICATIONS ....................................... 11
Grammar and Composition, LIB 150

$$
\begin{aligned}
& \text { HUMANITIES AND FINE ARTS ............................ } 15 \\
& \text { Literature, philosophy, religion, foreign language, art, drama, } \\
& \text { speech, and music }
\end{aligned}
$$

$\qquad$
MATHEMATICS 5
SCIENCE ..... 12
Courses, at least one of which is to include laboratory experience, will be chosen from areas such as astronomy, biology, chemistry, geology and physics
SOCIAL SCIENCE ..... 20
History, anthropology, economics, geography, sociology, political science, and psychology
HEALTH AND PHYSICAL EDUCATION ..... 5
ORIENTATION COURSE ..... 1ORI 100*ELECTIVES28
TOTAL CREDIT HOURS FOR DEGREE ..... 97
*Electives should be selected on the basis of the student's major field of study and on the requirements of the institution to which the student intends to transfer.

## PRE-BUSINESS ADMINISTRATION

Pre-Business Administration is designed for those students who wish to transfer to a senior college or university tu pursue majors in the areas of accounting, banking, business administration, economics, finance, management, marketing, quantitative methods, or real estate. Degree plans may vary according to requirements of the senior institution.

# PRE-BUSINESS ADMINISTRATION COURSE AND HOUR REQUIREMENTS 

| Title |  |  | C | L | CH |
| :---: | :---: | :---: | :---: | :---: | :---: |
| MAJOR COURSES: |  |  |  |  |  |
| ACT | 150 | Principles of Accounting |  | 3 | 2 | 4 |
| ACT | 151 | Principles of Accounting | 3 | 2 | 4 |
| ACT | 152 | Principles of Accounting | 3 | 2 | 4 |
| BUS | 165 | Introduction to Business |  |  |  |
|  | or | **Elective | 5 | 0 | 5 |
| BUS | 166 | Business Law I | 3 | 0 | 3 |
| BUS | 167 | Business Law II | 3 | 0 | 3 |
| ECO | 150 | Economics I | 3 | 0 | 3 |
| ECO | 151 | Economics II | 3 | 0 | 3 |
| ECO | 152 | Economics III | 3 | 0 | 3 |
| EDP | 150 | Introduction to Computers | 5 | 0 | 5 |
| *ENG | 150 | Composition I | 3 | 0 | 3 |
| ENG | 151 | Composition II | 3 | 0 | 3 |
| ENG | 152 | Composition III | 3 | 0 | 3 |
| HEA | 150 | Personal and Community Health | 3 | 0 | 3 |
| LIB | 150 | Library Research Skills | 2 | 0 | 2 |
| *MAT | 150 | College Algebra | 5 | 0 | 5 |
| ORI | 100 | New Student Seminar | 1 | 0 | 1 |
| PSY | 150 | General Psychology I | 4 | 0 | 4 |
| SOC | 150 | Sociology I | 5 | 0 | 5 |
| **ELECTIVES |  |  |  |  |  |
|  |  | Fine Arts or Humanities Elective | 15 | 0 | 15 |
|  | or |  |  |  |  |
| ENG | 204 | Oral Communications | 3 | 0 | 3 |
|  |  | Physical Education Elective | 0 | 4 | 2 |
|  |  | Science Elective | 9 | 6 | 12 |
|  |  | Social Science Elective | $\underline{2}$ | 0 | $\underline{2}$ |
| TOTAL CREDITS FOR AA DEGREE |  |  | 89 | 16 | 97 |

*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

MAT 099, 100R, 100, 101, ENG 091, 092, 093, 094, 095, 100G, 100A, 101
**Students enrolled in this curriculum may select additional elective credits from approved college transfer courses and make course substitutions from such college transfer courses on a credit-for-credit basis upon approval by the student's department chairperson.

## **RECOMMENDED ELECTIVES:

Fine Arts: ART 160, 170; ENG 270; MUS 150
Humanities: ENG 250, 251, 260, 261; PHI 150; REL 150, 160, 161
Physical Education: PED 150, 160-184, 196
Science: BIO 250, 251, 252; CHM 250, 251, 252, PHY 260, 261, 262
Social Science: ANT 150, 160; GEO 150; HIS 150, 151, 160, 161; POL 150; PSY 151, 160,
170, 180; SOC 160, 170
General: EDU 250; ENG 271, 272, 273, 274, 275; MAT 151, 180
For information pertaining to cooperative education credits, see page 55.

## PRE-EDUCATION (SECONDARY)

Pre-Education (Secondary) is designed for students who plan to transfer to senior institutions and major in secondary education and then teach in high school. Students take the same courses as preliberal arts students, with elective hours chosen in the area of major interest.

## PRE-EDUCATION (SECONDARY) COURSE AND HOUR REQUIREMENTS

Title C L CH

MAJOR COURSES:

| *ENG | 150 | Composition I | 3 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| ENG | 151 | Composition II | 3 | 0 | 3 |
| ENG | 152 | Composition III | 3 | 0 | 3 |
| HEA | 150 | Personal and Community Health | 3 | 0 | 3 |
| LIB | 150 | Library Research Skills | 2 | 0 | 2 |
| MAT | 150 | College Algebra | 5 | 0 | 5 |
| ORI | 100 | New Student Seminar | 1 | 0 | 1 |
| **ELECTIVES |  |  |  |  |  |
|  | Electives | 28 | 0 | 28 |  |
|  | Fine Arts | 3 | 0 | 3 |  |
|  | Humanities | 3 | 0 | 3 |  |
|  | Humanities or Fine Arts | 9 | 0 | 9 |  |
|  | Physical Education | 0 | 4 | 2 |  |
|  | Science | 9 | 6 | 12 |  |
|  | Social Science | 20 | 0 | 20 |  |

*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

MAT 099, 100R, 100, 101; ENG 091, 092, 093, 094, 095, 100G, 100A, 101, 101A
**Elective credits should be selected based on the student's prospective teaching field.

## RECOMMENDED ELECTIVES:

Fine Arts: ART 160, 170; ENG 270; MUS 150; SPH 150, 160
Humanities: ENG 250, 251, 260, 261; PHI 150; REL 150, 160, 161
Physical Education: PED 150, 160-184, 196
Science: BIO 250, 251, 252; CHM 250, 251, 252; PHY 260, 261, 262
Social Science: ANT 150, 160; ECO 150, 151, 152; GEO 150: HIS 150, 151, 160, 161; POL 150; PSY 150, 151, 160, 170, 180; SOC 150, 160, 170
General: ACT 150, 151, 152; BUS 165, 166, 167; EDP 150, EDU 250; ENG 271, 272, 273, 274, 275; MAT 151, 180

For information pertaining to cooperative education credits, see page 55.
Students enrolled full-time and making satisfactory progress should complete this program in six quarters.

## PRE-LIBERAL ARTS

The Pre-Liberal Arts curriculum is designed for students who intend to transfer to a senior college for their four-year degrees and for people who wish a liberal arts education ending in a two-year degree. Students take general college courses, including courses in English, math, biology, speech, health, physical education, and social science such as psychology, sociology, and history. Because the program is general, many students who have not decided on a major select preliberal arts. Adjustments can be made to meet the general education requirements of most colleges and universities.

## PRE-LIBERAL ARTS <br> COURSE AND HOUR REQUIREMENTS

## Title

MAJOR COURSES:

| *ENG | 150 | Composition I | 3 | 0 | 3 |
| :---: | :---: | :--- | :---: | :---: | :---: |
| ENG | 151 | Composition II | 3 | 0 | 3 |
| ENG | 152 | Composition III | 3 | 0 | 3 |
| HEA | 150 | Personal and Community Health | 3 | 0 | 3 |
| LIB | 150 | Library Research Skills | 2 | 0 | 2 |
| *MAT | 150 | College Algebra | 5 | 0 | 5 |
| ORI | 100 | New Student Seminar | 1 | 0 | 1 |
| **ELECTIVES |  |  |  |  |  |
|  | Electives | 28 | 0 | 28 |  |
|  | Fine Arts | 3 | 0 | 3 |  |
|  | Humanities | 3 | 0 | 3 |  |
|  | Humanities or Fine Arts | 9 | 0 | 9 |  |
|  | Physical Education | 0 | 4 | 2 |  |
|  | Science | 9 | 6 | 12 |  |
|  | Social Science | $\underline{20}$ | $\underline{0}$ | $\underline{20}$ |  |
|  |  |  |  | 10 | 97 |

*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

MAT 099, 100R, 100, 101; ENG 091, 092, 093, 094, 095, 100G, 100A, 101, 101A

## **RECOMMENDED ELECTIVES

Fine Arts: ART 160, 170; ENG 270; MUS 150; SPH 150, 160
Humanities: ENG 250, 251, 260, 261; PHI 150; REL 150, 160, 161
Physical Education: PED 150, 160-184, 196
Science: BIO 250, 251, 252; CHM 250, 251, 252, PHY 260, 261, 262
Social Science: ANT 150, 160; ECO 150, 151, 152; GEO 150; HIS 150, 151, 160, 161; POL 150; PSY 150, 151, 160, 170, 180; SOC 150, 160, 170
General : ACT 150, 151, 152; BUS 165, 166, 167; EDP 150; EDU 250; ENG 271, 272, 273, 274, 275; MAT 151, 180, 250, 251

For information pertaining to cooperative education credits, see page 55 .
Students enrolled full-time and making satisfactory progress should complete this program in six quarters.






## TECHNICAL EDUCATION



## ACCOUNTING

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, account ing clerk, cost clerk, payroll clerk, and related data processing occupations.

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

## ACCOUNTING COURSE AND HOUR REQUIREMENTS

## Title

C $\quad \mathrm{LH} / \mathrm{CL} \mathbf{C H}$
MAJOR COURSES:

|  | ACT | 150 | Principles of Accounting | 3 | 2 | 0 | 4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | ACT | 151 | Principles of Accounting | 3 | 2 | 0 | 4 |
|  | ACT | 152 | Principles of Accounting | 3 | 2 | 0 | 4 |
|  | BUS | 110 | Electronic Calculator | 2 | 2 | 0 | 3 |
|  | BUS | 165 | Introduction to Business | 5 | 0 | 0 | 5 |
|  | BUS | 166 | Business Law I | 3 | 0 | 0 | 3 |
|  | BUS | 167 | Business Law II | 3 | 0 | 0 | 3 |
|  | BUS | 222 | Intermediate Accounting | 5 | 2 | 0 | 6 |
|  | BUS | 223 | Intermediate Accounting | 5 | 2 | 0 | 6 |
|  | BUS | 225 | Cost Accounting | 3 | 2 | 0 | 4 |
| 74 | BUS | 229 | Taxes | 3 | 2 | 0 | 4 |
|  | BUS | 235 | Business Management | 3 | 0 | 0 | 3 |
|  | BUS | 269 | Auditing | 5 | 0 | 0 | 5 |
|  | BUS | 270 | Computer Appl. of Accounting | 1 | 4 | $\underline{0}$ | $\underline{3}$ |
|  |  |  | TOTALS | 47 | 20 | 0 | 57 |

RELATED COURSES:

| BUS | 102 | Beginning Typewriting | 2 | 3 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| BUS | 123 | Business Finance | 3 | 0 | 0 | 3 |
| BUS | 134 | Personal Grooming | 3 | 0 | 0 | 3 |
| BUS | 214 | Business Seminar | 2 | 0 | 0 | 2 |
| BUS | 226 | Payroll Accounting | 3 | 2 | 0 | 4 |
| ECO | 151 | Economics II | 3 | 0 | 0 | 3 |
| EDP | 112 | BASIC I | 2 | 2 | 0 | 3 |
| EDP | 115 | FORTRAN | 2 | 4 | 0 | 4 |
| MAT | 101 | Algebra I | 5 | 0 | 0 | 5 |
| MAT | 110 | Business Mathematics | $\underline{5}$ | $\underline{0}$ | $\underline{0}$ | $\frac{5}{30}$ |
|  |  | TOTALS | $\mathbf{3 0}$ | $\mathbf{1 1}$ | $\mathbf{0}$ | 35 |

## GENERAL EDUCATION:

| ECO | 150 | Economics I | 3 | 0 | 0 | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ENG | 101 | Grammar* | 3 | 0 | 0 | 3 |
| ENG | 102 | Composition | 3 | 0 | 0 | 3 |
| ENG | 103 | Report Writing | 3 | 0 | 0 | 3 |
| ENG | 204 | Oral Communications | 3 | 0 | 0 | 3 |
|  |  | Social Science Elective** | 3 | 0 | 0 | 3 |
| ORI | 100 | New Student Seminar | 1 | 0 | 0 | 1 |
|  |  | TOTALS | 19 | 0 | 0 | 19 |
| ELEC | $S^{* * *}$ |  | 6 | 0 | 0 | 6 |

WORK EXPERIENCE:

| COE | 102 | Cooperative Education+ | 0 | 0 | 20 | 2 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| TOTAL CREDITS FOR AAS DEGREE | 102 | 31 | 20 | 119 |  |  |

*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 091, 092, 093, 094, 100G, 100A, 101A, 102A; MAT 099, 100R
**Recommended Social Science Electives:
ANT 150, 160; GEO 150; HIS 150, 151, 160, 161; POL 102, 103, 150; PSY 102, 104, 150, 206 ; SOC 102, 103, 150, 160, 170; SSC 101

## ***Electives:

Students enrolled in this curriculum may select elective credits and make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.
+Student must have completed 100 required hours with 2.0 grade-point average. BUS 214 and Cooperative Education Field Experience are to be taken concurrently. For information pertaining to cooperate education credits, see page 55.

Students enrolled full-time and making satisfactory progress should complete this program in seven quarters.

## AGRICULTURAL BUSINESS TECHNOLOGY

The Agricultural Business curriculum is designed to help students acquire knowledge, understanding and abilities in the field of agricultural business, including agricultural production. Students learn the principles of organization and management in agricultural business and industry, the application of these principles of agricultural production and the basic principles of our economic system marketing credit, price concepts, governmental policies and programs relating to agriculture. Students also gain an understanding of the agricultural sciences most essential to the production and marketing of agricultural products.

Graduates should qualify for a variety of jobs in agricultural business and industry: salesperson or store manager in farm supply stores, agricultural field service person, salesperson, demonstrator, or plant manager of food and food companies, farm products inspector, salesperson or office manager of farm products marketing firms and farm manager.

## AGRICULTURAL BUSINESS TECHNOLOGY COURSE AND HOUR REQUIREMENT

Title C L SH/CL CH

MAJOR COURSES:

|  | AGR | 100 | Introduction to Agriculture | 1 | 0 | 0 | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | AGR | 119 | Techniques of Welding | 2 | 3 | 0 | 3 |
|  | AGR | 125 | Animal Science | 5 | 2 | 0 | 6 |
|  | AGR | 165 | Crop Science | 3 | 0 | 0 |  |
| 76 | AGR | 170 | Plant Science | 5 | 2 | 0 | 6 |
|  | AGR | 185 | Soil Science | 5 | 2 | 0 | 6 |
|  | AGR | 203 | Pesticide and Fertilizer Appl. | 3 | 2 | 0 | 4 |
|  | AGR | 204 | Agri Economics and Farm Records | 3 | 2 | 0 | 4 |
|  | AGR | 205 | Agricultural Marketing | 3 | 2 | 0 | 4 |
|  | AGR | 225 | Agricultural Pollution Control | 3 | 2 | 0 | 4 |
|  | AGR | 245 | Crop Insects | 3 | 2 | 0 | 4 |
|  | AGR | 247 | Pesticide Use in the Home and Community | 3 | 2 | 0 | 4 |
|  | AGR | 255 | Landscaping Principles and Practices | 3 | 2 | 0 | 4 |
|  | AGR | 278 | Weed Identification and Control | 3 | 2 | 0 | 4 |
|  | AGR | 290 | Soil and Water Conservation TOTALS | $\frac{3}{48}$ | $\frac{2}{27}$ | $\frac{0}{0}$ | $\frac{4}{61}$ |

RELATED COURSES:

| ACT | 150 | Principles of Accounting | 3 | 2 | 0 | 4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| BUS | 102 | Beginning Typing | 2 | 3 | 0 | 3 |
|  | or |  |  |  |  |  |
| BUS | 103 | Intermediate Typing |  |  |  |  |
| BUS | 170 | Intro. to Microcomputers | 2 | 2 | 0 | 3 |
| BUS | 235 | Business Management | 3 | 0 | 0 | 3 |
| BUS | 272 | Principles of Supervision | 3 | 0 | 0 | 3 |
| CHM | 101 | Chemistry | 4 | 2 | 0 | 5 |
| MAT | 110 | Business Mathematics | 5 | 0 | 0 | 5 |
|  |  | TOTALS | 22 | 9 | 0 | 26 |

GENERAL EDUCATION:

| ENG | 101 | Grammar* | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| ENG | 102 | Composition | 3 | 0 | 0 | 3 |
| ENG | 103 | Report Writing | 3 | 0 | 0 | 3 |
| ENG | 204 | Oral Communications | 3 | 0 | 0 | 3 |
| ORI | 100 | New Student Seminar | 1 | 0 | 0 | 1 |
|  |  | Social Science Elective** | 3 | 0 | 0 | 3 |
|  |  | Social Science Elective** | $\mathbf{3}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\frac{3}{2}$ |
|  | TOTALS | 19 | 0 | 0 | 19 |  |
|  |  | 6 | 0 | 0 | 6 |  |

WORK EXPERIENCE: Up to 6 credit hours may be taken under free electives.
TOTAL CREDITS FOR AAS DEGREE $95 \quad 36 \quad 0 \quad 112$
*If students, as a result of placement tests or grades, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 091, 092, 093, 100G, 100A, 101A, 102A; MAT 099, 100R
**Recommended Social Science Electives:
ANT 150, 160; GEO 150; HIS 150, 151, 160, 161; POL 102, 103, 150; PSY 102, 104, 150, 206 ; SOC 102, 103, 150, 160, 170; SSC 101

## ***Electives:

Students enrolled in this curriculum may select elective credits and make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.

For information pertaining to cooperative education credits, see page 55.
Students enrolled full-time and making satisfactory progress should complete the program in six quarters.

## AGRICULTURAL SCIENCE

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

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

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

## AGRICULTURAL SCIENCE COURSE AND HOUR REQUIREMENTS

Title C L SH/CL CH
MAJOR COURSES:

|  | AGR | 105 | Pasture and Forage Crops | 3 | 0 | 0 | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | AGR | 107 | Farm Enterprise Management | 3 | 0 | 0 | 3 |
|  | AGR | 112 | Small Engine Repair | 2 | 2 | 0 | 3 |
|  | AGR | 116 | Farm Welding | 2 | 2 | 0 | 3 |
|  | AGR | 121 | Crop Production | 3 | 0 | 0 | 3 |
| 78 | AGR | 127 | Animal Nutrition | 3 | 0 | 0 | 3 |
|  | AGR | 135 | Agricultural Law | 3 | 0 | 0 | 3 |
|  | AGR | 136 | Agricultural Mathematics | 3 | 0 | 0 | 3 |
|  | AGR | 150 | General Horticulture | 3 | 0 | 0 | 3 |
|  | AGR | 154 | Swine Production | 3 | 0 | 0 | 3 |
|  | AGR | 187 | Fertilizers and Lime | 3 | 0 | 0 | 3 |
|  | AGR | 190 | Soils and Soil Fertility | 2 | 2 | 0 | 3 |
|  | AGR | 198 | Practical Application of Agricultural Chemicals | 2 | 2 | 0 | 3 |
|  | AGR | 201 | Agricultural Chemicals | 3 | 0 | 0 | 3 |
|  | AGR | 206 | Marketing Farm Products | 3 | 0 | 0 | 3 |
|  | AGR | 207 | Poultry Enterprises | 3 | 0 | 0 | 3 |
|  | AGR | 218 | Agricultural Mechanization | 3 | 0 | 0 | 3 |
|  | AGR | 222 | Farm Electrification | 2 | 2 | 0 | 3 |
|  | AGR | 224 | Agricultural Pollution, Prevention and Management | 2 | 2 | 0 | 3 |
|  | AGR | 227 | Beef Production | 3 | 0 | 0 | 3 |
|  | AGR | 230 | Plant Diseases | 3 | 0 | 0 | 3 |
|  | AGR | 235 | Animal Diseases | 3 | 0 | 0 | 3 |
|  | AGR | 240 | Insects of Agronomic Crops | 2 | 2 | 0 | 3 |


| AGR | 254 | Plant Propagation | 3 | 0 | 0 | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| AGR | 260 | Residential Landscaping | 2 | 2 | 0 | 3 |
| AGR | 272 | Tobacco Production | 3 | 0 | 0 | 3 |
| AGR | 275 | Introduction to Weed Identification and Control | 2 | 2 | 0 | 3 |
| AGR | 280 | Farm Forestry Management | 2 | 2 | 0 | 3 |
| AGR | 285 | Introduction to Soil and Water Conservation | 3 | 0 | 0 | 3 |
| AGR | 297 | Agricultural Policy and Programs | 3 | 0 | 0 | 3 |
|  |  | TOTALS | 80 | 20 | 0 | 90 |

GENERAL EDUCATION:

| ENG | 101 | Grammar* | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :---: | :---: | :---: | :---: |
| ENG | 102 | Composition | 3 | 0 | 0 | 3 |
| ENG | 103 | Report Writing | 3 | 0 | 0 | 3 |
| ENG | 204 | Oral Communications | 3 | 0 | 0 | 3 |
| ORI | 100 | New Student Seminar | 1 | 0 | 0 | 1 |
|  |  | Social Science Elective** | 3 | 0 | 0 | 3 |
|  |  | Social Science Elective** | $\underline{3}$ | $\mathbf{0}$ | $\underline{0}$ | $\frac{3}{19}$ |
|  | TOTALS | 19 | 0 | 0 | 19 |  |
|  | TOTAL CREDITS FOR AAS DEGREE | 99 | 20 | 0 | 109 |  |

*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 091, 092, 093, 100G, 100A, 101A, 102A; MAT 099, 100R
Upon approval of the department chairperson, the agricultural science student may make course substitutions on a credit-for-credit basis from the agricultural science courses.
**Recommended Social Science Electives:
PSY 102, 206; SOC 102, 103; SSC 101
WORK EXPERIENCE: Up to 11 credit hours may be taken in lieu of approved courses. For information pertaining to cooperative education credits, see page 55.

Students enrolled in the evening and making satisfactory progress should complete this program in fifteen quarters.

## ARCHITECTURAL DRAFTING TECHNOLOGY

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

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

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

## ARCHITECTURAL DRAFTING TECHNOLOGY COURSE AND HOUR REQUIREMENTS

Title
C L $\quad \mathrm{SH} / \mathrm{CL} \mathbf{C H}$
MAJOR COURSES:

| AHR | 106 | Architectural Mechanical Equipment | 3 | 0 | 3 | 4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ARC | 106 | Architectural Drafting | 2 | 0 | 6 | 4 |
| ARC | 107 | Architectural Drafting | 2 | 0 | 6 | 4 |
| ARC | 108 | Architectural Drafting | 0 | 0 | 9 | 3 |
| ARC | 201 | Architectural Design | 3 | 0 | 9 | 6 |
| ARC | 202 | Environmental Design | 2 | 0 | 3 | 3 |
| ARC | 220 | Architectural Drafting | 2 | 0 | 9 | 5 |
| ARC | 221 | Architectural Drafting | 2 | 0 | 9 | 5 |
| ARC | 222 | Architectural Drafting | 2 | 0 | 9 | 5 |
| +ARC | 233 | Office Practice Seminar | 2 | 0 | 0 | 2 |
| CIV | 101 | Surveying | 2 | 0 | 6 | 4 |
| CIV | 105 | Arch. Materials and Methods | 3 | 0 | 3 | 4 |
| CIV | 114 | Statics | 5 | 0 | 0 | 5 |
| CIV | 216 | Strength of Materials | 3 | 2 | 0 | 4 |
| CIV | 221 | Reinforced Concrete Construction | 3 | 2 | 0 | 4 |
| DFT | 230 | Structural Drafting | 2 | 0 | 6 | 4 |
| DFT | 235 | Codes, Specifications and Contract Documents | 3 | 0 | 3 | 4 |
| DFT | 236 | Construction Estimating and Field Inspecting <br> TOTALS | $\frac{3}{44}$ | $\frac{0}{4}$ | $\frac{3}{84}$ | $\frac{4}{74}$ |

## RELATED COURSES:

| MAT | 101 | Algebra I* | 5 | 0 | 0 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| MAT | 102 | Trigonometry | 5 | 0 | 0 | 5 |
| MAT | 103 | Algebra II | 5 | 0 | 0 | 5 |
| PHY | 101 | Technical Physics | 4 | 2 | 0 | 5 |
| PHY | 102 | Technical Physics | 4 | 2 | 0 | 5 |
| PHY | 103 | Technical Physics | $\frac{4}{27}$ | $\frac{2}{6}$ | $\frac{0}{0}$ | $\frac{5}{30}$ |

GENERAL EDUCATION:

| ENG | 101 | Grammar* | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| ENG | 102 | Composition | 3 | 0 | 0 | 3 |
| ENG | 103 | Report Writing | 3 | 0 | 0 | 3 |
| ENG | 204 | Oral Communications | 3 | 0 | 0 | 3 |
| ORI | 100 | New Student Seminar | 1 | 0 | 0 | 1 |
| PSY | 102 | General Psychology | 3 | 0 | 0 | 3 |
| SSC | 101 | Intro. to Social Sciences | $\frac{3}{19}$ | $\underline{0}$ | $\underline{0}$ | $\frac{3}{19}$ |
|  |  | TOTALS | 90 | 10 | 84 | 123 |

*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 091, 092, 093, 100G, 100A, 101A, 102A; MAT 100R, 100
Students enrolled in this curriculum may make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.
+WORK EXPERIENCE: Up to 2 credit hours may be taken in lieu of approved courses as indicated by plus. For information pertaining to cooperative education credits, see page 55.
Students enrolled full-time and making satisfactory progress should complete this program in seven quarters.

## BANKING AND FINANCE

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

These purposes will be fulfilled through study in areas such as banking and finance principles, theories and practices; teller operations; lending and 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 and credit companies.

## BANKING AND FINANCE COURSE AND HOUR REQUIREMENTS

Title
C $\quad \mathrm{SH} / \mathrm{CL} \mathbf{C H}$
MAJOR COURSES:

|  | ACT | 150 | Principles of Accounting | 3 | 2 | 0 | 4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | ACT | 151 | Principles of Accounting | 3 | 2 | 0 | 4 |
|  | AIB | 202 | Principles of Bank Operation | 4 | 0 | 0 | 4 |
|  | AIB | 205 | Bank Management | 4 | 0 | 0 | 4 |
|  | AIB | 209 | Installment Credit | 4 | 0 | 0 | 4 |
|  | AIB | 210 | Money and Banking | 4 | 0 | 0 | 4 |
| 82 | AIB | 215 | Branch Management | 2 | 4 | 0 | 4 |
|  | AIB | 219 | Credit Administration | 4 | 0 | 0 | 4 |
|  | AIB | 220 | Bank Cards | 3 | 0 | 0 | 3 |
|  | AIB | 226 | Fundamentals of Bank Data Processing | 0 | 2 | 0 | 1 |
|  | +AIB | 230 | Introduction to Commercial Lending | 4 | 0 | 0 | 4 |
|  | AIB | 231 | Savings and Time Deposit Banking | 4 | 0 | 0 | 4 |
|  | AIB | 232 | Agricultural Finance | 4 | 0 | 0 | 4 |
|  | ++AIB | 233 | Analyzing Financial Statements | 4 | 0 | 0 | 4 |
|  | AIB | 239 | Marketing for Bankers | 4 | 0 | 0 | 4 |
|  | AIB | 250 | Real Estate Finance | 4 | 0 | 0 | 4 |
|  | AIB | 259 | Law and Banking | 4 | 0 | 0 | 4 |
|  |  |  | TOTALS | 59 | 10 | 0 | 64 |

RELATED COURSES:

| BUS | 102 | Beginning Typewriting | 2 | 3 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| BUS | 110 | Electronic Calculator | 2 | 2 | 0 | 3 |
| BUS | 165 | Introduction to Business | 5 | 0 | 0 | 5 |
| BUS | 235 | Business Management | 3 | 0 | 0 | 3 |
| BUS | 272 | Principles of Supervision | 3 | 0 | 0 | 3 |
| ECO | 150 | Economics I | 3 | 0 | 0 | 3 |
| ECO | 151 | Economics II | 3 | 0 | 0 | 3 |
| EDP | 112 | BASIC I | 2 | 2 | 0 | 3 |
| ENG | 206 | Business Communications | 3 | 0 | 0 | 3 |
| MAT | 110 | Business Mathematics* | $\underline{5}$ | $\underline{0}$ | $\underline{0}$ | $\frac{5}{7}$ |
|  |  | TOTALS | 31 | 7 | 0 | 34 |

## GENERAL EDUCATION:

| ENG | 101 | Grammar* | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :---: | :---: | :---: | :---: |
| ENG | 102 | Composition | 3 | 0 | 0 | 3 |
| ENG | 103 | Report Writing | 3 | 0 | 0 | 3 |
| ENG | 204 | Oral Communications | 3 | 0 | 0 | 3 |
| ORI | 100 | New Student Seminar | 1 | 0 | 0 | 1 |
| PSY | 206 | Applied Psychology | 3 | 0 | 0 | 3 |
| SOC | $\mathbf{1 0 2}$ | Principles of Sociology | 3 | 0 | 0 | 3 |
|  |  | Elective | $\mathbf{4}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\frac{4}{2}$ |
|  |  | TOTALS | 23 | 0 | 0 | 23 |
| TOTAL CREDITS FOR AAS DEGREE: | 113 | 17 | 0 | 121 |  |  |

*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 091, 092, 093, 094, 100G, 100A, 101A, 102A; MAT 099, 100R
Students enrolled in this curriculum may make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.
**Recommended Business Electives:
BUS 103, 112, 134, 140, 141, 170, 171, 219, 222, 223, 225, 231, 290A, 290B, 290C
WORK EXPERIENCE: Up to 8 credit hours may be taken in lieu of approved courses. For information pertaining to cooperative education credits, see page 55.

Currently, this curriculum is offered only in the evening.
+AIB 228 will substitute
++AIB 229 will stubstitute

## BUSINESS ADMINISTRATION

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

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

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

## BUSINESS ADMINISTRATION COURSE AND HOUR REQUIREMENTS

## Title

C $\quad \mathrm{L} \quad \mathrm{SH} / \mathrm{CL} \mathrm{CH}$
MAJOR COURSES:

|  | ACT | 150 | Principles of Accounting | 3 | 2 | 0 | 4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | ACT | 151 | Principles of Accounting | 3 | 2 | 0 | 4 |
|  | ACT | 152 | Principles of Accounting | 3 | 2 | 0 | 4 |
|  | BUS | 110 | Electronic Calculator | 2 | 2 | 0 | 3 |
|  | BUS | 123 | Business Finance | 3 | 0 | 0 | 3 |
|  | BUS | 165 | Introduction to Business | 5 | 0 | 0 | 5 |
| 84 | BUS | 166 | Business Law I | 3 | 0 | 0 | 3 |
|  | BUS | 167 | Business Law II | 3 | 0 | 0 | 3 |
|  | BUS | 226 | Payroll Accounting |  | 2 | 0 | 4 |
|  | BUS | 229 | Taxes | 3 | 2 | 0 | 4 |
|  | BUS | 232 | Sales Development |  | 0 | 0 | 3 |
|  | +BUS | 235 | Business Management or Co-op Substitution | 3 | 0 | 0 | 3 |
|  | BUS | 239 | Marketing | 5 | 0 | 0 | 5 |
|  | BUS | 243 | Advertising | 3 | 2 | 0 | 4 |
|  | BUS | 271 | Office Management | 3 | 0 | 0 | 3 |
|  | +BUS | 272 | Principles of Supervision or Co-op Substitution | 3 | 0 | 0 | 3 |
|  | MAT | 110 | Business Mathematics | 5 | 0 | $\underline{0}$ | 5 |
|  |  |  | TOTALS | 56 | 14 | 0 | 63 |

RELATED COURSES:

| BUS 102 | Beginning Typewriting | 2 | 3 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | Business Elective** | 3 | 0 | 0 | 3 |
|  | Business Elective** | 3 | 0 | 0 | 3 |
|  | Business Elective** | 3 | 0 | 0 | 3 |


| ECO | 108 | Consumer Economics | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| ECO | 150 | Economics I | 3 | 0 | 0 | 3 |
| ECO | 151 | Economics II | 3 | 0 | 0 | 3 |
| EDP | 112 | BASIC I | 2 | 2 | 0 | 3 |
| EDP | 113 | BASIC II | 2 | 4 | 0 | 4 |
| EDP | 114 | Introduction to Computer <br> Concepts <br> ENG | 206 | Business Communications <br> TOTALS | 3 <br> 30 | 0 |

## GENERAL EDUCATION:

| ENG | 101 | Grammar* | 3 | 0 | 0 | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ENG | 102 | Composition | 3 | 0 | 0 | 3 |
| ENG | 103 | Report Writing | 3 | 0 | 0 | 3 |
| ENG | 204 | Oral Communications | 3 | 0 | 0 | 3 |
|  |  | Social Science Elective\# | 3 | 0 | 0 | 3 |
| ORI | 100 | New Student Seminar | 1 | 0 | 0 | 1 |
| SOC | 100 | Job Search and Career |  |  |  |  |
|  |  | Planning | 3 | 0 | 0 | 3 |
|  |  | TOTALS | 19 | 0 | 0 | 19 |
| TOTAL CREDITS FOR AAS DEGREE: |  |  | 105 | 23 | 0 | 116 |

*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 091, 092, 093, 094, 100G, 100A, 101A, 102A; MAT 099, 100R
Students enrolled in this curriculum may select elective credits from the list of recommended electives or from other related courses and make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.
**Recommended Business Electives:
BUS 103, 112, 134, 140, 141, 170, 171, 219, 222, 223, 225, 231, 290A, 290B, 290C

## \#Recommended Social Science Electives:

ANT 150, 160; GEO 150: HIS 150, 151, 160, 161; POL 102, 150; PSY 102, 104, 150, 206; SOC 102, 103, 150, 160, 170; SSC 101
+WORK EXPERIENCE: Up to six hours may be taken in lieu of courses listed as noted by plus. For information pertaining to cooperative education credits, see page 55.

Students enrolled full-time and making satisfactory progress should complete this program in seven quarters.

## COMMERCIAL ART AND GRAPHIC DESIGN

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

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

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

## COMMERCIAL ART AND GRAPHIC DESIGN COURSE AND HOUR REQUIREMENTS

MAJOR COURSES:

|  | CAT | 102 | Drawing I | 1 | 4 | 0 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| CAT | 103 | Drawing II | 1 | 4 | 0 | 3 |
| CAT | 104 | Drawing III | 1 | 4 | 0 | 3 |
| CAT | 107 | Drafting for Art | 1 | 3 | 0 | 2 |
| CAT | 108 | Drafting for Art | 1 | 3 | 0 | 2 |
| CAT | 109 | Drawing IV | 1 | 4 | 0 | 3 |
| CAT | 110 | Art History to 1300 | 3 | 0 | 0 | 3 |
| CAT | 111 | Art History since 1300 | 3 | 0 | 0 | 3 |
| CAT | 120 | Illustration Techniques | 1 | 4 | 0 | 3 |
| CAT | 121 | Design I | 3 | 6 | 0 | 6 |
| CAT | 122 | Design II | 3 | 6 | 0 | 6 |
| CAT | 123 | Layout and Design I | 2 | 6 | 0 | 5 |
| CAT | 210 | Production Techniques | 1 | 4 | 0 | 3 |
| CAT | 212 | Advertising Illustration | 1 | 4 | 0 | 3 |
| CAT | 213 | Advertising Illustration | 1 | 4 | 0 | 3 |
| CAT | 214 | Type and Letter Form Design | 1 | 4 | 0 | 3 |
| CAT | 218 | Photomechanical Techniques | 2 | 6 | 0 | 5 |
| CAT | 224 | Layout and Design II | 3 | 6 | 0 | 6 |
| CAT | 225 | Graphic Design I | 3 | 6 | 0 | 6 |
| CAT | 226 | Graphic Design II | 3 | 6 | 0 | 6 |
| CAT | 235 | Portfolio Development | 1 | 4 | 0 | 3 |
|  |  |  | 37 | 88 | 0 | 80 |

## RELATED COURSES:

| BUS | 102 | Beginning Typewriting <br> Review of Fundamental | 2 | 3 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| MAT | 100 | Mathmatics* | 5 | 0 | 0 | 5 |
| PHO | 116 | Photography <br> Photography | TOTALS | $\underline{2}$ | 4 | 0 |
| PHO | 217 | TO | $\frac{4}{11}$ | $\frac{0}{0}$ | $\frac{4}{16}$ |  |

GENERAL EDUCATION:

| ENG | 101 | Grammar* | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :---: | :--- | :--- | :--- |
| ENG | 102 | Composition | 3 | 0 | 0 | 3 |
| ENG | 103 | Report Writing | 3 | 0 | 0 | 3 |
| ENG | 204 | Oral Communication | 3 | 0 | 0 | 3 |
| ORI | 100 | New Student Seminar | 1 | 0 | 0 | 1 |
|  |  | Social Science Elective** | 3 | 0 | 0 | 3 |
|  |  | Social Science Elective** | $\mathbf{3}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\frac{3}{2}$ |
|  | TOTALS | 19 | 0 | 0 | 19 |  |
|  |  | 67 | 99 | 0 | 115 |  |

*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 091, 092, 093, 094, 100G, 100A, 101A, 102A; MAT 099, 100R
Students enrolled in this curriculum may select elective credits from the list of recommended electives and make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.

## **Recommended Social Science Electives:

ANT 150, 160; GEO 150; HIS 150, 151, 160, 161; POL 102, 150; PSY 102, 104, 150, 206; SOC 102, 103, 150, 160, 170; SSC 101

WORK EXPERIENCE: Up to 8 credit hours may be taken in lieu of approved courses. For information pertaining to cooperative education credits, see page 55.

Students enrolled full-time and making satisfactory progress should complete this program in six quarters.

## CRIMINAL JUSTICE: CORRECTIONS

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: CORRECTIONS COURSE AND HOUR REQUIREMENTS

Title
MAJOR COURSES:

| CJC | 101 | Introduction to Criminal <br> Justice** | 5 | 0 | 0 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| CJC | 109 | Interviewing | 3 | 0 | 0 | 3 |
| CJC | 112 | Motor Vehicle Laws | 3 | 0 | 0 | 3 |
| CJC | 113 | Corrections Law | 3 | 0 | 0 | 3 |
| CJC | 115 | Criminal Law I | 3 | 0 | 0 | 3 |
| CJC | 116 | Criminal Law II | 3 | 0 | 0 | 3 |
| CJC | 125 | Criminal Procedures and North |  |  |  |  |
|  | Carolina Court System | 3 | 0 | 0 | 3 |  |
| CJC | 205 | Evidence | 3 | 0 | 0 | 3 |
| CSC | 201 | Marriage and the Family | 3 | 0 | 0 | 3 |


| CSC | 202 | Introduction to Recreation |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Services | 2 | 2 | 0 | 3 |
| CSC | 203 | Survey of Corrections | 3 | 0 | 0 | 3 |
| CSC | 207 | Confinement Facilities |  |  |  |  |
|  |  | Administration | 3 | 0 | 0 | 3 |
| CSC | 213 | Dynamics of Substance Abuse | 3 | 0 | 0 | 3 |
| CSC | 224 | Rehabilitation Techniques | 3 | 0 | 0 | 3 |
| CSC | 226 | Administration and |  |  |  |  |
|  |  | Interpretation of Tests | 3 | 0 | 0 | 3 |
| CSC | 229 | Career Information | 2 | 2 | 0 | 3 |
| CSC | 234 | Community Based Corrections | 3 | 0 | 0 | 3 |
| PSC | 110 | Juvenile Delinquency | 5 | 0 | 0 | 5 |
| +PSC | 202 | Community Relations | 2 | 0 | 0 | 2 |
| PSC | 213 | Identification Techniques | 3 | 2 | 0 | 4 |
| PSC | 240 | Firearms \& Defensive Tactics | $\underline{2}$ | $\underline{2}$ | $\underline{0}$ | $\underline{3}$ |
|  |  | TOTALS | 63 | 8 | 0 | 67 |

## RELATED COURSES:

| CHM | 101 | Chemistry | 4 | 2 | 0 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| CJC | 102 | Legal Research I | 1 | 2 | 0 | 2 |
| HEA | 110 | First Aid and Medical |  |  |  |  |
|  |  | Terminology | 2 | 2 | 0 | 3 |
| MAT | 101 | Algebra I* | 5 | 0 | 0 | 5 |
| POL | 102 | National Government | 3 | 0 | 0 | 3 |
| POL | 103 | State and Local Government | 3 | 0 | 0 | 3 |
| PSY | 103 | Adolescent Psychology | 3 | 0 | 0 | 3 |
| PSY | 228 | Abnormal Psychology | 3 | 0 | 0 | 3 |

GENERAL EDUCATION:

| ENG | 101 | Grammar* | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :---: | :---: | :---: | :---: |
| ENG | 102 | Composition | 3 | 0 | 0 | 3 |
| ENG | 103 | Report Writing | 3 | 0 | 0 | 3 |
| ENG | 204 | Oral Comunications | 3 | 0 | 0 | 3 |
| ORI | 100 | New Student Seminar | 1 | 0 | 0 | 1 |
| PSY | 102 | General Psychology | 3 | 0 | 0 | 3 |
| SOC | 102 | Principles of Sociology | $\underline{3}$ | $\underline{0}$ | $\underline{0}$ | $\frac{3}{19}$ |
| TOTALS |  | 6 | 0 | 19 |  |  |
|  |  |  | 112 | 14 | 0 | 119 |

*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 091, 092, 093, 100G, 100A, 101A, 102A; MAT 099, 100R, 100
Students enrolled in this curriculum may select elective credits from approved courses and make course substitutions on a credit-for-credit basis upon approval by the student's department chairperson.
${ }^{* *}$ CJC 151, 152, 153, 154, 155, and 156 totaling 6 quarter hours of credit may be substituted for CJC 101 Introduction to Criminal Justice, a 5-credit-hour course.
+WORK EXPERIENCE: Up to 8 credit hours may be taken in lieu of approved courses as indicated by a plus. For information pertaining to cooperative education credits, see page 55.

Students enrolled full-time and making satisfactory progress should complete this program in six quarters.


## CRIMINAL JUSTICE: LAW ENFORCEMENT

The Law Enforcement Technology curriculum prepares individuals for a career in the law enforcement services occupations field and other allied occupations. Law enforcement occupations require a thorough understanding of criminal behavior, criminal investigation, interpersonal communications, law, patrol operations, psychology, sociology, traffic management and other aspects of law enforcement administration and operations.

Job opportunities are available with federal, state, county and municipal governments. In addition, knowledge, skills and abilities 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: LAW ENFORCEMENT COURSE AND HOUR REQUIREMENTS

## Title

C $\quad \mathrm{SH} / \mathrm{CL} \mathbf{C H}$
MAJOR COURSES:

| CJC | 101 | Introduction to Criminal Justice** | 5 | 0 | 0 | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CJC | 109 | Interviewing | 3 | 0 | 0 | 3 |
| CJC | 112 | Motor Vehicle Laws | 3 | 0 | 0 | 3 |
| CJC | 113 | Corrections Law | 3 | 0 | 0 | 3 |
| CJC | 115 | Criminal Law I | 3 | 0 | 0 | 3 |
| CJC | 116 | Criminal Law II | 3 | 0 | 0 | 3 |
| CJC | 125 | Criminal Procedures and North Carolina Court System | 3 | 0 | 0 | 3 |
| CJC | 204 | Evidence Photography | 3 | 0 | 3 |  |
| CJC | 205 | Evidence | 3 | 0 | 0 |  |
| cJc | 210 | Techniques of Investigation | 4 | 2 | 0 |  |
| CJC | 211 | Criminalistics | 4 | 2 | 0 |  |
| CJC | 235 | Forensic Science | 3 | 2 | 0 |  |
| PSC | 110 | Juvenile Delinquency | 5 | 0 | 0 |  |
| PSC | 201 | Patrol Procedures | 4 | 2 | 0 |  |
| PSC | 202 | Community Relations | 2 | 0 | 0 |  |
| PSC | 213 | Identification Techniques | 3 | 2 | 0 |  |
| PSC | 220 | Police Administration | 3 | 0 | 0 | 3 |
| PSC | 240 | Firearms and Defensive Tactics | 2 | 2 | 0 | 3 |
| PSC | 241 | Police Conditioning | 0 | $\underline{2}$ | 0 | 1 |
|  |  | TOTALS | 59 | 14 | 3 | 67 |

RELATED COURSES:

| CHM | 101 | Chemistry | 4 | 2 | 0 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| CJC | 102 | Legal Research I | 1 | 2 | 0 | 2 |
| CSC | 203 | Survey of Corrections | 3 | 0 | 0 | 3 |
| CSC | 213 | Dynamics of Substance Abuse | 3 | 0 | 0 | 3 |


| HEA | 110 | First Aid and Medical <br> Terminology | 2 | 2 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| MAT | 101 | Algebra I* | 5 | 0 | 0 | 5 |
| POL | 102 | National Government | 3 | 0 | 0 | 3 |
| POL | 103 | State and Local Government | 3 | 0 | 0 | 3 |
| PSY | 228 | Abnormal Psychology | $\underline{3}$ | $\underline{0}$ | $\underline{0}$ | $\underline{3}$ |
|  | $\quad$ TOTALS | 27 | 6 | 0 | 30 |  |

GENERAL EDUCATION:

| ENG | 101 | Grammar* | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :---: | :---: | :---: | :---: |
| ENG | 102 | Composition | 3 | 0 | 0 | 3 |
| ENG | 103 | Report Writing | 3 | 0 | 0 | 3 |
| ENG | 204 | Oral Communications | 3 | 0 | 0 | 3 |
| ORI | 100 | New Student Seminar | 1 | 0 | 0 | 1 |
| PSY | 102 | General Psychology | 3 | 0 | 0 | 3 |
| SOC | 102 | Principles of Sociology | $\underline{3}$ | $\underline{0}$ | $\underline{0}$ | $\frac{3}{19}$ |
|  |  | TOTALS | 19 | 0 | 0 | 19 |
|  |  | 5 | 0 | 0 | 5 |  |
| ELECTIVES+ |  | 110 | 20 | 3 | 121 |  |

*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 091, 092, 093, 100G, 100A, 101A, 102A; MAT 099, 100R, 100
+Students enrolled in this curriculum may select elective credits from approved courses and make course substitutions on a credit-for-credit basis upon approval by the student's department chairperson.
**CJC 151, 152, 153, 154, 155, and 156 totaling 6 quarter hours of credit may be substituted for CJC 101 Introduction to Criminal Justice, a 5 credit-hour course.

WORK EXPERIENCE: Up to 5 credit hours may be taken in lieu of approved courses as indicated by a plus. For information pertaining to cooperative education credits, see page 55.

Students enrolled full-time and making satisfactory progress should complete this program in six quarters.

## EARLY CHILDHOOD ASSOCIATE

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.

## EARLY CHILDHOOD ASSOCIATE COURSE AND HOUR REQUIREMENTS

## Title

MAJOR COURSES:

| EDU | 102 | Child Health, Safety and Nutrition | 5 | 0 | 0 | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| EDU | 103 | Preschool Orientation | 1 | 0 | 6 | 3 |
| +EDU | 104 | Preschool Observation | 1 | 0 | 6 | 3 |
| EDU | 108 | Early Childhood Curriculum | 5 | 0 | 0 | 5 |
| EDU | 109 | Guiding Young Children's Behavior |  | 0 | 0 | 3 |
| EDU | 111 | Language Arts Techniques | 3 | 0 | 0 | 3 |
| EDU | 115 | Audiovisual and Media Instruction | 3 | 0 | 0 | 3 |
| +EDU | 201 | Children's Issues in Today's Society | 1 | 0 | 0 | 1 |
| EDU | 202 | Discipline Strategies in Classroom | 3 | 0 | 0 | 3 |
| EDU | 203 | Exceptional Children | 5 | 0 | 0 | 5 |
| +EDU | 204 | Parent Education | 1 | 0 | 0 | 1 |
| EDU | 225A | Seminar Practicum: Preschool | 1 | 0 | 15 | 6 |
| EDU | 225B | Seminar Practicum: Preschool | 1 | 0 | 15 | 6 |
| EDU | 225 C | Seminar Practicum: Preschool | 1 | 0 | 15 | 6 |
| EDU | 229 | Infant Care Activities |  | 0 | 0 | 3 |
| EDU | 231 | Creative Activities | 5 | 0 | 0 | 5 |
| EDU | 232 | Preschool Administration and Supervision <br> TOTAIS | $\frac{3}{45}$ | $\frac{0}{0}$ | $\frac{0}{57}$ | $\frac{3}{64}$ |

RELATED COURSES:

| BUS | 102 | Beginning Typewriting | 2 | 3 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| ENG | 217 | Children's Literature | 3 | 0 | 0 | 3 |
| HEA | 112 | First Aid | 1 | 0 | 0 | 1 |


| MAT | 100R | Computational Skills | 5 | 0 | 0 | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PED | 150 | Foundations in Physical |  |  |  |  |
|  |  | Education | 2 | 0 | 0 | 2 |
| PSY | 115 | Child Growth and Development I | 3 | 0 | 0 | 3 |
| PSY | 116 | Child Growth and Development II | 3 | 0 | 0 | 3 |
| SOC | 100 | Job Search and Career Planning | 3 | 0 | 0 | 3 |
| SOC | 221 | Family | 3 | 0 | 0 | 3 |
|  |  | TOTALS | 25 | 3 | 0 | 26 |

GENERAL EDUCATION:

| ENG | 101 | Grammar* | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| ENG | 102 | Composition | 3 | 0 | 0 | 3 |
| ENG | 103 | Report Writing | 3 | 0 | 0 | 3 |
| ORI | 100 | New Student Seminar | 1 | 0 | 0 | 1 |
| PSY | 102 | General Psychology | 3 | 0 | 0 | 3 |
| SPH | 150 | Voice and Diction | 3 | 0 | 0 | 3 |
| SOC | 101 | Introduction to Sociology | $\frac{5}{2}$ | $\underline{0}$ | 0 | 5 |
|  | TOTALS | 21 | 0 | 0 | 21 |  |
|  |  | 91 | 3 | 57 | 111 |  |

*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 091, 092, 093, 094, 100G, 100A, 101A, 102A; MAT 099

Students enrolled in this curriculum may make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.
+WORK EXPERIENCE: Up to 5 credit hours may be taken in lieu of approved courses as indicated by a plus. For information pertaining to cooperate education credits, see page 55.

Students enrolled full-time and making satisfactory progress should complete this program in seven quarters.

## ELECTRONIC DATA PROCESSING: BUSINESS

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.

## ELECTRONIC DATA PROCESSING: BUSINESS COURSE AND HOUR REQUIREMENTS

## Title

MAJOR COURSES:

| EDP | 112 | BASIC I | 2 | 2 | 0 | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| EDP | 113 | BASIC II | 2 | 4 | 0 | 4 |
| EDP | 114 | Introduction to Computer |  |  |  |  |
|  |  | Concepts | 3 | 0 | 0 | 3 |
| EDP | 115 | FORTRAN | 2 | 4 | 0 | 4 |
| EDP | 118 | COBOLI | 2 | 4 | 0 | 4 |
| EDP | 119 | COBOL II | 2 | 4 | 0 | 4 |
| EDP | 211 | Applications I | 2 | 4 | 0 | 4 |
| EDP | 212 | Applications II | 2 | 4 | 0 | 4 |
| EDP | 214 | Computer Systems I | 2 | 2 | 0 | 3 |
| EDP | 223 | Introduction to RPG II | 2 | 4 | 0 | 4 |
| EDP | 224 | RPG II | 2 | 4 | 0 | 4 |
| EDP | 240 | Internship I | 0 | 10 | 0 | 1 |
| EDP | 241 | Internship II | 0 | 10 | 0 | 1 |
| EDP | 233 | Customer Information Computer Systems | 2 | 4 | 0 | 4 |
| EDP | 234 | Interactive Workstation Programming | 2 | 4 | 0 | 4 |
| ACT | 150 | Principles of Accounting | 3 | 2 | 0 | 4 |
| ACT | 151 | Principles of Accounting | 3 | 2 | 0 | 5 |
| MAT | 111 | Computer Mathematics | 5 | 0 | 0 | 5 |
|  |  | TOTALS | 38 | 68 | 0 | 64 |

RELATED COURSES:

| ACT | 152 | Pricniples of Accounting | 3 | 2 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| BUS | 166 | Business Law I | 3 | 0 | 0 | 3 |
| BUS | 225 | Cost Accounting | 3 | 2 | 0 | 4 |
| BUS | 235 | Business Management | 3 | 0 | 0 | 3 |
| MAT | 110 | Business Mathematics | 5 | 0 | 0 | 5 |
|  |  | Business Electives** | $\underline{6}$ | $\underline{0}$ | $\underline{0}$ | $\underline{6}$ |
|  | TOTALS |  | 23 | 4 | 0 | 25 |

GENERAL EDUCATION:

| ENG | 101 | Grammar* | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| ENG | 102 | Composition | 3 | 0 | 0 | 3 |
| ENG | 103 | Report Writing | 3 | 0 | 0 | 3 |
|  | or |  |  |  |  |  |
| ENG | 206 | Business Communications | 3 | 0 | 0 | 3 |
| ENG | 204 | Oral Communications | 3 | 0 | 0 | 3 |
| ORI | 100 | New Student Seminar | 1 | 0 | 0 | 1 |
|  |  | Social Science Elective\# | 3 | 0 | 0 | 3 |
|  |  | Social Science Elective\# | $\frac{3}{2}$ | $\frac{0}{0}$ | $\frac{0}{0}$ | $\frac{3}{19}$ |
|  |  | TOTALS | 19 | 0 | 0 | 19 |

*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 091, 092, 093, 094, 100G, 100A, 101A, 102A; MAT 099, 100R
Students enrolled in this curriculum may select elective credits from the list of recommended electives and make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.

## **Recommended Business Electives:

BUS 123, 165, 167, 222, 223, 224, 226, 227, 229, 231, 239, 271, 272; COE 101A-107B; ECO 108, 150, 151; EDP 116, 117, 130, 140

## \#Recommended Social Science Electives:

PSY 101, 102, 104, 150, 151, 206; SOC 102, 103, 150
WORK EXPERIENCE: Up to 8 credit hours may be taken in lieu of approved courses. For information pertaining to cooperative education credits, see page 55.

Students enrolled full-time and making satisfactory progress should complete this program in six quarters.

## ELECTRONICS ENGINEERING TECHNOLOGY

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 enginering aide, laboratory technician, supervisor or equipment specialist.

## ELECTRONICS ENGINEERING TECHNOLOGY COURSE AND HOUR REQUIREMENTS

## Title

C L SH/CL CH
MAJOR COURSES:

| ELC | 101 | Fundamentals of Electricity I | 4 | 4 | 0 | 6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ELC | 102 | Fundamentals of Electricity II | 4 | 4 | 0 | 6 |
| ELC | 210 | Rotation Devices | 2 | 2 | 0 | 3 |
| ELN | 100 | Introduction to Electronics | 3 | 2 | 0 | 4 |
| ELN | 101 | Electronic Instrumentation and Measurement | 1 | 4 | 0 | 3 |
| ELN | 105 | Control Devices | 4 | 4 | 0 | 6 |
| ELN | 205 | Application of Transistors | 5 | 6 | 0 | 8 |
| ELN | 210 | Semiconductor Circuit Analysis | 5 | 4 | 0 | 7 |
| ELN | 211P | Communication Circuits | 4 | 4 | 0 | 6 |
| ELN | 214 | Fundamentals of Digital ELN I | 3 | 0 | 3 | 4 |
| ELN | 215 | Fundamentals of Digital ELN II | 3 | 0 | 3 |  |
| ELN | 220 | Electronic Systems | 5 | 4 | 0 | 7 |
| ELN | 231 | Intro. to Microprocessors | 3 | $\underline{0}$ | 3 | 4 |
|  |  | TOTALS | 46 | 38 | 9 | 68 |

RELATED COURSES:

| +DFT | 102 | Technical Drafting | 1 | 0 | 3 | 2 |
| :---: | :--- | :--- | :--- | :--- | :--- | :--- |
| MAT | 101 | Algebra I | 5 | 0 | 0 | 5 |
| MAT | 102 | Trigonometry | 5 | 0 | 0 | 5 |
| MAT | 103 | Algebra II | 5 | 0 | 0 | 5 |
| MAT | 104 | Calculus I | 3 | 0 | 0 | 3 |
| MAT | 201 | Calculus II | 3 | 0 | 0 | 3 |
| MEC | 112 | Machine Shop Processes | 1 | 0 | 3 | 2 |
| PHY | 101 | Technical Physics | 4 | 2 | 0 | 5 |
| PHY | 102 | Technical Physics | 4 | 2 | 0 | 5 |
| PHY | 104 | Technical Physics | $\underline{3}$ | $\underline{2}$ | $\underline{0}$ | $\frac{4}{6}$ |
|  |  | TOTALS | 34 | 6 | 6 | 39 |

GENERAL EDUCATION:

| ENG | 101 | Grammar* | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| ENG | 102 | Composition | 3 | 0 | 0 | 3 |
| ENG | 103 | Report Writing | 3 | 0 | 0 | 3 |
| ENG | 204 | Oral Communication | 3 | 0 | 0 | 3 |
|  |  | Social Science Elective** | 6 | 0 | 0 | 6 |
| ORI | 100 | New Student Seminar | $\frac{1}{2}$ | $\frac{0}{2}$ | $\frac{0}{2}$ | $\frac{1}{19}$ |
|  |  | TOTALS | 19 | 0 | 0 | 19 |
|  |  | 0 | 0 | 0 | 2 |  |
| ELECTIVES*** |  | 99 | 44 | 15 | 128 |  |

*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 091, 092, 093, 100G, 100A, 101A, 102A; MAT 099, 100R, 100
***Students enrolled in this curriculum may select elective credits from the list of recommended electives and make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.
**Recommended Social Science Electives:
PSY 102, 104; SOC 100, 102, 103; SSC 101

WORK EXPERIENCE: Up to 4 credit hours may be taken in lieu of approved courses as indicated by plus and free electives. For information pertaining to cooperative education credits, see page 55.

Students enrolled full-time and making satisfactory progress should complete this program in seven quarters.

## GENERAL OFFICE TECHNOLOGY

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

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

## GENERAL OFFICE TECHNOLOGY COURSE AND HOUR REQUIREMENTS

Title C L SH/CL CH

MAJOR COURSES:

| BUS | 102 | Beginning Typewriting |
| :--- | :--- | :--- |
| BUS | 103 | Intermediate Typewriting |
| BUS | 104 | Advanced Typewriting |
| BUS | 112 | Filing |
| BUS | 113 | Machine Transcription I |
| BUS | 114 | Machine Transcription II |
| BUS | 117 | Electronic Calculator: Sec |
| BUS | 134 | Personal Grooming |
| BUS | 192 | Word Processing Applications I |
| BUS | 193 | Word Processing Applications II |
| BUS | 194 | Word Processing: Report Pack |
| BUS | 213 | Machine Transcription III |
| BUS | 216 | Office Procedures |
| BUS | 259 | Office Simulation |
| BUS | 271 | Office Management |


| 2 | 3 | 0 | 3 |
| :--- | :--- | :--- | :--- |
| 2 | 3 | 0 | 3 |
| 2 | 3 | 0 | 3 |
| 3 | 0 | 0 | 3 |
| 5 | 0 | 0 | 5 |
| 5 | 0 | 0 | 5 |
| 2 | 3 | 0 | 3 |
| 3 | 0 | 0 | 3 |
| 2 | 3 | 0 | 3 |
| 2 | 3 | 0 | 3 |
| 2 | 3 | 0 | 3 |
| 5 | 0 | 0 | 5 |
| 5 | 0 | 0 | 5 |
| 2 | 3 | 0 | 3 |
| $\frac{3}{45}$ | $\underline{0}$ | $\underline{0}$ | $\underline{3}$ |

RELATED COURSES:

| ACT | 150 | Principles of Accounting | 3 | 2 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| BUS | 165 | Introduction to Business | 5 | 0 | 0 | 5 |
| BUS | 166 | Business Law I | 3 | 0 | 0 | 3 |
| BUS | 170 | Introduction to Microcomputer <br> Applications | 2 | 2 | 0 | 3 |
| +BUS | 214 | Business Seminar <br> CECO | 108 | 2 | 0 | 0 |
| Consumer Economic |  |  |  |  |  |  |
| or | Co-Op Substitution <br> Introduction to Computer <br> Concepts | 3 | 0 | 0 | 3 |  |
| EDP | 1144 | 3 | 0 | 0 | 3 |  |


| ENG | 106 | Spelling Techniques | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| ENG | 206 | Business Communications | 3 | 0 | 0 | 3 |
| MAT | 110 | Business Mathematics | $\frac{5}{32}$ | $\frac{0}{4}$ | $\frac{0}{0}$ | $\frac{5}{34}$ |

GENERAL EDUCATION:

| ENG | $101 S$ | Grammar* | 5 | 0 | 0 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| ENG | 102 | Composition | 3 | 0 | 0 | 3 |
| ENG | 204 | Oral Communications | 3 | 0 | 0 | 3 |
| ORI | 100 | New Student Seminar | 1 | 0 | 0 | 1 |
| SOC | 100 | Job Search and Career Planning | 3 | 0 | 0 | 3 |
|  |  | Social Science Elective** | $\underline{5}$ | $\underline{0}$ | $\underline{0}$ | $\frac{5}{2}$ |
|  |  | TOTALS | 20 | 0 | 0 | 20 |

W'ORK EXPERIENCE:

| +COE 101B Cooperative Field Experience | 0 | 0 | 20 | 2 |
| :--- | :--- | :---: | :---: | :---: | :---: |
| ELECTIVES*** | 1 | 0 | 0 | 1 |
| TOTAL CREDITS FOR AAS DEGREE | 98 | 28 | 20 | 110 |

*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 091, 092, 093, 094, 100G, 100A, 101, 101A, 102A; MAT 099, 100R
***Students enrolled in this curriculum may select elective credits from the list of recommended electives or from other related courses and make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.

## **Recommended Social Science Electives:

PSY $101,102,115,116,120,150,151,170,180,206,228,230$; SOC 101, 102, 103, 150, 160, 170, 221
+Student must have completed 100 required hours with 2.0 grade-point average. BUS 214 and Cooperative Education Field Experience are to be taken concurrently.

WORK EXPERIENCE: Up to three hours may be taken in lieu of courses listed by asterisk. For information pertaining to cooperative education credits, see page 55.

Students enrolled full-time and making satisfactory progress should complete this program in seven quarters.

## HUMAN SERVICES TECHNOLOGY

The Human Services Technology curriculum is designed to prepare graduates for entry into a variety of positions in institutions and agencies which provide social, community and educational services to people. Along with the human services courses, the curriculum provides for electives that allow the student to specialize in a specific work interest area. During the last five quarters, emphasis is pertinent to the chosen area. Internships in one or more areas of human services are included in the final phases of the curriculum.

Graduates may find employment in child care agencies, family services agencies, hospitals, mental health centers, public welfare departments, schools and rehabilitation agencies.
Individuals desiring a career in human services technology should, if possible, take biology, psychology and sociology courses prior to entering the program.

## HUMAN SERVICES TECHNOLOGY COURSE AND HOUR REQUIREMENTS

| Title |  |  | C | L | SH/CL | CH |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MAJOR COURSES: |  |  |  |  |  |  |  |
| HSA | 100 | Basic Health Science | 3 | 0 | 0 | 3 |  |
| HSA | 102 | Orientation Lab I | 0 | 2 | 0 | 1 |  |
| HSA | 111 | Introduction to Human Services | 3 | 0 | 3 | 4 |  |
| HSA | 112 | Group Processes I | 1 | 0 | 3 | 2 |  |
| HSA | 112P | Practicum I | 1 | 0 | 6 | 3 |  |
| HSA | 113 | Group Processes II | 1 | 0 | 3 | 2 |  |
| HSA | 113P | Practicum II | 1 | 0 | 6 | 3 | 101 |
| HSA | 114 | Interviewing \& Counseling | 3 | 2 | 0 | 4 |  |
| HSA | 115 | Field Experience | 2 | 0 | 30 | 12 |  |
| HSA | 116 | Group Processes III | 1 | 0 | 3 | 2 |  |
| HSA | 201 | Mental Health Care | 4 | 0 | 3 | 5 |  |
| HSA | 202 | Orientation Lab II | 0 | 2 | 0 | 1 |  |
| HSA | 209 | Treatment Modalities | 4 | 2 | 0 | 5 |  |
| HSA | 210P | Practicum III | 1 | 0 | 6 | 5 |  |
| HSA | 215 | Human Services Seminar | 3 | 0 | 0 | 3 |  |
| HSA | 220 | Activities in Human Services | 2 | 2 | 0 | 3 |  |
| HSA | 225 | Crisis Intervention | 4 | 0 | 0 | 4 |  |
| PSY | 221 | Learning and Behavior | 5 | 2 | 0 | 6 |  |
| PSY | 223 | Addictive Behavior | $\underline{3}$ | 0 | 0 | 3 |  |
|  |  | TOTALS | 42 | 12 | 63 | 69 |  |

## RELATED COURSES:

| PSY | 120 | Human Growth and Development | 3 | 0 | 0 | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PSY | 211 | Behavior Disorders | 5 | 0 | 0 | 5 |
| PSY | 222 | Exceptionality | 5 | 0 | 0 | 5 |
| PSY | 225 | Tests and Measurements | 3 | 0 | 0 | 3 |
| PSY | 230 | Psychology and Physiology of Aging | 3 | 0 | 0 | 3 |
| SOC | 160 | Courtship and Marriage | $\underline{5}$ | 0 | 0 | $\underline{5}$ |
|  |  | TOTALS | 24 | 0 | 0 | 24 |

GENERAL EDUCATION:

| ENG | 101 | Grammar*+ | 3 | 0 | 0 | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ENG | 102 | Composition+ | 3 | 0 | 0 | 3 |
| ENG | 103 | Report Writing | 3 | 0 | 0 | 3 |
| ENG | 204 | Oral Communications+ | 3 | 0 | 0 | 3 |
|  | or |  |  |  |  |  |
| SPH | 160 | Public Speaking | 3 | 0 | 0 | 3 |
| PSY | 150 | General Psychology I | 4 | 0 | 0 | 4 |
|  | or |  |  |  |  |  |
| PSY | 102 | General Psychology | 3 | 0 | 0 | 3 |
| ORI | 100 | New Student Seminar | 1 | 0 | 0 | 1 |
| SOC | 150 | Sociology I | 5 | 0 | 0 | 5 |
|  | or |  |  |  |  |  |
| SOC | 102 | Principles of Sociology | 3 | 0 | $\underline{0}$ | 3 |
|  |  | TOTALS | 19-22 | 0 | 0 | 19-22 |
| ELECTIVES*** |  |  | 5 | 0 | 0 | 5 |
| TOTAL CREDIT |  | FOR AAS DEGREES | 90-93 | 12 | 63 | 117-120 |

*If students, as a result of placement tests, are found to be deficient in English skills, they will be required to take the appropriate courses from the following list:

ENG 091, 092, 093, 100G, 100A, 101A, 102A
+College transfer courses may be substituted.
**Students enrolled in this curriculum may select elective credits and make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson. Students may elect to participate in cooperative education field experience. For information pertaining to cooperative education credits, see page 55 .

Students enrolled full-time and making satisfactory progress should complete this program in seven quarters.

## INDUSTRIAL MAINTENANCE TECHNOLOGY

The Industrial Maintenance Technology curriculum is designed specifically to teach individuals to maintain, repair and service sophisticated production equipment such as automated and numerically controlled machines used by industry. Training in theory and practical skills will provide the knowledge needed to inspect, diagnose, repair and install industrial, electrical and mechanical equipment.

The curriculum is structured to provide employable skills early in the program in areas such as welding, machine shop, hydraulics and pneumatics, metallurgy and electricity. Students who demonstrate leadership qualities, aptitude and interest in the field may continue the second year of the program to study maintenance management, rigging, material handling, quality control and supervision.

## INDUSTRIAL MAINTENANCE TECHNOLOGY COURSE AND HOUR REQUIREMENTS


$\left.\begin{array}{lllllll}\text { ISC } & 102 & \begin{array}{l}\text { Industrial Safety } \\ \text { Industrial Organization and } \\ \text { Management }\end{array} & 201 & 3 & 0 & 0\end{array}\right] 3$

GENERAL EDUCATION:

| ENG | 101 | Grammar* | 3 | 0 | 0 | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ENG | 103 | Report Writing | 3 | 0 | 0 | 3 |
| ENG | 204 | Oral Communications | 3 | 0 | 0 | 3 |
| ORI | 100 | New Student Seminar | 1 | 0 | 0 | 1 |
| PSY | 206 | Applied Psychology | 3 | 0 | 0 | 3 |
|  |  | Social Science Elective*** | 6 | 0 | 0 | 6 |
|  |  | TOTALS | 19 | 0 | 0 | 19 |
| ELECTIVES** |  |  | 6 | 0 | 0 | 6 |
| TOTAL CREDITS FOR AAS DEGREE |  |  | 93 | 0 | 69 | 116 |

*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 092, 093, 094, 100G, 100A, 101A, 102A; MAT 099, 100R
**Students enrolled in this curriculum may select elective credits from the list of recommended electives and make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.

## ***Recommended Social Science Electives:

PSY 101, 102, 104, 120, 228; SOC 100, 101, 102, 103; SSC 101
WORK EXPERIENCE: Up to 6 credit hours may be taken in lieu of approved courses as indicated by asterisk. For information pertaining to cooperative education credits, see page 55.

Students enrolled three-quarter time and making satisfactory progress should complete this program in thirteen quarters. Currently, this program is offered in the evening only.

## INDUSTRIAL MANAGEMENT TECHNOLOGY

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 entry supervisory or middle-management positions, to provide an educational program for upgrading or retraining, and to provide an opportunity for the individual wanting to fulfill professional or general interest needs.

## INDUSTRIAL MANAGEMENT TECHNOLOGY COURSE AND HOUR REQUIREMENTS

| Title |  |  | C | L | SH/CL | CH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ACT | 150 | Principles of Accounting | 3 | 2 | 0 | 4 |
| BUS | 123 | Business Finance | 3 | 0 | 0 | 3 |
| BUS | 166 | Business Law I | 3 | 0 | 0 | 3 |
| BUS | 229 | Taxes | 3 | 2 | 0 | 4 |
| BUS | 235 | Business Management | 3 | 0 | 0 | 3 |
| BUS | 239 | Marketing | 5 | 0 | 0 | 5 |
| BUS | 272 | Principles of Supervision | 3 | 0 | 0 | 3 |
| DFT | 101 | Technical Drafting | 1 | 3 | 0 | 2 |
| ISC | 102 | Industrial Safety | 3 | 0 | 0 | 3 |
| ISC | 110 | Readings in Industrial Management | 1 | 0 | 0 | 1 |
| ISC | 120 | Readings in Industrial Management | 1 | 0 | 0 | 1 |
| ISC | 130 | Readings in Industrial Management | 1 | 0 | 0 | 1 |
| ISC | 202 | Quality Control | 3 | 0 | 0 | 3 |
| ISC | 203 | Motion Economy | 3 | 0 | 0 | 3 |
| ISC | 204 | Value Analysis | 3 | 0 | 0 | 3 |
| ISC | 209 | Plant Layout | 4 | 0 | 0 | 4 |
| ISC | 213 | Production Planning | 4 | 0 | 0 | 4 |
| ISC | 231 | Manufacturing Processes | 5 | 0 | 0 | 5 |
| ISC | 232 | Labor Relations | $\underline{4}$ | 0 | 0 | 4 |
|  |  | TOTALS | 54 | 7 | 0 | 59 |

RELATED COURSES:

| ECO | 150 | Economics I | 3 | 0 | 0 | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ECO | 151 | Economics II | 3 | 0 | 0 | 3 |
| EDP | 112 | BASIC I | 2 | 2 | 0 | 3 |
| EDP | 114 | Introduction to Computer Concepts | 3 | 0 | 0 | 3 |
| PSY | 104 | Human Relations | 3 | 0 | 0 | 3 |
| PSY | 206 | Applied Psychology | 3 | 0 | 0 | 3 |
| SOC | 103 | Social Problems | $\underline{3}$ | $\underline{0}$ | - | $\underline{3}$ |

GENERAL EDUCATION:

| ENG | 101 | Grammar* | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| ENG | 102 | Composition | 3 | 0 | 0 | 3 |
| ENG | 103 | Report Writing | 3 | 0 | 0 | 3 |
| ENG | 204 | Oral Communications | 3 | 0 | 0 | 3 |
| MAT | 101 | Algebra I | 5 | 0 | 0 | 5 |
| ORI | 100 | New Student Seminar | 1 | 0 | 0 | 1 |
| PHY | 120 | Introduction to the Metric |  |  |  |  |
|  | System | TOTALS | $\frac{3}{21}$ | $\frac{0}{0}$ | $\frac{0}{0}$ | $\frac{3}{21}$ |
|  |  | 10 | 0 | 0 | 10 |  |
|  |  | 106 | 10 | 0 | 111 |  |

*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 091, 092, 093, 100G, 100A, 101A, 102A; MAT 099, 100R, 100
+Students enrolled in this curriculum may select elective credits from approved courses and make course substitutions on a credit-for-credit basis upon approval by the student's department chairperson.

WORK EXPERIENCE: Up to 10 credit hours may be taken in lieu of approved courses as indicated by double asterisk. For information pertaining to cooperative education credits, see page 55.

Students enrolled one-half to three-quarter time and making satisfactory progress should complete this program in sixteen quarters. Currently, this program is offered in the evening only.

## MANUFACTURING ENGINEERING TECHNOLOGY

The primary objective of the Manufacturing Engineering Technology curriculum is the training of personnel to assist the engineer or small industry in planning, tooling, operating, servicing, and supervising manufacturing operations. The curriculum provides a basic background of mechanical and related theory, with specific skills in the use of manufacturing and testing equipment. Students are given experiences in operating and servicing machines, accompanied by general education and management courses.

A graduate of the program may qualify for an entry position in one of several manufacturing functions: methods analysis, production scheduling, quality control, materials testing, plant layout, time study, machine tooling, maintenance, and equipment and instrument work.

## MANUFACTURING ENGINEERING TECHNOLOGY COURSE AND HOUR REQUIREMENTS

## Title

MAJOR COURSES:

| DFT | 110 | Computer-Aided Drafting I (CAD) | 1 | 0 | 3 | 2 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| DFT | 111 | Computer-Aided Drafting II (CAD) | 1 | 0 | 3 | 2 |
| ECO | 201 | Cost Benefit Analysis <br> Industrial Organization and | 3 | 0 | 0 | 3 |
| ISC | 201 |  |  |  |  |  |
| ISC | 202 | Management | 3 | 0 | 0 | 3 |
| Quality Control | 3 | 0 | 0 | 3 |  |  |
| ISC | 203 | Motion Economy | 3 | 0 | 0 | 3 |
| ISC | 209 | Plant Layout** | 4 | 0 | 0 | 4 |
| MEC | 101 | Machine Processes | 3 | 0 | 3 | 4 |
| MEC | 102 | Machine Processes | 3 | 0 | 3 | 4 |
| MEC | 104 | Applied Mechanics | 5 | 0 | 0 | 5 |
| MEC | 201 | Manufacturing Processes I | 2 | 0 | 2 | 3 |
| MEC | 202 | Manufacturing Processes II | 2 | 0 | 2 | 3 |
| MEC | 205 | Strength of Materials | 3 | 2 | 0 | 4 |
| MEC | 210 | Physical Metallurgy | 3 | 0 | 3 | 4 |
| MEC | 237 | Control Systems | 3 | 2 | 0 | 4 |
| MEC | 235 | Hydraulics and Pneumatics | 3 | 0 | 3 | 4 |
| MEC | 240 | Introduction to Robotics | 3 | 2 | 0 | 4 |
| MEC | 270 | Introduction to CNC Machining | 1 | 2 | 0 | 2 |
| MEC | 272 | Programming of CNC Equipment | $\underline{2}$ | $\underline{2}$ | $\underline{0}$ | $\underline{3}$ |
|  |  | $\quad$ TOTALS | 51 | 10 | 22 | 64 |

RELATED COURSES:

| CHM | 101 | Chemistry | 4 | 2 | 0 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| EDP | 112 | BASIC I** | 2 | 2 | 0 | 3 |
| MAT | 101 | Algebra I | 5 | 0 | 0 | 5 |
| MAT | 102 | Trigonometry | 5 | 0 | 0 | 5 |
| MAT | 103 | Algebra II | 5 | 0 | 0 | 5 |
| MAT | 104 | Calculus I | 3 | 0 | 0 | 3 |


| MEC | 250 | MET Seminar** | 1 | 0 | 0 | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| PHY | 101 | Technical Physics | 4 | 2 | 0 | 5 |
| PHY | 102 | Technical Physics | 4 | 2 | 0 | 5 |
| PHY | 104 | Technical Physics | $\frac{3}{26}$ | $\frac{2}{10}$ | $\frac{0}{0}$ | $\frac{4}{41}$ |

GENERAL EDUCATION:

| ECO | 150 | Economics I | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :---: | :--- | :--- | :--- |
| ENG | 101 | Grammar* | 3 | 0 | 0 | 3 |
| ENG | 102 | Composition | 3 | 0 | 0 | 3 |
| ENG | 103 | Report Writing | 3 | 0 | 0 | 3 |
| ENG | 204 | Oral Communications | 3 | 0 | 0 | 3 |
| ORI | 100 | New Student Seminar | 1 | 0 | 0 | 1 |
| PSY | 206 | Applied Psychology | $\underline{3}$ | $\underline{0}$ | $\underline{0}$ | $\frac{3}{19}$ |
| TOTALS | 10 | 0 | 19 |  |  |  |
|  |  |  | 106 | 20 | 22 | 124 |

*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 091, 092, 093, 100G, 100A, 101A, 102A; MAT 099, 100R, 100
**Students enrolled in this curriculum may select elective credits from approved courses and make substitutions on a credit-for-credit basis upon approval by the student's department chairperson.

WORK EXPERIENCE: Up to 8 credit hours may be taken in lieu of approved courses as indicated by double asterisk. For information pertaining to cooperative education credits, see page 55 .

Students enrolled full-time and making satisfactory progress should complete this program in seven quarters.

## MEDICAL SECRETARY

The purposes of the Secretarial - Medical curriculum are 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; and (3) provide an opportunity for individuals wanting to fulfill professional or general interest needs.

These purposes will be fulfilled through skill development in the areas of medical typewriting, shorthand, transcription, 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.

## MEDICAL SECRETARY COURSE AND HOUR REQUIREMENTS

Title
MAJOR COURSES:

| BUS | 102 | Beginning Typewriting |
| :--- | :--- | :--- |
| BUS | 103 | Intermediate Typewriting |
| BUS | 104 | Advanced Typewriting |
| BUS | 112 | Filing |
| BUS | 113 | Machine Transcription I |
| BUS | 115 M | Medical Law and Ethics |
| BUS | 117 | Electronic Calculator: Sec |
| BUS | 183 M | Medical Typing Practice |
| BUS | 184 M | Terminology and Voc I: Medical |
| BUS | 185 M | Terminology and Voc II: Medical |
| BUS | 186 M | Terminology and Voc III: Medical |
| BUS | 188 | Medical Transcription |
| BUS | 189 | Medical Transcription II |
| BUS | 192 | Word Processing Applications I |
| BUS | 193 | Word Processing Applications II |
| BUS | 216 | Office Procedures |
| BUS | 248 | Medical Insurance |

TOTALS
RELATED COURSES:

| ACT | 150 | Principles of Accounting | 3 | 2 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| BIO | 100 | Introduction to Human Biology | 5 | 0 | 0 | 5 |
| BUS | 134 | Personal Grooming | 3 | 0 | 0 | 3 |
| BUS | 165 | Introduction to Business | 5 | 0 | 0 | 5 |
| BUS | 170 | Introduction to Micro. <br> Applications | 2 | 2 | 0 | 3 |


| BUS | 214 | Business Seminar | 2 | 0 | 0 | 2 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| ENG | 106 | Spelling Techniques | 3 | 0 | 0 | 3 |
| ENG | 206 | Business Communications | 3 | 0 | 0 | 3 |
| MAT | 110 | Business Mathematics | $\frac{5}{30}$ | $\frac{0}{6}$ | $\frac{0}{0}$ | $\frac{5}{33}$ |

GENERAL EDUCATION:

| ENG | $101 S$ | Grammar* | 5 | 0 | 0 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| ENG | 102 | Composition | 3 | 0 | 0 | 3 |
| ENG | 204 | Oral Communications | 3 | 0 | 0 | 3 |
| ORI | 100 | New Student Seminar | 1 | 0 | 0 | 1 |
| SOC | 100 | Job Search and Career Planning | 3 | 0 | 0 | 3 |
|  |  | Social Science Elective** | $\underline{5}$ | $\underline{0}$ | $\underline{0}$ | $\frac{5}{20}$ |
|  |  | TOTALS | 20 | 0 | 0 | 20 |

WORK EXPERIENCE:

| COE 101B | Cooperative Education Field <br> Experience + | 0 | 0 | 20 | 2 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| ELECTIVES |  | 2 | 0 | 0 | 2 |
| TOTAL CREDITS FOR AAS DEGREE | 103 | 28 | 20 | 116 |  |

*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 091, 092, 093, 094, 095, 100A, 101, 101A, 102A; MAT 099, 100R
**Students enrolled in this curriculum may make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.

## **Recommended Social Science Electives:

PSY 101, 102, 115, 116, 120, 150, 151, 170, 180, 206, 228, 230; SOC 101, 102, 103, 150, 160, 170, 221.
+For information pertaining to cooperative education credits, see page 55.

Students enrolled full-time and making satisfactory progress should complete this program in seven quarters.

## NURSING EDUCATION OPTIONS

The Nursing Education Options: Associate Degree with Practical Nursing is a unique nursing curriculum designed to prepare graduates to practice as a practical nurse (LPN) or a registered nurse (RN). Students who choose to exit after four (4) quarters have received fundamental preparation in nursing enabling them to be eligible to take the licensing examination (NCLEX-PN) required for practice as a Licensed Practical Nurse. Graduates of the second year have developed the knowledge and skills which will enable them to be eligible to take the licensing examination (NCLEX-RN) required to practice as a Registered Nurse. Licensed Practical Nurses who meet specific criteria may also enter this program with advanced credits toward the Associate of Applied Science Degree.
The first year graduate possesses a sound basic knowledge of nursing theory and proficiency in fundamental nursing skills. The graduate may provide care and treatment to selected patients under the supervision of a registered nurse or physician. The practical nurse graduate is prepared specifically to: (1) participate in assessing the patient's physical and mental health; (2) record and report the results of the nursing assessment; (3) participate in implementing the health care plan; (4) reinforce the teaching and counseling of a registered nurse, physician, or dentist; and (5) record and report the nursing care rendered and the patient's response to that care.
The graduate of the second year is prepared to carry out measures as well as medically delegated procedures utilizing the principles and theories of nursing and the sciences. The associate degree graduate is prepared to: (1) assess the patient's physical and mental health; (2) record, and report the results of the nursing assessment; (3) plan, initiate, and deliver and evaluate appropriate nursing acts: (4) teach, delegate to or supervise other personnel in implementing the treatment regimen; (5) collaborate with other health care providers in determining the appropriate health care for a patient; (6) implement the treatment and pharmaceutical regimen prescribed by any person authorized by State law to prescribe such a regimen; (7) provide teaching and counseling about the patient's health care; (8) report and record the plan for care, nursing care given, and the patient's response to that care; and (9) supervise, teach, and evaluate those who perform or are preparing to perform nursing functions.

## NURSING EDUCATION OPTIONS COURSE AND HOUR REQUIREMENTS

## Title

C $\quad$ SH/CL CH
MAJOR COURSES:

| NUR | 101 | Fundamentals of Nursing | 6 | 4 | 3 | 9 |
| :--- | :--- | :--- | :---: | :---: | :---: | :---: |
| NUR | 102 | Medical-Surgical Nursing I | 8 | 2 | 12 | 13 |
| NUR | 103 | Medical-Surgical Nursing III | 8 | 2 | 12 | 13 |
| NUR | 104 | Maternal-Child Nursing I | 8 | 0 | 12 | 12 |
| NUR | 110 | Pharmacology | 2 | 0 | 0 | 2 |
| NUR | 121 | Health Assessment | 2 | 0 | 0 | 2 |
| NUR | 131 | Nursing Seminar | 2 | 0 | 0 | 2 |
| NUR | 201 | Medical-Surgical Nursing III | 6 | 0 | 15 | 11 |
| NUR | 202 | Psychiatric Nursing | 4 | 0 | 9 | 7 |
| NUR | 203 | Medical-Surgical Nursing II | 6 | 0 | 15 | 11 |
| NUR | 204 | Patient Care Management | $\underline{4}$ | $\underline{0}$ | $\underline{6}$ | $\underline{6}$ |
|  |  | TOTALS | 56 | 8 | 84 | 88 |
| *NUR | 200 | Transition Nursing | 4 | 2 | 12 | 9 |

RELATED COURSES:

| BIO | 150 | Human Anatomy \& Physiology I | 3 | 2 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| BIO | 151 | Human Anatomy \& Physiology II | 3 | 2 | 0 | 4 |
| BIO | 152 | Human Anatomy \& Physiology III | 3 | 2 | 0 | 4 |
| BIO | 206 | Microbiology | 3 | 2 | 0 | 4 |
| HEA | 111 | Cardiopulmonary Resuscitation <br> MAT | 114 | 1 | 0 | 0 |
| Basic Math for Health |  |  |  |  |  |  |
| PSY | 180 | Professions <br>  <br> $\quad$Abnormal Psychology <br> TOTALS | 2 | 0 | 0 | 2 |
|  |  | $\underline{3}$ | $\underline{0}$ | $\underline{0}$ | $\underline{3}$ |  |

GENERAL EDUCATION:

| +ENG | 101 | Grammar | 3 | 0 | 0 | 3 |
| :---: | :--- | :--- | :---: | :---: | :---: | :---: |
| +ENG | 102 | Composition | 3 | 0 | 0 | 3 |
| ORI | 100 | New Student Seminar | 1 | 0 | 0 | 1 |
| PSY | 120 | Human Growth and Development | 3 | 0 | 0 | 3 |
| PSY | 150 | General Psychology I | 4 | 0 | 0 | 4 |
| SOC | 150 | Sociology I | $\underline{5}$ | $\underline{0}$ | $\underline{0}$ | $\frac{5}{19}$ |
|  |  | 19 | 0 | 0 | 19 |  |
| TOTALS | 93 | 16 | 84 | 129 |  |  |

+May substitute college transfer English.
*Licensed practical nurses applying for advanced standing must take NUR 200 the summer prior to entering the second year of the program.

Cooperative Education not allowed.
Students enrolled full-time and making satisfactory progress should complete this program in seven quarters.

The Paralegal Technology curriculum trains individuals to work under the general direction of lawyers, to relieve lawyers of routine matters, and to assist them in the conduct of more complicated and difficult tasks. The legal technician should be capable of doing independent legal work under the supervision of a lawyer and search out information and court facts for the lawyer. Training will include general subjects such as English, accounting and psychology, as well as specialized legal courses such as legal definitions, court systems, laws, and techniques of investigation.

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

## PARALEGAL TECHNOLOGY COURSE AND HOUR REQUIREMENTS

| Title |  |  | C | L | SH/CL | CH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| BUS | 166 | Business Law I | 3 | 0 | 0 | 3 |
| BUS | 167 | Business Law II | 3 | 0 | 0 | 3 |
| CJC- | 101 | Intro. to Criminal Justice | 5 | 0 | 0 | 5 |
| CJC | 102 | Legal Research I | 1 | 2 | 0 | 2 |
| CJC | 109 | Interviewing | 3 | 0 | 0 | 3 |
| CJC | 112 | Motor Vehicle Law | 3 | 0 | 0 | 3 |
| CJC | 113 | Corrections Law | 3 | 0 | 0 | 3 |
| CJC | 115 | Criminal Law I | 3 | 0 | 0 | 3 |
| CJC | 116 | Criminal Law II | 3 | 0 | 0 | 3 |
| CJC | 125 | Criminal Procedures and N.C. Court System | 3 | 0 | 0 | 3 |
| CJC | 204 | Evidence Photography | 3 | 3 | 0 | 4 |
| CJC | 205 | Evidence | 3 | 0 | 0 | 5 |
| CJC | 210 | Techniques of Investigation | 4 | 2 | 0 | 5 |
| CJC | 235 | Forensic Science | 3 | 2 | 0 | 4 |
| LEC | 203 | Legal Research II | 3 | 0 | 0 | 3 |
| LEC | 207 | Law Office Management | 3 | 0 | 0 | 3 |
| LEC | 210 | Real Property and Title Abstracting I | 2 | 2 | 0 | 3 |
| LEC | 211 | Real Property and Title Abstracting II | 2 | 2 | 0 | 3 |


| LEC | 212 | Real Estate Transactions | 2 | 2 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| LEC | 220 | Family Law | 3 | 0 | 0 | 3 |
| LEC | 224 | Torts | 3 | 0 | 0 | 3 |
| LEC | 229 | Taxes | 3 | 0 | 0 | 3 |
| LEC | 232 | Estate Administration | 3 | 0 | 0 | 3 |
| LEC | 240 | Civil Litigation | $\underline{3}$ | $\underline{0}$ | $\underline{0}$ | $\underline{3}$ |
|  |  | TOTALS | 70 | 15 | 0 | 77 |

## RELATED COURSES:

| ACT | 150 | Principles of Accounting | 3 | 2 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| CHM | 101 | Chemistry | 4 | 2 | 0 | 5 |
| CJC | 211 | Criminalistics | 4 | 2 | 0 | 5 |
| HEA | 110 | First Aid and Medical |  |  |  |  |
|  |  | Terminology | 2 | 2 | 0 | 3 |
| MAT | 101 | Algebra I | 5 | 0 | 0 | 5 |
| POL | 102 | National Government | 3 | 0 | 0 | 3 |
| POL | 103 | State and Local Government | $\underline{3}$ | $\underline{0}$ | $\underline{0}$ | $\frac{3}{2}$ |
|  |  | TOTALS | 24 | 8 | 0 | 28 |

## GENERAL EDUCATION:

| ENG | 101 | Grammar* | 3 | 0 | 0 | , |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ENG | 102 | Composition | 3 | 0 | 0 | 3 |
| ENG | 103 | Report Writing | 3 | 0 | 0 | 3 |
| ENG | 204 | Oral Communications | 3 | 0 | 0 | 3 |
| ENG | 206 | Business Communications | 3 | 0 | 0 | 3 |
| ORI | 100 | New Student Seminar | 1 | 0 | 0 | 1 |
| PSY | 102 | General Psychology | 3 | $\underline{0}$ | $\underline{0}$ | 3 |
|  |  | TOTALS | 19 | 0 | 0 | 19 |
| TOTAL CREDITS FOR AAS DEGREE |  |  | 113 | 23 | 0 | 124 |

*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 091, 092, 093, 100G, 100A, 101A, 102A; MAT 099, 100R, 100
Students enrolled in this curriculum may select elective credits from the list of recommended electives or from other related courses and make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.
${ }^{* *}$ CJC 151, 152, 153, 154, 155, 156 may be substituted for CJC 101 Introduction to Criminal Justice, which is a 5 credit-hour course.

WORK EXPERIENCE: Up to 8 credit hours may be taken in lieu of approved courses. For information pertaining to cooperative education credits, see page 55.

Students enrolled full-time and making satisfactory progress should complete this program in seven quarters.

## RADIOLOGIC TECHNOLOGY

The Radiologic Techology curriculum prepares graduates to be competent Medical Radiographers. The radiographer is a skilled person qualified by technological education to provide patient services using imaging modalities (as directed by physicians qualified to order and/or perform radiologic procedures) by: (1) Applying knowledge of the principles of radiation protection for the patient, self and others; (2) Applying knowledge of anatomy, positioning, and radiographic techniques to accurately demonstrate anatomical structures on a radiograph; (3) Determining exposure factors to achieve optimum radiographic technique with a minimum of radiation exposure to the patient; (4) Examining radiographs for the purpose of evaluating technique, positioning, and other pertinent technical qualities; (5) Exercising discretion and judgment in the performance of medical imaging procedures; (6) Providing patient care essential to radiologic procedures; and (7) Recognizing emergency patient conditions and initiating life-saving first aid.
Graduates may be employed in Radiology departments in hospitals, clinics, physicians' offices, research and medical laboratories, federal and state agencies, and industry.

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

Individuals desiring a career in radiologic technology should take courses in biology, algebra, and chemistry and/or physics prior to entering the program.

## RADIOLOGIC TECHNOLOGY COURSE AND HOUR REQUIREMENTS

| Title |  | C | L. | SH/CL | CH |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| MAJOR | COURSES: |  |  |  |  |  |
| PHY | 107 | Radiologic Physics | 3 | 2 | 0 | 4 |
| RDT | 101 | Radiologic Technology I | 4 | 2 | 0 | 5 |
| RDT | 102 | Radiologic Techology II | 4 | 2 | 0 | 5 |
| RDT | 103 | Radiologic Technology III | 4 | 2 | 0 | 5 |
| RDT | 111 | Radiologic Positioning | 4 | 2 | 0 | 5 |
| RDT | 112 | Clinical Education | 2 | 0 | 12 | 6 |
| RDT | 113 | Clinical Education | 0 | 0 | 24 | 8 |
| RDT | 114 | Clinical Education | 0 | 0 | 27 | 9 |
| RDT | 201 | Topographic Anatomy | 2 | 0 | 0 | 2 |
| RDT | 204 | Radiologic Technology IV | 4 | 2 | 0 | 5 |
| RDT | 205 | Radiologic Technology V | 4 | 2 | 0 | 5 |
| RDT | 208 | Radiologic Technology VI | 6 | 0 | 0 | 6 |
| RDT | 210 | Pathology | 3 | 0 | 0 | 3 |


| RDT | 215 | Clinical Education | 1 | 0 | 33 | 12 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| RDT | 216 | Clinical Education | 0 | 0 | 24 | 8 |
| RDT | 217 | Clinical Education | 0 | 0 | 30 | 10 |
| RDT | 218 | Clinical Education | $\underline{0}$ | $\frac{0}{41}$ | $\frac{27}{14}$ | $\frac{9}{177}$ |
|  |  | TOTALS | 107 |  |  |  |

RELATED COURSES:

| BIO | 107 | Anatomy and Physiology I | 4 | 2 | 0 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| BIO | 108 | Anatomy and Physiology II | 4 | 2 | 0 | 5 |
| BIO | 210 | Radiation Biology | 4 | 0 | 0 | 4 |
| BUS | 166 | Business Law I | 3 | 0 | 0 | 3 |
| BUS | 272 | Principles of Supervision | 3 | 0 | 0 | 3 |
| MAT | 101 | Algebra I | $\frac{5}{2}$ | $\frac{0}{4}$ | $\frac{0}{2}$ | $\frac{5}{25}$ |

GENERAL COURSES:

| ENG | 101 | Grammar | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| ENG | 102 | Composition | 3 | 0 | 0 | 3 |
| ENG | 103 | Report Writing | 3 | 0 | 0 | 3 |
| ORI | 100 | New Student Seminar | 1 | 0 | 0 | 1 |
| PSY | 102 | General Psychology | 3 | 0 | 0 | 3 |
| PSY | 104 | Human Relations | 3 | 0 | 0 | 3 |
| SOC | 102 | Principles of Sociology | $\frac{3}{2}$ | $\frac{0}{2}$ | $\frac{0}{2}$ | $\frac{3}{19}$ |
|  |  | TOTALS | 19 | 0 | 0 | 19 |
|  |  | 3 | 0 | 0 | 3 |  |
| ELECTIVES |  | 86 | 18 | 177 | 154 |  |
| TOTAL CREDITS FOR AAS DEGREE |  |  |  |  |  |  |

Cooperative Education not allowed.
Students enrolled full-time and making satisfactory progress should complete this program in eight quarters.

## RESPIRATORY THERAPY TECHNOLOGY

The Respiratory Therapy Technology curricula offer career education options for respiratory therapists and/or respiratory therapy technicians.

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

The technician's role does not require the exercising of independent, clinical judgment; however, the technician is expected to adjust or modify therapeutic techniques within well-defined procedures based on a limited range of patient responses. Therefore, the effective use of the technician, especially in the critical care setting, requires the supervision of a respiratory therapist or a physician experienced in respiratory care. Knowledge and skills for performing these functions are usually achieved through one or more years of academic and clinical preparation.
Graduates of the technical and therapist curricula are eligible to apply for admission to the Entry Level Respiratory Therapy practitioner (CRITT) examination by the National Board for Respiratory Care. Graduates of the therapist level curriculum are eligible to apply for admission to the Advanced Respiratory Care Practitioner (RRT) examination.

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

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

# RESPIRATORY THERAPY TECHNOLOGY COURSE AND HOUR REQUIREMENTS 

Title C L SH/CL CH
MAJOR COURSES:

| RTH | 101 | Respiratory Therapy I | 3 | 2 | 0 | 4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| RTH | 102 | Respiratory Therapy II |  | 2 | 0 | 4 |
| RTH | 103 | Clinical Practice I | 0 | 0 | 6 | 2 |
| RTH | 104 | Cardiopulmonary Anatomy and Physiology | 3 | 0 | 0 | 3 |
| RTH | 105 | Pharmacology | 3 | 0 | 0 | 3 |
| RTH | 106 | Clinical Practice II | 0 | 0 | 15 | 5 |
| RTH | 107 | Acid Base Chemistry | 3 | 0 | 0 | 3 |
| RTH | 108 | Continuous Mechanical Ventilation I | 3 | 2 | 0 | 4 |
| RTH | 109 | Clinical Practice III | 0 | 0 | 15 | 5 |
| RTH | 110 | Pathology | 4 | 0 | 0 | 4 |
| RTH | 111 | Diagnostic and Therapeutic Procedures | 2 | 2 | 0 | 3 |
| RTH | 201 | Continuous Mechanical Ventilation II | 2 | 2 | 0 | 3 |
| RTH | 202 | Clinical Practice IV | 0 | 0 | 18 |  |
| RTH | 203 | Perinatology and Pediatrics | 2 | 2 | 0 | 3 |
| RTH | 204 | Pediatric Pathophysiology |  | 0 | 0 |  |
| RTH | 205 | Cardiopulmonary Function | 3 | 2 | 0 | 4 |
| RTH | 206 | Clinical Practice V | 0 | 0 | 15 |  |
| RTH | 207 | Clinical Practice VI | 0 | 0 | 24 | 8 |
| RTH | 208 | Respiratory Therapy Seminar | $\underline{3}$ | 0 | $\underline{0}$ | $\underline{3}$ |
|  |  | TOTALS | 37 | 14 | 93 | 75 |

RELATED COURSES:

| BIO | 107 | Anatomy \& Physiology I | 4 | 2 | 0 | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| BIO | 108 | Anatomy \& Physiology II | 4 | 2 | 0 | 5 |
| BIO | 206 | Microbiology | 3 | 2 | 0 | 4 |
| CHM | 110 | Chemistry for Allied Health | 3 | 2 | 0 | 4 |
| MAT | 101 | Algebra I | 5 | 0 | 0 | 5 |
| PHY | 108 | Physics for Respiratory |  |  |  |  |
|  |  | Therapists | 3 | $\underline{2}$ | $\underline{0}$ | 4 |
|  |  | TOTALS | 22 | 10 | 0 | 27 |

GENERAL EDUCATION:

| ENG | 101 | Grammar | 3 | 0 | 0 | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ENG | 102 | Composition | 3 | 0 | 0 | 3 |
| ENG | 204 | Oral Communications | 3 | 0 | 0 | 3 |
| ORI | 100 | New Student Seminar | 1 | 0 | 0 | 1 |
| PSY | 104 | Human Relations | 3 | 0 | 0 |  |
| PSY | 102 | General Psychology | 3 | 0 | 0 | 3 |
| SOC | 102 | Principles of Sociology | 3 | $\underline{0}$ | $\underline{0}$ | 3 |
|  |  | TOTALS | 19 | 0 | 0 | 19 |
| TOTAL CREDITS FOR AAS DEGREE |  |  | 78 | 24 | 93 | 121 |

Cooperative Education not allowed.
Students enrolled full-time and making satisfactory progress should complete this program in seven quarters.

## SECRETARIAL SCIENCE

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

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

## SECRETARIAL SCIENCE COURSE AND HOUR REQUIREMENTS

## Title <br> MAJOR COURSES:

C L SH/CL CH

| BUS | 102 | Beginning Typewriting | 2 | 3 | 0 | 3 |
| :---: | :--- | :--- | :--- | :--- | :--- | :--- |
| BUS | 103 | Intermediate Typewriting | 2 | 3 | 0 | 3 |
| BUS | 104 | Advanced Typewriting | 2 | 3 | 0 | 3 |
| BUS | 106 | Beginning Shorthand | 4 | 6 | 0 | 7 |
| BUS | 107 | Intermediate Shorthand | 4 | 6 | 0 | 7 |
| BUS | 108 | Advanced Shorthand | 4 | 6 | 0 | 7 |
| BUS | 112 | Filing | 3 | 0 | 0 | 3 |
| BUS | 113 | Machine Transcription I | 5 | 0 | 0 | 5 |
| BUS | 114 | Machine Transcription II | 5 | 0 | 0 | 5 |
| BUS | 117 | Electronic Calculator-Sec. | 2 | 3 | 0 | 3 |
| BUS | 134 | Personal Grooming | 3 | 0 | 0 | 3 |
| BUS | 192 | Word Processing Applications I | 2 | 3 | 0 | 3 |
| BUS | 193 | Word Processing Applications II | 2 | 3 | 0 | 3 |
| +BUS | 216 | Office Procedures | 5 | 0 | 0 | 5 |
| BUS | 259 | Office Simulation | $\underline{2}$ | $\underline{3}$ | $\underline{0}$ | $\frac{3}{6}$ |
|  |  | TOTALS | 47 | 39 | 0 | 63 |

RELATED COURSES:

| ACT | 150 | Principles of Accounting | 3 | 2 | 0 | 4 |
| :---: | :---: | :--- | :--- | :--- | :--- | :--- |
| BUS | 165 | Introduction to Business | 5 | 0 | 0 | 5 |
| BUS | 166 | Business Law I | 3 | 0 | 0 | 3 |
| BUS | 170 | Introduction to Microcomputer <br> Applications | 2 | 2 | 0 | 3 |
| \%BUS | 214 | Business Seminar | 2 | 0 | 0 | 2 |
| BUS | 271 | Office Management | 3 | 0 | 0 | 3 |
| ECO | 108 | Consumer Economis | 3 | 0 | 0 | 3 |
| ENG | 106 | Spelling Techniques | 3 | 0 | 0 | 3 |
| ENG | 206 | Business Communications | 3 | 0 | 0 | 3 |
| MAT | 110 | Business Mathematics | $\underline{5}$ | $\underline{0}$ | $\underline{0}$ | $\frac{5}{7}$ |
|  |  | TOTALS | 32 | 4 | 0 | 34 |

GENERAL EDUCATION:

| ENG | 1015 | Grammar* | 5 | 0 | 0 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| ENG | 102 | Composition | 3 | 0 | 0 | 3 |
| ENG | 204 | Oral Communications | 3 | 0 | 0 | 3 |
| ORI | 100 | New Student Seminar | 1 | 0 | 0 | 1 |
| SOC | 100 | Job Search and Career Planning | 3 | 0 | 0 | 3 |
|  |  | Social Science Elective** | $\frac{5}{20}$ | $\frac{0}{2}$ | $\frac{0}{2}$ | $\frac{5}{20}$ |

WORK EXPERIENCE:

| COE 101BCooperative Education Field <br> Experience | 0 | 0 | 20 | 2 |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| ELECTIVES |  | 1 | 0 | 0 | 1 |
| TOTAL CREDITS FOR AAS DEGREE | 100 | 43 | 20 | 120 |  |

*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 091, 092, 093, 094, 100G, 100A, 101, 101A, 102A; MAT 099, 100R

Students enrolled in this curriculum may make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.

## **Recommended Social Science Electives:

PSY 101, 102, 115, 116, 120, 150, 151, 170, 180, 206, 228, 230; SOC 101, 102, 103, 150, 160, 170, 221
\%Student must have completed over 100 required hours in curriculum with 2.0 gradepoint average to enroll. Course must be taken concurrently with COE 101B.

WORK EXPERIENCE: 5 hours substitute credit allowed as indicated by +. For more information pertaining to cooperative education credits, see page 55.

Students enrolled full-time and making satisfactory progress should complete this program in seven quarters.

## VOCATIONAL EDUCATION



## AIR CONDITIONING, HEATING, AND REFRIGERATION

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 serve 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.

## AIR CONDITIONING, HEATING, AND REFRIGERATION COURSE AND HOUR REQUIREMENTS

Title C L SH/CL CH
122
MAJOR COURSES:

| AHR | 1107 | Gas Laws: Refrigeration | 2 | 0 | 3 | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| +AHR | 1115 | Fundamentals of Heating | 2 | 0 | 6 | 4 |
| MEC | 1120 | Duct Construction and Installation | 3 | 0 | 6 | 5 |
| AHR | 1121 | Principles of Refrigeration | 3 | 0 | 12 | 7 |
| AHR | 1122 | Domestic and Commercial Refrigeration | 3 | 0 | 6 | 5 |
| AHR | 1123 | Principles of Air Conditioning | 3 | 0 | 12 | 7 |
| AHR | 1124 | Air Conditioning, Heating and Refrigeration Service | 3 | 0 | 6 | 5 |
| AHR | 1126 | All Year Comfort Systems | 3 | 0 | 6 | 5 |
| AHR | 1128 | Automatic Controls | $\underline{3}$ | 0 | $\underline{6}$ | 5 |
|  |  | TOTALS | 25 | 0 | 63 | 46 |

RELATED COURSES:

| ENG | 1103 | Small Business Operations | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| DFT | 1103 | Blueprint Reading: Mechanical | 0 | 0 | 3 | 1 |


| DFT | 1116 | Blueprint Reading: Air Conditioning | 1 | 0 | 3 | 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ELC | 1102 | Applied Electricity | 3 | 0 | 3 | 4 |
| MAT | 1101 | Fundamentals of Math* | 5 | 0 | 0 | 5 |
| WLD | 1102 | Basic Gas Welding | $\underline{0}$ | 0 | 3 | 1 |
|  |  | TOTALS | 12 | 0 | 12 | 16 |

GENERAL EDUCATION:

| ENG | 1101 | Reading Improvement* | 2 | 0 | 0 | 2 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| ENG | 1102 | Communication Skills | 3 | 0 | 0 | 3 |
| ORI | 100 | New Student Seminar | 1 | 0 | 0 | 1 |
| PSY | 1101 | Human Relations | $\frac{3}{9}$ | $\frac{0}{0}$ | $\frac{0}{2}$ | $\frac{3}{2}$ |
|  |  | TOTALS | 46 | 0 | 0 | 9 |
| TOTAL CREDITS FOR DIPLOMA |  |  | 95 | 71 |  |  |

*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 1000; MAT 0099, 1000
Students enrolled in this curriculum may select elective credits from the list of recommended electives or from other related courses and make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.

WORK EXPERIENCE: Up to 4 credit hours may be taken in lieu of approved courses as indicated by +. For information pertaining to cooperative education credits, see page 55.

Students enrolled full-time and making satisfactory progress should complete this program in four quarters.

## AUTOMOTIVE MECHANICS

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 understandng 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 curricululm may find employment with franchised automobile dealers, independent garages, or may start their own business.

## AUTOMOTIVE MECHANICS COURSE AND HOUR REQUIREMENTS

|  | Title |  |  | C | L | SH/CL | CH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | MAJOR | COUR |  |  |  |  |  |
|  | AHR | 1101 | Automotive Air Conditioning | 3 | 0 | 6 | 5 |
|  | PME | 1100 | Engine Shop Practice | 0 | 0 | 3 | 1 |
|  | PME | 1101 | Internal Combustion Engine | 5 | 0 | 12 | 9 |
|  | PME | 1102 | Electrical System | 5 | 0 | 12 | 9 |
| 124 | PME | 1104 | Fuel Systems Gasoline and Diesel | 5 | 0 | 9 | 8 |
|  | PME | 1123 | Brakes, Chassis, Suspension | 3 | 0 | 9 | 6 |
|  | PME | 1124 | Power Trains | 3 | 0 | 9 | 6 |
|  | PME | 1125 | Auto Servicing | 3 | 0 | 9 | 6 |
|  | PME | 1202 | Electricity Electronics | 3 | 0 | 9 | 6 |
|  | PME | 1204 | Emission Controls | 5 | 0 | 6 | 7 |
|  | PME | 1224 | Automatic Transmission | 5 | 0 | 12 | 9 |
|  | PME | 1227 | Power Accessories | 2 | 0 | 6 | 4 |
|  |  |  | TOTALS | 42 | 0 | 102 | 76 |
|  | RELATE | COU |  |  |  |  |  |
|  | MAT | 1101 | Fundamentals of Mathematics | 5 | 0 | 0 | 5 |
|  | +MEC | 1112 | Machine Shop Processes | 1 | 0 | 3 | 2 |
|  | +MEC | 1147 | System of Measurement and Measuring Tools | 2 | 0 | 0 | 2 |
|  | PHY | 1103 | Principles of Electricity | 3 | 2 | 0 | 4 |
|  | PME | 1230 | Auto Service Excellence |  |  |  |  |
|  |  |  | Test Review | 5 | 0 | 0 | 5 |
|  | WLD | 1129 | Basic Gas \& Electric Welding | $\frac{2}{18}$ | $\underline{0}$ | 6 | $\frac{4}{72}$ |
|  |  |  | TOTALS | 18 | 2 | 9 | 22 |

## GENERAL EDUCATION:

| ENG | 1101 | Reading Improvement* | 2 | 0 | 0 | 2 |
| :--- | :--- | :--- | :---: | :--- | :--- | :--- |
| ENG | 1102 | Communication Skills | 3 | 0 | 0 | 3 |
| ORI | 100 | New Student Seminar | 1 | 0 | 0 | 1 |
| PSY | 1101 | Human Relations | $\frac{3}{9}$ | $\frac{0}{2}$ | $\frac{0}{2}$ | $\frac{3}{9}$ |
|  |  | TOTALS | 69 | 2 | 111 | 107 |

*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 1000; MAT 0099, 1000

Students enrolled in this curriculum may select elective credits from approved courses and make course substitutions on a credit-for-credit basis upon approval by the student's department chairperson.
+WORK EXPERIENCE: Up to 4 credit hours may be taken in lieu of approved courses. For information pertaining to cooperative education credits, see page 55.

Students enrolled full-time and making satisfactory progress should complete this program in seven quarters.


## CARPENTRY AND CABINETMAKING

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

Carpenters work on new construction and maintain and repair many types of existing structures, both residential and commercial. They have an understanding of building materials, concrete form construction, rough framing, roof and stair construction, the application of interior and exterior trim, insulation, and other energy saving materials and the installation of cabinets and fixtures.

Most carpenters are employed by contractors in the building construction fields. When specializing in a particular phase of carpentry, the job may be designated according to the specialty as rough carpenter, framing carpenter, form carpenter, scaffolding carpenter, acoustical insulating carpenter, and finish carpenter.

## CARPENTRY AND CABINETMAKING COURSE AND HOUR REQUIREMENTS

Title C L SH/CL CH

MAJOR COURSES:

| $\begin{aligned} & \text { CAR } \\ & \text { CAR } \end{aligned}$ | 1101 | Carpentry | 3 | 0 | 15 | 8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1102 | Carpentry: Millwork and Cabinetmaking |  |  |  |  |
|  |  |  | 3 | 0 | 15 | 8 |
| CAR | 1103 | Carpentry: Framing | 3 | 0 | 15 | 8 |
| CAR | 1104 | Carpentry: Finishing | 3 | 0 | 18 | 9 |
| CAR | 1113 | Carpentry: Estimating | 3 | 0 | 3 | 4 |
| CAR | 1114 | Building Codes | $\underline{3}$ | 0 | 0 | $\underline{3}$ |
|  |  | TOTALS | 18 | 0 | 66 | 40 |

RELATED COURSES:

| BUS | 1103 | Small Business Operations | 3 | 0 | 0 | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DFT | 1110 | Blueprint Reading: Building Trades | 3 | 0 | 0 | 3 |
| DFT | 1111 | Blueprint Reading and Sketching I | 3 | 0 | 0 | 3 |
| DFT | 1112 | Blueprint Reading and Sketching II | 3 | 0 | 0 | 3 |
| MAT | 1101 | Fundamentals of Mathematics | 5 | 0 | 0 | 5 |
| MAT | 1112 | Building Trades Mathematics | $\underline{3}$ | $\underline{0}$ | $\underline{0}$ | $\underline{3}$ |
|  |  | TOTALS | 20 | 0 | 0 | 20 |

GENERAL EDUCATION:

| +ENG | 1101 | Reading Improvement* | 2 | 0 | 0 | 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ENG | 1102 | Communications Skills | 3 | 0 | 0 | 3 |
| ORI | 100 | New Student Seminar | 1 | 0 | 0 | 1 |
| PSY | 1101 | Human Relations | 3 | 0 | 0 | 3 |
|  |  | TOTALS | 9 | 0 | 0 | 9 |
| TOTAL CREDITS FOR DIPLOMA |  |  | 47 | 0 | 66 | 69 |

*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 1000; MAT 0099, 1000
Students enrolled in this curriculum may select elective credits from approved courses and make course substitutions on a credit-for-credit basis upon approval by the student's department chairperson.
+WORK EXPERIENCE: Up to 2 credit hours may be taken in lieu of approved courses as indicated by +. For information pertaining to cooperative education credits, see page 55.

Students enrolled full-time and making satisfactory progress should complete this program in four quarters.


## COSMETOLOGY

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

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

## COSMETOLOGY COURSE AND HOUR REQUIREMENTS

```
Title
C \(\quad\) L \(\mathrm{SH} / \mathrm{CL} \mathbf{C H}\)
```

MAJOR COURSES:

| COS | 1101 | Cosmetology I | 0 | 0 | 40 | 12 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| COS | 1102 | Cosmetology II | 0 | 0 | 40 | 12 |
| COS | 1103 | Cosmetology III | 0 | 0 | 40 | 12 |
| COS | 1104 | Cosmetology IV | $\underline{0}$ | $\underline{0}$ | $\underline{40}$ | $\underline{12}$ |
|  | TOTAL CREDITS FOR DIPLOMA | 0 | 0 | 160 | 48 |  |

Cooperative Education not allowed.
128 Students enrolled full-time and making satisfactory progress should complete this program in four quarters.

Evening students enrolled one half-time will need eight quarters for completion.

## DIESEL ENGINE AND FARM MACHINERY MECHANICS

The Farm Machinery Mechanics curriculum provides emphasis on the basic theories of farm machinery mechanics and techniques of maintenance, troubleshooting and repair of general farm machinery.

Graduates of this curriculum can quickly adapt themselves for employment in the areas of service, distribution and installation, of work on equipment in the field. They make inspections and tests to determine the causes of faulty operation, and repair or replace defective parts to restore the tractor or other gasoline or diesel power equipment to proper operating condition.

## DIESEL ENGINE AND FARM MACHINERY MECHANICS COURSE AND HOUR REQUIREMENTS

Title C L SH/CL. CH
MAJOR COURSES:

| PME | 1030 | Electrical Systems in Farm <br> Equipment | 3 | 0 | 3 | 4 |
| :--- | :---: | :--- | :--- | :--- | :--- | :--- |
| PME | 1040 | Farm Harvesting Equipment | 3 | 0 | 6 | 5 |
| PME | 1045 | Farm Equipment Servicing | 3 | 0 | 12 | 7 |
| PME | 1050 | New Tractor \& Equipment Setup | 1 | 0 | 3 | 2 |
| PME | 1105 | Fundamentals of Diesel Engines | 5 | 0 | 6 | 7 |
| PME | 1106 | Fundamentals of Diesel Engines | 1 | 0 | 6 | 3 |
| PME | 1126 | Small Engine Repair | 1 | 0 | 3 | 2 |
| PME | 1135 | Basic Fuel Systems: Gas-Diesel | 3 | 0 | 3 | 4 |
| PME | 1137 | Basic Power Transmission | $\underline{4}$ | $\underline{0}$ | $\underline{6}$ | $\underline{6}$ |
|  |  | TOTALS | 24 | 0 | 48 | 40 |

RELATED COURSES:

GENERAL EDUCATION:

| ENG | 1101 | Reading Improvement* | 2 | 0 | 0 | 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ENG | 1102 | Communication Skills | 3 | 0 | 0 | 3 |
| ORI | 100 | New Student Seminar | 1 | 0 | 0 | 1 |
| SOC | 100 | Job Search \& Career Planning | 3 | 0 | 0 | 3 |
|  |  | TOTALS | 9 | 0 | 0 | 9 |
| ELECT |  |  | 3 | 0 | 0 | 3 |
| TOTA | REDI | FOR DIPLOMA | 52 | 0 | 66 | 74 |

*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 1000; MAT 0099, 1000
Students enrolled in this curriculum may select elective credits from approved courses and make course substitutions on a credit-for-credit basis upon approval by the student's department chairperson.

For information pertaining to cooperative education credits, see page 55.
Students enrolled full-time and making satisfactory progress should complete this program in four quarters.


## ELECTRICAL INSTALLATION AND MAINTENANCE

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.

## ELECTRICAL INSTALLATION AND MAINTENANCE COURSE AND HOUR REQUIREMENTS

Title C L SH/CL CH

MAJOR COURSES:

| DFT | 1113 | Blueprint Reading and <br> Sketching: Electrical | 3 | 0 | 0 | 3 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| ELC | 1112 | Direct and Alternating Current | 5 | 0 | 12 | 9 |
| ELC | 1113 | AC and DC Machines and |  |  |  |  |
| ELC | 1114 | Controls |  |  |  |  |
| Electrical Safety | 5 | 0 | 12 | 9 |  |  |
| ELC | 1124 | Residential Wiring | 1 | 0 | 0 | 1 |
| ELC | 1125 | Commercial and Industrial | 6 | 0 | 9 | 9 |
| ELN | 1118 | Wiring |  |  |  |  |
| ELN | 1119 | Industrial Electronics | 5 | 0 | 12 | 9 |
|  |  | TOTALS | $\underline{3}$ | 0 | 6 | 5 |

RELATED COURSES:

| +BUS | 1103 | Small Business Operations <br> DFT | 1110 | 3 | 0 | 0 |
| :---: | :---: | :--- | :---: | :--- | :--- | :--- |
| Blueprint Reading: Building |  |  |  |  |  |  |
| Trades |  |  |  |  |  |  |$\quad 3$

GENERAL EDUCATION:

| *ENG | 1101 | Reading Improvement | 2 | 0 | 0 | 2 |
| :--- | :--- | :--- | :---: | :---: | :---: | :---: |
| ENG | 1102 | Communication Skills | 3 | 0 | 0 | 3 |
| ORI | 100 | New Student Seminar | 1 | 0 | 0 | 1 |
| PSY | 1101 | Human Relations | $\frac{3}{9}$ | $\frac{0}{5}$ | $\frac{0}{0}$ | $\frac{3}{9}$ |
|  |  | 97 | 0 | 0 | 9 |  |
| TOTAL CREDITS FOR DIPLOMA | 57 | 2 | 60 | 78 |  |  |

*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 1000; MAT 0099, 1000.
Students enrolled in this curriculum may make course substitutions on a credit-forcredit basis upon approval by the student's department chairperson.

WORK EXPERIENCE: Up to 3 credit hours may be taken in lieu of approved courses as indicated by +. For information pertaining to cooperative education credits, see page 55.

Students enrolled full-time and making satisfactory progress should complete this program in four quarters.


## ELECTRONIC SERVICING

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: radio, television, audio/ video recording and playback equipment, home entertainment system, digital electronic systems, Master Antenna Television and Cable Television components and systems.

## ELECTRONIC SERVICING COURSE AND HOUR REQUIREMENTS

Title
MAJOR COURSES:

| ELC | 1110 | Direct Current Theory and Practice | 5 | 0 | 12 | 9 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ELC | 1111 | Alternating Current Theory and Practice | 5 | 0 | 12 | 9 |
| ELN | 1103 | Introduction to Electronic Devices | 5 | 0 | 12 | 9 |
| ELN | 1104 | Circuit Applications I | 4 | 0 | 9 | 7 |
| ELN | 1105 | Circuit Applications II | 4 | 0 | 9 | 7 |
| ELN | 1106 | Maintenance and Analysis of Electronic Systems | 5 | 0 | 9 | 8 |
| ELN | 1108 | Digital Concepts I | 3 | 0 | 3 | 4 |
| ELN | 1110 | Digital Concepts II | 3 |  | 3 | 4 |
| +ELN | 1111 | Electronic Troubleshooting | 3 | 0 | 0 | 3 |
| ELN | 1125 | Radio Receiver Servicing | 5 | 0 | 0 | 5 |
| ELN | 1127 | Television Receiver Circuits and Servicing | 10 | 0 | 18 | 16 |
|  |  | TOT | 52 | 0 | 87 | 81 |

RELATED COURSES:

| MAT | 1101 | Fundamentals of Mathematics | 5 | 0 | 0 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| MAT | 1102 | Algebra | 5 | 0 | 0 | 5 |
| MAT | 1103 | Basic Geometry \& Trigonometry | $\underline{5}$ | $\underline{0}$ | $\underline{0}$ | $\frac{5}{7}$ |
|  |  | TOTALS | 15 | 0 | 0 | 15 |

GENERAL EDUCATION:

| *ENG | 1102 | Communication Skills | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :---: | :--- | :---: | :---: |
| ORI | 100 | New Student Seminar | 1 | 0 | 0 | 1 |
| PSY | 1101 | Human Relations | $\frac{3}{2}$ | $\underline{0}$ | $\underline{0}$ | 3 |
|  |  | TOTALS | 7 | 0 | 0 | 7 |
|  |  | 74 | 0 | 87 | 103 |  |

*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 1000, 1101; MAT 0099, 1000
Students enrolled in this curriculum may make course substitutions on a credit-forcredit basis upon approval by the student's department chairperson.

WORK EXPERIENCE: Up to 3 credit hours may be taken in lieu of approved courses as indicated by +. For information pertaining to cooperative education credits, see page 55.
\%Students enrolled full-time and making satisfactory progress may complete the requirements for a regular diploma in four quarters, advanced diploma requirements can be completed in seven quarters.


## INDUSTRIAL MAINTENANCE: ELECTROMECHANICAL

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.

## INDUSTRIAL MAINTENANCE: ELECTROMECHANICAL COURSE AND HOUR REQUIREMENTS

Title C L SH/CL. CH
MAJOR COURSES:

| AHR | 1102 | Introduction to Cooling and <br> Heating Systems |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DFT | 1113 | Blueprint Reading and <br> Sketching: Electrical | 3 | 0 | 9 | 6 |
| ELC | 1112 | Direct and Alternating Current <br> AC and DC Machines and | 3 | 0 | 0 | 3 |
| ELC | 1113 | 5 | 0 | 12 | 9 |  |
| HSC | 1101 | Controls <br> Industrial Safety <br> Electrical and Mechanical <br> Maintenance | 1133 | 0 | 0 | 0 |
| MEC | 1134 | Electrical and Mechanical <br> Maintenance | 3 | 0 | 6 | 5 |
| MEC | 1140 | Hydraulics and Pneumatic <br> Fundamentals | 3 | 0 | 6 | 5 |
| PLU | 1110 | Plumbing Pipework <br> TOTALS | $\mathbf{3}$ | 0 | 3 | 4 |
|  |  | 30 | 0 | 54 | 48 |  |

RELATED COURSES:

| BUS | $\mathbf{1 1 0 5}$ | Industrial Organization | 3 | 0 | 0 | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DFT | 1104 | Blueprint Read: Mechanical | 3 | 0 | 0 | 3 |
| MAT | 1101 | Fundamentals of Mathematics | 5 | 0 | 0 | 5 |
| PHY | 1101 | Applied Science | 3 | 2 | 0 | 4 |
| WLD | 1102 | Basic Gas Welding | 0 | 0 | 3 | 1 |
| +WLD | 1103 | Basic Arc Welding | $\underline{0}$ | $\underline{0}$ | $\underline{3}$ | $\underline{1}$ |
|  |  | TOTALS | 14 | 2 | 6 | 17 |

## GENERAL EDUCATION:

| *ENG | 1101 | Reading Improvement | 0 | 0 | 2 | 2 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| ENG | 1102 | Communication Skills | 3 | 0 | 0 | 3 |
| ORI | 100 | New Student Orientation | 1 | 0 | 0 | 1 |
| PSY | 1101 | Human Relations | $\underline{3}$ | $\underline{0}$ | $\underline{0}$ | $\frac{3}{9}$ |
|  |  | TOTALS | 9 | 0 | 0 | 9 |
|  |  | 54 | 2 | 60 | 74 |  |

*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 1000; MAT 0099, 1000
Students enrolled in this curriculum may make course substitutions on a credit-forcredit basis upon approval by the student's department chairperson.

WORK EXPERIENCE: Up to 4 credit hours may be taken in lieu of approved courses as indicated by +. For information pertaining to cooperative education credits, see page 55.

Students enrolled full-time and making satisfactory progress should complete this program in four quarters.


## MACHINIST

The Machinist curriculum gives individuals the opportunity to acquire basic skills and related technical information necessary to gain employment as machinist. The machinist is a skilled metalworker who shapes metal by using machine tools and hand tools. Machinist 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.

## MACHINIST <br> COURSE AND HOUR REQUIREMENTS

Title C L SH/CL CH
MAJOR COURSES:

| DFT | 1104 | Blueprint Reading: Mechanical | 3 | 0 | 0 | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DFT | 1105 | Blueprint Reading: Mechanical | 3 | 0 | 0 | 3 |
| MEC | 1101 | Machine Shop Theory and Practice | 3 | 0 | 12 | 7 |
| MEC | 1102 | Machine Shop Theory and Practice | 3 | 0 | 12 | 7 |
| MEC | 1103 | Machine Shop Theory and Practice | 3 | 0 | 12 | 7 |
| MEC | 1104 | Machine Shop Theory and Practice | 3 | 0 | 12 | 7 |
| MEC | 1115 | Metallurgy: Ferrous Metals | 2 | 0 | 3 | 3 |
| MEC | 1116 | Metallurgy: Non-Ferrous Metals | 2 | 0 | 3 | 3 |
| MEC | 1170 | Introduction to CNC Machining | 1 | $\underline{2}$ | 0 | $\underline{2}$ |
|  |  | TOTALS | 23 | 2 | 54 | 42 |

RELATED COURSES:

| DFT | 1106 | Blueprint Reading: Mechanical | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| ISC | 1101 | Industrial Safety | 3 | 0 | 0 | 3 |
| MAT | 1101 | Fundamentals of Mathematics | 5 | 0 | 0 | 5 |
| MAT | 1103 | Basic Geometry and <br>  <br>  <br>  <br> Trigonometry | 5 | 0 | 0 | 5 |
| MAT | 1123 | Machinist Mathematics | 3 | 0 | 0 | 3 |
| WLD | 1102 | Basic Gas Welding | $\underline{0}$ | $\underline{0}$ | $\underline{3}$ | $\frac{1}{2}$ |
|  | TOTALS |  | 19 | 0 | 3 | 20 |

GENERAL EDUCATION:

| *ENG | 1101 | Reading Improvement | 2 | 0 | 0 | 2 |
| :---: | :--- | :--- | :---: | :--- | :--- | :--- |
| +ENG | 1102 | Communication Skills | 3 | 0 | 0 | 3 |
| ORI | 100 | New Student Seminar | 1 | 0 | 0 | 1 |
| PHY | 1101 | Applied Science | $\frac{3}{2}$ | $\frac{2}{2}$ | $\frac{0}{4}$ | $\frac{4}{10}$ |
|  | TOTALS | 9 | 2 | 0 | 10 |  |
| +ELECTIVES |  | 3 | 0 | 0 | 3 |  |
| TOTAL CREDITS FOR DIPLOMA | 54 | 4 | 57 | 75 |  |  |

*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 1000; MAT 0099, 1000

Students enrolled in this curriculum may make course substitutions on a credit-forcredit basis upon approval by the student's department chairperson.

WORK EXPERIENCE: Up to 6 credit hours may be taken in lieu of approved courses as indicated by + . For information pertaining to cooperative education credits, see page 55.

Students enrolled full-time and making satisfactory progress should complete this program in four quarters.


## MASONRY

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

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

## MASONRY <br> COURSE AND HOUR REQUIREMENTS

## Title

MAJOR COURSES:

| MAS | 1101 | Bricklaying I | 4 | 0 | 18 | 10 |
| ---: | ---: | :--- | :--- | :--- | :--- | :--- |
| MAS | 1102 | Bricklaying II | 4 | 0 | 18 | 10 |
| MAS | 1103 | Bricklaying III | 4 | 0 | 18 | 10 |
| MAS | 1104 | Bricklaying IV | 3 | 0 | 18 | 9 |
| MAS | 1113 | Masonry Estimating I | 1 | 0 | 3 | 2 |
| +MAS | 1114 | Masonry Estimating II | $\underline{1}$ | $\underline{0}$ | $\underline{3}$ | $\underline{2}$ |
|  |  | TOTALS | 17 | 0 | 78 | 43 |

RELATED COURSES:
DFT 1110 Blueprint Reading: Building Trades
1111 Blueprint Reading and Sketching I
1112 Blueprint Reading and Sketching II

3
Blueprint Reading and Sketching: Masonry

3003
MAT 1111 Building Trades Mathematics: Masonry

30003
MAT 1112 Building Trades Mathematics
MAT 1113 Building Trades Mathematics: Masonry

TOTALS

C I SH/CL CH
*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 1000, MAT 0099, 1000
Students enrolled in this curriculum may make course substitutions on a credit-forcredit basis upon approval by the student's department chairperson.

WORK EXPERIENCE: Up to 2 credit hours may be taken in lieu of approved courses as indicated by +. For information pertaining to cooperative education credits, see page 55.

Students enrolled full-time and making satisfactory progress should complete this program in four quarters.


## TEACHER ASSISTANT

The Teacher Aide curriculum prepares individuals for work in assisting teachers. Individuals receive training in the areas of classroom procedures, preparation of educational material and audiovisual aids.

Individuals will be qualified to prepare instructional material, to assist with physical education programs, to construct audiovisual aids, and to assist the teacher in the performance of general classroom duties. Employment opportunities exist with public school systems and with private schools.

## TEACHER ASSISTANT COURSE AND HOUR REQUIREMENTS

Title
MAJOR COURSES:

| EDU | 102 | Child Health, Safety \& |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Nutrition | 5 | 0 | 0 | 5 |
| EDU | 103 | Preschool Orientation | 1 | 0 | 6 | 3 |
| EDU | 104 | Preschool Observation | 1 | 0 | 6 | 3 |
| EDU | 106 | Practicum in Elementary School | 1 | 0 | 15 | 6 |
| EDU | 107 | Practicum in Preschool Experience | 1 | 0 | 15 | 6 |
| EDU | 108 | Early Childhood Curriculum | 5 | 0 | 0 | 5 |
| EDU | 109 | Guiding Young Children's Behavior | 3 | 0 | 0 | 3 |
| EDU | 115 | Audiovisual \& Media Instruction | 3 | 0 | 0 | 3 |
| PSY | 102 | General Psychology | 3 | 0 | 0 | 3 |
| PSY | 115 | Child Growth \& Development I | 3 | 0 | 0 | 3 |
| PSY | 116 | Child Growth \& Development II | 3 | 0 | 0 | 3 |
| SOC | 101 | Introduction to Sociology | $\underline{5}$ | 0 | $\underline{0}$ | 5 |
|  |  | TOTALS | 34 | 0 | 42 | 48 |

RELATED COURSES:

| BUS | 102 | Beginning Typewriting | 2 | 3 | 0 | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| +HEA | 112 | First Aid | 1 | 0 | 0 | 1 |
| MAT | 100R | Computational Skills | 5 | 0 | 0 | 5 |
| SPH | 150 | Voice \& Diction | $\underline{3}$ | 0 | 0 | $\underline{3}$ |
|  |  | TOTALS | 11 | 3 | 0 | 12 |

GENERAL EDUCATION:

| *ENG | 101 | Grammar | 3 | 0 | 0 | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ENG | 102 | Composition | 3 | 0 | 0 | 3 |
| +ENG | 103 | Report Writing | 3 | 0 | 0 | 3 |
| ORI | 100 | New Student Seminar | 1 | 0 | 0 | 1 |
|  |  | TOTALS | 10 | 0 | 0 | 10 |
| TOTAL | ED | OR DIPLOMA | 55 | 3 | 42 | 70 |

*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 091, 092, 093, 094, 100G, 101A, 102A; MAT 099.
Students enrolled in this curriculum may make course substitutions from appropriate subject areas on a credit-for-credit basis upon approval by the student's department chairperson.

WORK EXPERIENCE: Up to 5 credit courses may be taken in lieu of approved courses indicated by + . For information pertaining to cooperative education credits, see page 55.

Students enrolled full-time and making satisfactory progress should complete this program in four quarters.


## WELDING

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

## WELDING <br> COURSE AND HOUR REQUIREMENTS

Title
MAJOR COURSES:

| WLD | 1112 | Mechanical Testing and <br> Inspection | 1 | 0 | 3 | 2 |
| :--- | :---: | :--- | :---: | :---: | :---: | :---: |
| WLD | 1122 | Commercial and Industrial | 3 | 0 | 9 | 6 |
| WLD | 1123 | Practices |  |  |  |  |
| WLert Gas Welding | 1124 | Pipe Welding | 1 | 0 | 3 | 2 |
| WLD | 1125 | Certification Practices | 3 | 0 | 12 | 7 |
| WLD | 1141 | Beginning Welding | 3 | 0 | 6 | 5 |
| WLD | 1142 | Intermediate Welding | 5 | 0 | 15 | 10 |
|  |  | TOTALS | $\mathbf{5}$ | $\underline{0}$ | $\underline{15}$ | 10 |
|  |  | 21 | 0 | 63 | 42 |  |

RELATED COURSES:


GENERAL EDUCATION:

| *ENG | 1101 | Reading Improvement | 2 | 0 | 0 | 2 |
| :---: | :--- | :--- | :---: | :--- | :--- | :--- |
| ORI | 100 | New Student Seminar | 1 | 0 | 0 | 1 |
| MAT | 1101 | Fundamentals of Mathematics | $\frac{5}{2}$ | 0 | $\underline{0}$ | 5 |
|  | TOTALS | 8 | 0 | 0 | 8 |  |
|  |  | 3 | 0 | 0 | 3 |  |
| +ELECTIVES |  | 47 | 0 | 66 | 69 |  |

*If students, as a result of placement tests, are found to be deficient in math and English skills, they will be required to take the appropriate courses from the following list:

ENG 1000; MAT 0099, 1000
Students enrolled in this curriculum may make course substitutions on a credit-forcredit basis upon approval by the student's department chairperson.
+WORK EXPERIENCE: Up to 3 credit hours may be taken in lieu of approved courses as indicated by +. For information pertaining to cooperative education credits, see page 55.

Students enrolled full-time and making satisfactory progress should complete this program in four quarters.


## BASIC LAW ENFORCEMENT TRAINING

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 Sheriff's 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 Sheriff's Commission. The student satisfactorily completing this program should possess at least the minimum degree of general attributes, knowledge, and skills to function as an inexperienced law enforcement officer.
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.

## BASIC LAW ENFORCEMENT TRAINING COURSE AND HOUR REQUIREMENTS

| Title | C | L | SH/CL. | CH |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| MAJOR COURSES: |  |  |  |  |  |  |
| PSC $\quad 200$ | Basic Law Enforcement Training | 14 | 2 | 24 | 23 |  |
| TOTAL CREDITS FOR CERTIFICATE | 14 | 2 | 24 | 23 | 145 |  |

Cooperative Education not allowed.
Students should complete this program in one quarter or eleven weeks.

## GERIATRIC ASSISTANT

The Geriatric Assistant curriculum prepares graduates to provide basic health and personal care for older persons. The curriculum emphasizes the processes of aging, communication, nutrition, therapeutic activities (music, dance, exercise, games, and arts and crafts), accident and fire safety, death and dying, drug usage, human sexuality, resources and services for the aged, and employment skills. Clinical experiences may be obtained in skilled nursing and intermediate care facilities, family care homes and homes for the aged and disabled, adult day care centers, and other long-term care settings.

Graduates may be employed in skilled nursing and intermediate care facilities, senior centers, adult day care centers, family care homes and homes for the aged and disabled, private homes, retirement homes, life-care facilities, and social services organizations which primarily serve older persons. In some clinical settings, the graduates will work under the supervision of licensed personnel.

## GERIATRIC ASSISTANT COURSE AND HOUR REQUIREMENTS

| Title | C | L | SH/CL | CH |
| :--- | :---: | :---: | :---: | :---: | :---: |
| MAJOR COURSES: |  |  |  |  |
| GCA $1001 \quad$ Geriatric Assistant | 8 | 8 | 12 | 16 |
| TOTAL CREDITS FOR CERTIFICATE | 8 | 8 | 12 | 16 |
| Cooperative Education not allowed. |  |  |  |  |
| Students should complete this program in one quarter or eleven weeks. |  |  |  |  |

## HOSPITAL WARD SECRETARY

The Hospital Ward Secretary (Clerk) curriculum is an eleven week or one quarter program designed to prepare an individual to perform a variety of clerical duties such as: maintaining patients' charts, requesting equipment and services for patients, requesting supplies and equipment for the nursing unit and completing forms correctly.

Employment opportunities are available in doctors' offices, clinics, hospitals and other health agencies as hospital ward clerks or hospital ward secretaries.

## HOSPITAL WARD SECRETARY COURSE AND HOUR REQUIREMENTS

| Title |  |  | C | L | SH/CL | CH |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MAJOR COURSES: |  |  |  |  |  |  |
| MED | 1100 | Hospital Ward Secretary: Theory and Practice | 12 | 0 | 12 | 16 |
| RELATED COURSES: |  |  |  |  |  |  |
| PSY | 104 | Human Relations | 3 | 0 | 0 | 3 |
| GENERAL EDUCATION: |  |  |  |  |  |  |
| ENG | 1102 | Communication Skills | 3 | $\underline{0}$ | 0 | $\underline{3}$ |
| TOTAL CREDITS FOR CERTIFICATE |  |  | 18 | 0 | 12 | 22 |
| Cooperative Education not allowed. |  |  |  |  |  |  |

Students should complete this program in one quarter or eleven weeks.

## SURVEYING (TECHNICAL SPECIALTY)

The Surveying (Technical Specialty) curriculum is designed for persons interested in learning to assist surveyors or engineers in land, forest, highway, marine, and other types of surveying. The emphasis of the program may be adapted by choice of electives. A certificate is awarded to students completing the program.

The graduates of this program will be prepared to determine exact location and measurements of points, elevations, lines, areas, and contours of the surface of the earth for construction, map making, land valuation, mining, or other purposes. They may calculate information needed to conduct surveys from notes, maps, deeds, or other records. They will use surveying instruments and perform calculations to verify the accuracy of survey data.

## SURVEYING (TECHNICAL SPECIALTY) COURSE AND HOUR REQUIREMENTS

Title C L SH/CL CH

BASIC COURSES:

| CIV | 101 | Surveying | 2 | 0 | 6 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| CIV | 102 | Surveying | 2 | 0 | 6 | 4 |
| CIV | 103 | Surveying | 2 | 0 | 6 | 4 |
| CIV | 204 | Surveying | 2 | 0 | 6 | 4 |
| DFT | 101 | Technical Drafting | 1 | 3 | 0 | 2 |
| MAT | 101 | Algebra I | 5 | 0 | 0 | 5 |
| MAT | 102 | Trigonometry | $\underline{5}$ | $\underline{0}$ | $\underline{0}$ | $\underline{5}$ |
| TOTAL CREDITS FOR CERTIFICATE | 19 | 3 | 24 | 28 |  |  |

Students who wish to acquire additional surveying skills may take any of the following courses:

| CIV | 110 | Surveyor Practices <br> Codes, Contracts, and | 1 | 0 | 0 | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| CIV | 223 | Specifications | 2 | 0 | 0 | 2 |
| FOR | 208 | Forest Surveying | 2 | 0 | 3 | 3 |
| MAT | 103 | Algebra II | 5 | 0 | 0 | 5 |

For information pertaining to cooperative education credits, see page 55 .
Students enrolled in the evening and taking one course should complete this program in seven quarters.

## COURSE PREFIX IDENTIFICATION

Prefix Identification ..... Page
ACT.........Accounting ..... 152
AGR ........Agriculture ..... 152
AHR ....... Air Conditioning, Heating, and Refrigeration ..... 158
AIB ......... Banking ..... 161
ANT ........Anthropology ..... 166
ARC ........Architecture ..... 166
ART.........Art ..... 168
BIO . . . . . . . . Biology ..... 168
BUS . . . . . . . . Business ..... 170
CAR ........ Carpentry ..... 179
CAT......... Commercial Art ..... 180
CHM........Chemistry ..... 184
CIV ........ . Civil Engineering ..... 184
CJC ......... Criminal Justice ..... 186
COE ........Cooperative Education ..... 187
COS ....... . Cosmetology ..... 188
CSC . ....... . Correctional Science ..... 189
DFT . . . . . . . . Drafting ..... 190
ECO ....... .Economics ..... 194
EDP . . . . . . . . Electronic Data Processing ..... 195
EDU ........Education ..... 198
ELC . . . . . . . .Electricity ..... 200
ELN . . . . . . . . Electronics ..... 204
ENG . .......English ..... 209
FOR .........Forestry ..... 214
GCA ........ Geriatrics ..... 214
GEO ....... . . Geography ..... 214
HEA......... Health ..... 215
HIS ........ . History ..... 215
HSA. . . . . . . . Human Services Associate ..... 216
INS .........Insurance ..... 218
ISC ..........Industrial Science ..... 218
JOU......... Journalism ..... 220
LEC . . . . . . . . Legal Education ..... 221
LIB . . . . . . . . .Library Science ..... 223
MAS ....... . Masonry ..... 223
MAT . ...... . Mathematics ..... 224
MEC ........ Mechanics ..... 227
MED ....... . . Medical ..... 232
MHA........ Mental Health ..... 233
MUS . . . . . . . Music ..... 234
NUR ....... . Nursing ..... 234
NUT . .......Nutrition ..... 237
ORI......... Orientation ..... 237
PED . . . . . . . . Physical Education ..... 238
PHI ......... Philosophy ..... 239
PHO ....... . Photography ..... 239
PHY . . . . . . . . Physics ..... 240
PLU . . . . . . . . Plumbing ..... 242
PME ........ Power Mechanics ..... 242
POL. ........ . Political Science ..... 246
PSC . . . . . . . . Police Science ..... 246
PSY Psychology ..... 247
RDT Radiology ..... 250
REL Religion ..... 252
RLS Real Estate ..... 252
RTH Respiratory Therapy ..... 253
SOC . . . . . . . Sociology ..... 256
SPH . . . . . . . . Speech ..... 257
SSC . . . . . . . . Social Science ..... 257
SUR......... . Surgical ..... 258
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## COURSE DESCRIPTIONS



## ACCOUNTING

$\begin{array}{lllllll}\text { ACT } & 150 & \text { Principles of Accounting } & 3 & 2 & 0 & 4\end{array}$
Prerequisite: MAT 110 or permission of instructor
Basic accounting concepts as applied to a single proprietorship. Practical problems requiring the use of journals and general ledgers, preparation and analysis of work sheets, the balance sheet, and income statements. Introduction to basic concepts of internal control included.

## $\begin{array}{lllllll}\text { ACT } & 151 & \text { Principles of Accounting } & 3 & 2 & 0 & 4\end{array}$

Prerequisite: ACT 150
An expanded study of the accounting cycle with emphasis on the recording, summarizing, and interpreting of data for management control. Includes a study of payrolls, federal and state taxes, and basic applications for computerized accounting.

## $\begin{array}{lllllll}\text { ACT } & 152 & \text { Principles of Accounting } & 3 & 2 & 0 & 4\end{array}$

Prerequisite: ACT 151
Partnership and corporation accounting, including a study of financial statement analysis and use of financial ratios.

## AGRICULTURE

AGR 100 Introduction to Agriculture 1
General study of the importance of agriculture to the state, nation, and world. Topics include the history of agriculture, world food-population problem, farm organizations, agricultural cooperatives, government agencies, and present agricultural policy. The Postsecondary Agricultural Student Organization is also introduced.

## AGR 103 Feeding and Management $\begin{array}{lllll}3 & 0 & 0 & 3\end{array}$

Study of applied principles and concepts of animal nutrition. Problems associated with feeding livestock, nutritional diseases, balancing rations, feed additives, feedstuffs, and anatomy and physiology of the digestive systems of farm animals. Includes management and economic problems associated with the feeding and marketing of livestock.

## AGR 105 Pastures and Forage Crops $\begin{array}{llllll}3 & 0 & 0 & 3\end{array}$

Study of the major grasses and legumes of economic importance in North Carolina. Attention given to management, soil types, fertilization, harvesting, and nutrient value.

## AGR 107 Farm Enterprise Management <br> 300 <br> 3

Introduces accounting methods related to farm enterprises and acquaints students with the terminology and basic principles and techniques used in recording transactions. Practical application of the principles learned by working with actual farm situations. Includes economic principles as applied to the decision-making process in the analysis of farm records.
Class Lab Shop Hours

| AGR | 112 | Small Engine Repair | 2 | 2 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Study of two- and four-cycle, one-cylinder gasoline engines and their power trains. Students taught preventive maintenance, troubleshooting, and repair of the typical auxiliary engine on the farm.

## $\begin{array}{lllllll}\text { AGR } 116 \text { Farm Welding } & 2 & 2 & 0 & 3\end{array}$

Introduces welding safety and principles of oxacetylene and electrical welding, cutting, and brazing. Procedures and experience in using arc and oxacetylene welding equipment. Brief study of metals, rods, gases, and special welding machinery.

## $\begin{array}{lllllll}\text { AGR } & 119 & \text { Techniques of Welding } & 2 & 3 & 0 & 3\end{array}$

Study of principles of oxyacetylene and electrical welding, cutting, and brazing; principles, procedures, safety precautions, and experience in using oxyacetylene and arc welding equipment; and projects to develop skill in the use of equipment. Also includes a study of metals, rods, gases, and special electrical welding machinery.

## $\begin{array}{lllllll}\text { AGR } 121 & 3 & 0 & 0 & 3\end{array}$

Study of the characteristics of field crops relative to varieties, environmental factors, rotations, fertilization, control of pests, and cultural practices pertinent to crop production.

## $\begin{array}{lllllll}\text { AGR } 125 & 5 & 2 & 0 & 6\end{array}$

Introductory animal science course covering the financial principles of livestock production. Study of the animal bcdy and the basic principles of reproduction, genetics, growth, fattening, and digestion; and of the selection, feeding, improvement, processing, and marketing of livestock.

## AGR 127 Animal Nutrition $\begin{array}{lllll}3 & 0 & 0 & 3\end{array}$

Deals with the principles of nutrition and their application to feeding practices in cattle, horses, sheep, and swine production in North Carolina.

## $\begin{array}{lllllll}\text { AGR } & 128 & \text { Farm and Home Construction } & 2 & 2 & 0 & 3\end{array}$

Deals with the fundamentals of farm carpentry, fences, concrete, and masonry. Part of the course gives students an opportunity to learn and practice home construction projects such as farm utility buildings. Also includes a study of farm water needs and waste disposal. Attention is given to planning farm water and plumbing systems and their proper care and maintenance.

## $\begin{array}{lllllll}\text { AGR } & 135 & \text { Agricultural Law } & 3 & 0 & 0 & 3\end{array}$

Designed to acquaint the agricultural student with certain fundamentals and principles of law, including contracts, agency, and negotiable instruments. Includes the general study of law pertaining to partnership, corporation, sales, suretyship, bailments, and real property.

## AGR 136 Agricultural Mathematics $\quad \begin{array}{lllll}3 & 0 & 0 & 3\end{array}$

Stresses the fundamental mathematics operations and their application to business problems. Topics covered include payrolls, price marking, interest and discount, commission, taxes, and pertinent use of mathematics in the field of business.

300 3

Introduction to botany as applied to higher plants. The fundamental principles of plant processing, reproduction (sexual and asexual), growth, and development. Application of plant processes to certain commercially grown field and horticultural crops.

## AGR 150 General Horticulture 30003

Deals with horticultural principles and the application of plant science fundamentals to horticultural practices.

## AGR 154 Swine Production 30003

Study of the scientific methods of selecting, breeding, feeding, and managing swine. Special attention is given to housing and marketing.
AGR 165 Crop Science $3 \quad 0 \quad 0 \quad 3$

Study of the distribution, classification, growth, structure, and reproduction of field crops. Topics include the world food/population problem and environmental factors and cultural practices involved in crop production. Emphasis on economically important crops in North Carolina.
$\begin{array}{llllllll}\text { AGR } & 167 & \text { Small Scale Vegetable Production } & 3 & 0 & 0 & 3\end{array}$
Study of common local vegetables. Course will stress production practices including soils and soil amendments, planning, fertilization, and disease, weed, and insect control of garden vegetables. Topics also include growing vegetable transplants and marketing alternatives. Intended for urban and small rural gardeners.

## $\begin{array}{lllllll}\text { AGR } 170 & \text { Plant Science } & 5 & 2 & 0 & 6\end{array}$

Introductory general botany course. Covers plant classification, internal and external structure, respiration, photosynthesis, nutrition, plant growth substances, reproduction, and factors affecting plant growth. Course series of AGR 149 and AGR 150 is equivalent and will substitute.
$\begin{array}{lllllll}\text { AGR } & 185 & \text { Soil Science and Fertilizers } & 5 & 2 & 0 & 6\end{array}$
Deals with the basic principles of efficient classification, evaluation, and management of soils; care, cultivation, and fertilization of the soil; and conservation of soil fertility. Course series of AGR 187 and AGR 190 is equivalent and will substitute.
$\begin{array}{llllll}\text { AGR } 187 & \text { Fertilizers and Lime } & 3 & 0 & 0 & 3\end{array}$
Review of the source, function, and use of the major and minor plant food elements; commercial fertilizer ingerdients; soil acidity and liming materials; and the application of fertilizer and liming materials.

| AGR 190 | Soils and Soil Fertility | 2 | 2 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Deals primarily with physical and chemical properties of soils in coastal and piedmont North Carolina. Includes the function and use of major and minor plant food elements and liming materials.

|  |  | Clinical/Credit |  |  |  |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: |
| AGR | 195 | Class | Lab | Shop | Hours |
| Cultural and Irrigation | 3 | 0 | 0 | 3 |  |

Deals with various tillage and cultural practices such as conventional, "no-till," and minimum tillage; the economical aspects of labor and fuel efficiency; and drainage and timely application of supplemental water to obtain maximum output.

## AGR 198 Practical Application of

 $\begin{array}{lllll}\text { Agricultural Chemicals } & 2 & 2 & 0 & 3\end{array}$Study of farm chemicals and fertilizers-their importance, ingredients, and formulation and the equipment involved in application. Special emphasis on practical farm application.

## AGR 201 Agricultural Chemicals

 (Pesticides) 3 0 0Study of agricultural chemicals and their importance; the ingredients, formulation, and application of farm chemicals; and the effective and safe utilization of chemicals in agricultural pest control. Major emphasis is placed on insecticides, fungicides, nematocides, herbicides, and other commonly used pesticides.

AGR 203 Pesticide and Fertilizer Application $\begin{array}{llll}3 & 2 & 0 & 4\end{array}$
Study of and practical exercise in the correct application of pesticides and fertilizers. Economics of custom application and equipment, precautions, and legal aspects of application are presented.

## AGR 204 Agricultural Economics and

 Farm Records $\begin{array}{lllll}3 & 2 & 0 & 4\end{array}$Introduction to economics, the functions of the economic system, and agriculture's role in the economy. Economic principles as applied to the decision-making process in the analysis of farm records are also included.

| AGR | 205 | Agricultural Marketing | 3 | 2 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Analysis of the functions of marketing in the economy; a survey of the problems marketing faces; and a review of the market structure and the relationship of local, terminal, wholesale, retail, and foreign markets. Problems in the operations of marketing firms, including buying and selling, processing, standardization and grading, risktaking and storage, financing, efficiency, and cooperation; and discussions of procedures for marketing commodities such as grain, cotton, livestock, and tobacco are included.

## AGR 206 Marketing Farm Products $\begin{array}{lllll}3 & 0 & 0 & 3\end{array}$

Looks at the market structure including local, terminal, wholesale, and retail markets. Emphasis on the marketing of grain, tobacco, soybeans, swine, beef, and poultry. Includes study of hedging and futures markets as a management tool.
$\begin{array}{lllllll}\text { AGR } 207 & \text { Poultry Enterprises } & \mathbf{3} & \mathbf{0} & \mathbf{0} & \mathbf{3}\end{array}$
Review of the growth of the various poultry enterprises including market eggs, hatching eggs, and broiler production; marketing procedures; determining and controlling costs of production; choosing breeds and determining flock size, feeding systems, conversion ratios, labor efficiency, and other management factors.

# Clinical/Credit <br> Class Lab Shop Hours 

AGR 215 Farm Machinery Repair and $\begin{array}{lllll}\text { Maintenance } & 2 & 2 & 0 & 3\end{array}$

Selection, care, and repair of large units of farm equipment and operating principles of self-propelled and tractor-drawn equipment studied in the classroom and in the field. Equipment such as balers, combines, corn pickers, cotton pickers, and peanut harvesters included in the study.
$\begin{array}{lllllll}\text { AGR } & 218 & \text { Agricultural Mechanization } & 3 & 0 & 0 & 3\end{array}$
Study of farm machinery management, laborsaving devices, and the economics of selection and operation of farm machinery. Includes study and evaluation of feed grinders and mixers, storage facilities, materials handling systems, and other laborsaving devices.

## $\begin{array}{lllllll}\text { AGR } 222 & \text { Farm Electrification } & 2 & 2 & 0 & 3\end{array}$

Study of the basic principles and systems of farm electrification and their application to agricultural production, with emphasis on equipment for controlling the utilization of electricity.

| AGR 223 | Livestock Production | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Study of the basic principles of livestock production, including the breeding, feeding, care, and management of farm animals.

AGR 224 Agricultural Pollution $\begin{array}{llllll}\text { Prevention and Management } & 2 & 2 & 0 & 3\end{array}$
Topics include soils, control of animal wastes, pesticides, fertilizer runoff, stream sedimentation, and the use of land for disposal of municipal wastewater. Emphasis on livestock waste management. Presents state and federal regulations governing agricultural pollution.

AGR
225 Agricultural Pollution Control $3 \quad 2 \quad 0 \quad 4$
Study of the relationship between agriculture and environmental pollution. Topics covered include soils, control of animal wastes and feedlot management, pesticide use and misuse, biological control of agricultural pests, fertilizer runoff and control, stream sedimentation, the use of land for disposal of municipal wastewater, and state and federal regulations related to agricultural pollution.

## AGR 227 Beef Production

## 30003

Study of beef production including the selection, breeding, feeding, care, and management of a beef herd. The economical aspects of various systems of beef production.

AGR 230 Plant Diseases $\begin{array}{lllll}3 & 0 & 0 & 3\end{array}$
Study of the germ theory of disease as it applies to plants and crop production. Includes common plant diseases and symptoms and methods of prevention and control.

AGR 235 Animal Diseases $\begin{array}{llll}3 & 0 & 0 & 3\end{array}$
Study of the common livestock and poultry diseases and symptoms. Presents the latest advances in disease control methods with emphasis on preventive measures, including antibiotics and feed supplements.

|  |  | Clinical/Credit |  |  |  |
| :--- | :--- | :--- | :---: | :---: | :---: | :---: |
|  | Class | Lab | Shop | Hours |  |
| AGR 240 | Insects of Agronomic Crops | 2 | 2 | 0 | 3 |

Study of common local crop insects-their economic importance, identification, life cycles, and hosts. Field trips used to determine the levels of economic damage and identify the causative insects.

## $\begin{array}{llllll}\text { AGR } 245 & \text { Crop Insects } & 3 & 2 & 0 & 4\end{array}$

Study of common crop insects, their economic importance, identification, life cycles, and hosts. Field trips to study insect damage to crops in the area.

| AGR 247 | Pesticides and Their Use in <br> Home and Community | 3 | 2 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Study of the use of pesticides including their function, ingredients, beneficial aspects, and environmental hazards, with major emphasis on safe application and handling. Biological and other alternative methods of pest control are studied.

## AGR 254 Plant Propagation $\begin{array}{lllll}3 & 0 & 0 & 3\end{array}$

Study of basic concepts and principles of sexual and asexual propagation. Techniques are learned through practical exercises conducted in laboratory sessions. Emphasis is given to those propagation methods widely utilized in the industry.

AGR 255 Landscaping Principles and Practices $3 \quad 2 \quad 0 \quad 4$

A study of the basic principles of landscape design. Includes selection and placement of plants and structures, preliminary sketches, planting, fertilization, and pruning. Emphasis placed on site plans for residences.

## $\begin{array}{lllllll}\text { AGR } 260 & \text { Residential Landscaping } & 2 & 2 & 0 & 3\end{array}$

Introduces basic landscape concepts and focuses on designing landscapes as extensions of indoor activities. Special emphasis on residential site planning and design. Requires students to complete a simple landscape design on paper.

## AGR-272 Tobacco Production $\begin{array}{lllll}3 & 0 & 0 & 3\end{array}$

Review of the economic importance of tobacco in North Carolina, detailed study of certain aspects of the production and marketing of tobacco, and brief look at the processing and manufacturing phases.

## AGR 273 Corn, Peanut, and Soybean

 Production 3 0 0Production, marketing, and improvement of corn, peanuts, and soybeans are covered in this course. The latest research information on seed varieties, fertilization, disease, weed control, cultural practices, equipment, harvesting, and marketing are stressed.

## AGR 275 Introduction to Weed <br> $\begin{array}{llllll}\text { Identification and Control } & 2 & 2 & 0 & 3\end{array}$

Study of the identification and control of common weeds in locally grown crops. Emphasis on weed control in corn, soybeans, and tobacco.
Class Lab Shop Hours

AGR 278 Weed Identification and
$\begin{array}{llllll}\text { Control } & 3 & 2 & 0 & 4\end{array}$
Study of the identification and control of annual and perennial weeds of economic importance in North Carolina.

## $\begin{array}{lllllll}\text { AGR } 279 & \text { Farm Forestry } & 3 & 2 & 0 & 4\end{array}$

Deals with the fundamentals of forestry and farm forestry problems, including planting, thinning, protecting, harvesting, and marketing.

## AGR 280 Farm Forestry Management $2 \begin{array}{lllll}\mathbf{2} & 2 & 0 & 3\end{array}$

Study of maintaining, harvesting, and planting local forest trees with an emphasis on tree farms and the economics of tree farming.

## AGR 285 Introduction to Soil and Water

 Conservation 30003
Study of the physical properties of soils and the processes of erosion. Includes methods of preventing and controlling soil erosion and an understanding of the principles involved in controlling excess water.

AGR 290 Soil and Water Conservation $\begin{array}{llllll}3 & 2 & 0 & 4\end{array}$
Introduction to soil, water, and plant conservation; the available resources to carry out soil and water conservation measures; and the relationship of specialized knowledge in agronomy, economics, engineering, soils, forestry, and recreation.

AGR 296 Agricultural Programs and
Agencies 3 0 $0 \quad 3$
Preview of public agricultural programs and agencies that provide services for agricultural producers, including their objectives, organization, functions, and services.

AGR 297 Agricultural Policy and
Programs $\quad 3 \quad 0 \quad 0 \quad 3$
Concerned with the processes of agricultural policy formation in a democratic society and the role of individual and group actions in the development of public programs. Policies and programs are analyzed, including the relationship to demand, supply, income, population, the nature of agricultural production, and social welfare.

## AIR CONDITIONING, HEATING, AND REFRIGERATION

AHR 101 Air Conditioning and Refrigeration

Class Lab Shop Hours

Introduction to the air conditioning and refrigeration field and to terminology relating to heating and cooling systems. Topics included are the basic laws of refrigeration, heat and heat transfer methods, servicing tools and equipment, and tubing and fittings. Shop practice will be given in operations such as tube bending, flaring, swaging, and soldering.

## Class Lab Shop Hours

## AHR 106 Architectural Mechanical

 Equipment 3 3 4General study of heating, air conditioning, plumbing, and electrical equipment, materials, and symbols, and building code requirements pertaining to residential and commercial structures. Reading and interpretation of working drawings prepared by mechanical engineers and coordination of mechanical and electrical features with structural and architectural designs are included.

| AHR 201 | Principles of Heating | 3 | 0 | 3 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Warm air systems, heat emitter, electric heating, forced hot water and steam heating systems, including selection and sizing of equipment such as registeres, grills, furnaces, boilers, radiators, baseboards, piping, and ducts. Heating layout and specifications for an existing structure or one on blueprint stage will be prepared.

## $\begin{array}{lllllll}\text { AHR } & 1101 & \text { Automotive Air Conditioning } & 3 & 0 & 6 & 5\end{array}$

General introduction to the principles of refrigeration. Includes a study of the assembly of the components and connections necessary in the mechanisms, methods of operation and control, proper handling of refrigerants in charging the system, use of testing equipment in diagnosing trouble, and efficiency tests and general maintenance work.

| AHR | 1102 | Introduction to Cooling <br> and Heating Systems | 3 | 0 | 9 |
| :--- | :--- | :--- | :--- | :--- | :--- |

Covers the basic principles of cooling and heating related to industrial systems. Air conditioning, refrigeration, and heating systems are studied as well as fluid flow, air distribution, and control systems. Special industrial cooling and heating systems are included.
$\begin{array}{lllllll}\text { AHR } & 1107 & \text { Gas Laws Refrigeration } & 2 & 0 & 3 & 3\end{array}$
Terminology, laws of refrigeration, absolute pressure and absolute temperature, energy conversion units; specific heat; latent heat, and sensible heat; measurement of heat in quantity and intensity; tone of refrigeration, pressure temperature relationship; transfer of heat by conduction, convection, and radition.
$\begin{array}{lllllll}\text { AHR } & 1115 & \text { Fundamentals of Heating } & 2 & 0 & 6 & 4\end{array}$
An introduction to the fundamentals of heating and heat transfer related to various types of heating systems. The uses and care of tools, using instruments to measure combustion efficiencies, and installing equipment and ductwork to make up a heating system are covered. Also introduced are comfort surveys, heat loss and gain, equipment selection and maintenance, solar heating, and heat distribution systems.

## $\begin{array}{lllllll}\text { AHR } & 1119 & \text { Principles of Refrigeration I } & 2 & 6 & 0 & 4\end{array}$

An introduction to the principles of refrigeration. Terminology and the use and care of tools and equipment. Practical work with hand tools and materials is given to develop basic skills in the operation of refrigeration systems. Standard procedures and safety measures are stressed. AHR 1119 and AHR 1120 series is equivalent to AHR 1121.

|  |  | Clinical/Credit |  |  |  |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: |
| AHR | 1120 | Class | Lab | Shop | Hours |
| Refrigeration II | 1 | 6 | 0 | 3 |  |

Prerequisite: AHR 1119
Further study of the principles of refrigeration. Terminology and identification and the function of the component parts of refrigeration systems are covered. Practical work with piping and duct-work is given to develop basic skills in the installation of refrigeration systems. Standard procedures and safety measures are stressed. AHR 1119 and AHR 1120 series is equivalent to AHR 1121.
$\begin{array}{llllllll}\text { AHR } & 1121 & \text { Principles of Refrigeration } & 3 & 0 & 12 & 7\end{array}$
An introduction to the principles of refrigeration. Terminology, the use and care of tools and equipment, and the identification and the function of the component parts of refrigeration systems are covered. Practical work with hand tools, materials, piping, and ductwork is given to develop basic skills in the installation of refrigeration systems. Standard procedures and safety measures are stressed.

## AHR 1122 Domestic and Commercial Refrigeration

306
5
Prerequisite: AHR 1121
Domestic refrigeration servicing of conventional, and hermetic systems. Cabinet care, controls, and system maintenance in window air conditioning units and domestic refrigerators and freezers are stressed. Commercial refrigeration servicing of display cabinets, walk-in cooler and freezer units, and mobile refrigeration systems are studied. Manufacturer's catalogs are used in sizing and matching system components and a study of controls, refrigerants, heat reclamation maintenance, and servicing methods is made. The American Standard Safety Code for Refrigeration is studied and its principles practiced.

## AHR 1123 Principles of Air Conditioning

 $\begin{array}{llll}3 & 0 & 12 & 7\end{array}$
## Prerequisite: AHR 1122

Includes a study of the selection of various heating, cooling, and ventilation systems and the investigation and control of factors affecting air cleaning in air movement, temperature, and humidity. Psychometric charts are used in determining optimum temperature and humidity control. Commercial air conditioning equipment is assembled and tested. Practical sizing and balancing of duct work is performed as needed.

| AHR | 1124 | Air Conditioning, Heating <br> and Refrigeration Servicing | 3 | 0 | 6 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

## Prerequisite: AHR 1123

Emphasis is placed on the maintenance and servicing of equipment used in the cleaning, changing, humidification and temperature control of air in an air conditioned space. Shop work involves locating and correcting equipment failures and controlling, testing, and adjusting heating and cooling equipment to maximize energy conservation.

| AHR | 1126 | All Year Comfort Systems | 3 | 0 | 6 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisites: AHR 1123; AHR 1128
Equipment used to provide heating and cooling for "all year" comfort will be studied. Included will be heat pumps, oil-fired, gas-fired, water-circulating, electric-resistance and solar heating and cooling systems.
Specialized controls required for all year comfort systems, preventive maintenance, and balancing are included in the course.

|  |  |  | Clinical/Credit |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| AHR | 1128 | Automatic Controls |  | Class | Lab | Shop | Hours |

Prerequisites: ELC 1102; AHR 1122
Types of automatic controls and their function in heating and cooling systems. Included in the course will be electric, electronic, mechanical, and pneumatic controls for domestic and commercial heating and cooling along with zone controls, unit heater and ventilator controls, commercial fan system controls, commercial refrigeration controls, and radiant panel controls.

## Clinical/Credit Class Lab Shop Hours

## BANKING AND FINANCE

| AIB | 111 | Business Administration | 4 | 0 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Emphasis placed on the managerial responsibility of coordinating carefully the many facets of a business enterprise. Also stresses the background of administration, financial management, production, labor-mangement relations, marketing, coordination and control, and public relations problems.

## AIB 120 Accounting I $4 \begin{array}{llll}4 & 0 & 0 & 4\end{array}$

Comprehensive treatment of all up-to-date principles giving the student ample opportunity through examples, illustrations, and correlated activities to learn how the principles are applied. End-of-unit summaries have special sections for both principles and managerial implications.

AIB 121 Accounting II |  | 4 | 0 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- |

Prerequisite: AIB 120
Content of this course selected with two major objectives in mind: immediate on-thejob usefulness and contribution to the student's future growth in the banking field. Consists of a detailed study of balance sheet items, covers manufacturing accounting and production costing, and includes an appropriate study of cost analysis for managerial decisions.

## AIB 122 Fundamentals of Bank Data

 $\begin{array}{lllll}\text { Processing } & 4 & 0 & 0 & 4\end{array}$This course is designed for non-data processing personnel at any level who would like a general understanding of data processing principles and their banking applications. The course presents the concepts of data processing and the basic functions of computers using analogies and illustrations from the banking industry. It discusses present and future bank applications of data processing, including MICR and EFTS.

## $\begin{array}{lllllll}\text { AIB } & 123 & \text { Financing Business Enterprise } & 4 & 0 & 0 & 4\end{array}$

Stress is placed on the difference between lending and investing, and on the fact that investing in a corporation and financing a corporation are different aspects of the same subject. Material is presented from the viewpoint of the corporate treasurer who must safeguard the financial future of the corporation.

AIB 202 \begin{tabular}{l}
Principles of Bank <br>
Operation

$\quad 4$

4
\end{tabular}

Fundamentals of bank functions in a descriptive fashion so that the beginning banker may view the profession in a broad (and operational) perspective. The descriptive orientation is intentional. Banking is increasingly dependent upon personnel who have the broad perspective so necessary for career advancement.

| AIB 203 | Bank Investments | $\mathbf{4}$ | 0 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

This course describes the nature of loanable funds and how their uses are determined. It also analyzes the primary and secondary reserve needs of commercial banks, the sources of reserves, and their random and cyclical fluctuations, showing the influence of these factors on investment policy. This analysis is followed by a study of yield changes as they affect a bank's long-term holdings.

## $\begin{array}{lllllll}\text { AIB } & 204 & \text { Bank Management by Objectives } & 0 & 2 & 0 & 1\end{array}$

Middle management seminar designed to assist bank officers in learning how to translate bank problems into realistic goals for the individual and the bank through the management-by-objectives system. Cases and outside readings are used in this seminar. It can be presented as a brief, intensive workshop or an eight-session seminar.

AIB 205 Bank Management $4 \begin{array}{llll}4 & 0 & 0 & 4\end{array}$
Philosophy and practice of management. The study and application of the principles outlined provide new and experienced bankers with a working knowledge of bank management.

AIB 206 Bank Letters and Reports $4 \begin{array}{lllll}\mathbf{4} & 0 & 0 & 4\end{array}$
Designed for those bank officers, supervisors, and employees who dictate or review correspondence. Since bank letters are actually public relations documents, all persons should be familiar not only with the mechanical forms of bank letters, but also with the psychological principles that help the letter writer achieve best results. Reviews letter forms, emphasizes fundamental principles underlying modern correspondence, and examines different kinds of bank letters.

AIB 207 International Banking 4
Introduction to a vast field for those working in international departments as well as for those involved in the domestic activities of their banks. Presents the basic framework and fundamentals of international banking, how money is transferred from one country to another, how trade is financed, what the international agencies are and how they supplement the work of commercial banks, and how money is changed from one currency to another.

## AIB 208 Conference Planning and

 $\begin{array}{llllll}\text { Leadership } & 0 & 2 & 0 & 1\end{array}$Centered on a specific phase of the problem of human understanding, the course is concerned with an important responsibility of management: to communicate and to coordinate ideas in the most effective way possible. Consideration is given to the dynamics of human interaction in groups convened to solve problems and make decisions. The essentials of parliamentary procedure are also stressed, thus presenting an effective technique for achieving consensus and formalizing and recording the decision-making process.

AIB 209 Installment Credit | 4 | 0 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- |

Techniques of installment lending presented concisely. Emphasis is placed on establishing the credit, obtaining and checking information, servicing the loan, and collecting the amounts due. Each phase of a bank's installment credit operation should be carefully scrutinized to be certain that the most efficient methods are employed, for only through an efficient operation can a bank maximize its profits on this particular


#### Abstract

Class Lab Shop Hours


kind of credit. Other topics discussed are inventory financing, special loan programs, business development and advertising, and the public relations aspect of installment lending.


#### Abstract

AIB 210 Money and Banking 400003


Stresses the practical aspects of money and banking and emphasizes the basic monetary theory needed by the banking student to apply his knowledge to his particular job. Historical treatment kept to a minimum. Emphasis is also placed on such problems as economic stabilization, types of spending, the role of gold, limitations of central bank control, government fiscal policy, balance of payments, and foreign exchange, showing their repercussions on the banking industry in affecting yield curves and structuring of portfolios.

| AIB 212Planning Management <br> Development | 0 | 2 | 0 | $\mathbf{1}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |

Middle management seminar designed to assist bank officers who are responsible for the planning, recruiting, and development of bank management personnel. Cases and outside readings are used. It can be presented as a brief, intensive workshop or as a twelve-session seminar.

## AIB 213 Trust Functions $4 \begin{array}{lllll}4 & 0 & 0 & 4\end{array}$

Presents a complete picture of the services rendered by institutions engaged in trust business. Providing an introduction to the services and duties involved in trust operations, the course is intended for all bankers, not just those who are engaged in trust business. It endeavors to keep clear the distinction between business and legal aspects of trust functions.

## AIB 214 Effective Speaking $4 \begin{array}{lllll}4 & 0 & 0 & 4\end{array}$

Students given an opportunity to study all phases of speech situations. Directed primarily to the student seeking to give an account on the public platform. Other speech situations are not neglected. Having studied the basic principles involved in organizing and presenting a speech, students are given suggestions to aid in developing speaking ability in situations such as conferences, panel discussions, radio, and television.

| AIB 215 | Branch Management | 2 | 4 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- |

Course includes lending, management, and operations, intended for management trainees, branch managers, and assistant managers. Classified in Functional Banking area, course is recommended for diploma in Retail Banking, in Commercial Lending, and is required for Branch Operations diploma.

## AIB 219 Credit Administration $4 \quad 0 \quad 0 \quad 4$

Directed toward the executive level, concerned partly with a statement and a discussion of factors influencing and determining loan policy. Methods of credit investigation and analysis, credit techniques, specific credit problems, and regular as well as unusual types of loans are discussed.

AIB 220 Bank Cards | $\mathbf{3}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{3}$ |
| :--- | :--- | :--- | :--- |

Classified in Functional Banking area, this course is a beginning level and recommended for diploma in Retail Banking, in Bank Marketing, and is required for Bank Card diploma.

AIB 228 Consumer Credit Analysis

|  | Clinical/Credit |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Class | Lab | Shop | Hours |  |
| 4 | 0 | 0 | 4 |  |

Designed for individuals who understand the basics of consumer lending and its function within a bank but need specific training on the many aspects of making a consumer loan. Includes legal and regulatory issues; credit application, investigation, scoring fundamentals; credit decision considerations; loan interviewing, documentation, closing and review.

## $\begin{array}{lllllll}\text { AIB } & 229 & \text { Financial Planning for Bankers } & 4 & 0 & 0 & 4\end{array}$

Designed for individuals with customer contact including bank managers, consumer credit, trusts, marketing, new business development, operations, and consumer information staff. Assumes no previous formal education or training has been done in financial planning. Provides a general appreciation of the topic and its application to the current banking environment.

## AIB 230 Introduction to Commercial

 Lending40003
Explores various aspects of a bank's commercial loan department including cost analysis, regulatory and legal environment, and business development.

AIB 231 Savings and Time Deposit Banking

400
4
Reflects recognition of the fact that a knowledge of the historical development of savings institutions and an awareness of the basic economic function of the savings process are necessary to an understanding of the current operations and policies of these institutions. Begins with a review of the economics of the savings process in order to clarify important differences between financial savings by individuals or organizations and real savings that appear as capital formation. Different types of financial savings are reviewed in order to describe the system of financial flows of income to capital investment.

## $\begin{array}{lllllll}\text { AIB } 232 & \text { Agricultural Finance } & \mathbf{4} & 0 & 0 & 4\end{array}$

Reflecting the rapid growth of the off-farm agribusiness sectors (the suppliers of farm inputs), this course emphasizes general principles associated with the evaluation of management and the use of capital rather than the examination of land and labor resources which are more closely aligned with agricultural production. An understanding of agricultural finance should help the banker in satisfying the credit needs of modern agriculture.

## AIB 233 Analyzing Financial

Statements 4000004
Characteristics of financial statements and financial statements analysis. The first section serves as a useful review of basic accounting principles for those students who have studied accounting. For those who have not, this section provides the minimum accounting background necessary for profitable study of financial statement analysis.

This seminar focuses on check cashing, check swindles, bank holdups, and security procedures.

AIB 235 Loan and Discount 300030
This seminar teaches bank employees the essential facts about promissory notes, including calculating interest and discounting commercial paper; guarantees; general collateral agreements; examining and processing documents accompanying notes secured by stocks, bonds, and savings account passbooks; and the concepts of attachment, perfection, priority, default, and foreclosure.
$\begin{array}{lllllll}\text { AIB } 236 & 4 & \mathbf{H} & 0 & 0 & 4\end{array}$
Approaches the subject from the viewpoint of the mortgage loan officer who seeks to develop a sound mortgage portfolio. A picture of the mortgage market is presented first; then the acquisition of a mortgage portfolio, mortgage plans and procedures, mortgage loan processing and servicing; and finally the obligations of the mortgage loan officer in overall portfolio management.
$\begin{array}{lllllll}\text { AIB } 237 & \text { Selling Bank Services } & 0 & 2 & 0 & 1\end{array}$
Teaches tellers and new-accounts personnel how to recognize and meet bank customer needs; checking accounts, savings services, loans to individuals, safe deposit boxes, travelers' checks, and cross selling.

AIB 239 Bank Public Relations and $\begin{array}{lllll}\text { Marketing } & 4 & 0 & 0 & 4\end{array}$
Discusses the basis of public relations, both internal and external, and seeks to explain the why, the what, and some of the how of public relations and marketing. Intended as an overview for all bankers in terms of what everyone in banking should know about the essentials of bank public relations and marketing.

## $\begin{array}{lllllll}\text { AIB } 250 & \text { Real Estate Finance } & 4 & 0 & 0 & 4\end{array}$

Classified in Functional Banking area, this course is designed for personnel involved in mortgage credit and is recommended for diploma in Retail Banking.

## AIB 259 Law and Banking $4 \begin{array}{llll}4 & 0 & 0 & 4\end{array}$

Introduction to basic U.S. law, presenting the rules of law which underlie banking. Topics include jurisprudence, the court system and civil procedure, contracts, quasicontracts, property, torts and crimes, agencies, partnerships, corporations, sales of personal property, commercial paper, bank deposits and collections, documents of titles, and secured transactions. Emphasis is on the Uniform Commercial Code.

## AIB 272 Supervision and Personnel

 Administration 400004Designed to aid first-line supervisors in making a smooth transition from expert in a particular task to the role of a supervisor who must produce results through the efforts of other people. In this role, the first-line supervisor must reflect management attitudes and carry out management policies while at the same time inspiring his group to achieve friendly cooperation and maximum production.

| AIB 299 | Supervisory Training | 4 | 0 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Explores role of supervisor with emphasis on management and leadership skills pertinent in bank operation.


#### Abstract

Class Lab Shop Hours

\section*{ANTHROPOLOGY} | ANT | 150 | Introduction to Anthropology | 5 | 0 | 0 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: Specified score on reading placement test or ENG 094 General introduction to anthropology, the science of man as the culture-bearing animal. Topics considered: physical evolution of mankind and biological variations within and between modern human populations, prehistoric and historic developments of culture, cultural dynamics viewed analytically and comparatively.


ANT 160 Societies Around the World $\quad 5 \quad 0 \quad 0 \quad 5$
Prerequisite: Specified score on reading placement test or ENG 094
Ethnolographic survey of world culture areas showing similarities and variations in cultural patterns.

|  |  | Clinical/Credit |  |
| :---: | :---: | :---: | :---: |
| Class | Lab | Shop | Hours |
| 1 | 3 | 0 | 2 |

## ARCHITECTURE


#### Abstract

ARC 104 Architectural Drafting $1 \begin{array}{llll} & 3 & 0 & 2\end{array}$


Beginning course in architectural drafting. Course includes orthographic and isometric drawings.

| ARC 105 | Architectural Drafting | 1 | 3 | 0 | 2 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: ARC 104
Intermediate course in architectural drafting. Course includes the mechanics of perspective drawing and rendering techniques. ARC 104 and 105 are equivalent to and will substitute for ARC 106.

| ARC | 106 | Architectural Drafting | 2 | 6 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Designed to provide fundamental knowledge of the principles of drafting. Basic skills and techniques of drafting included are the use of drafting equipment, lettering, pictorial sketching, geometric construction, and orthographic instrument drawing of principal views. Projection problems dealing with principles of isometric, oblique, and perspective drawings are included. Applications of descriptive geometry are used in visualization and analytical solutions of the drafting problems involving auxiliary views, intersections, and developments.
$\begin{array}{lllllll}\text { ARC } 107 & \text { Architectural Drafting } & 2 & 6 & 0 & 4\end{array}$
Prerequisite: ARC 106
Includes the development of techniques in architectural lettering, symbols, dimensioning, freehand and instrument drafting, and the development of a complete set of working drawings for a residence, with construction details and the use of appropriate material symbols and connections. Sections, scale details, and full-size details will be prepared from preliminary sketches.

| ARC | 108 | Architectural Drafting | 0 | 9 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisites: ARC 107; AHR 106; CIV 105
An indepth approach to the study of architectural drafting. Development of techniques in architectural lettering, dimensioning, freehand sketching and instrument drawing,
and drawings of construction details, using appropriate material symbols will be included. A continuation of ARC 107, this course includes an introduction to commercial working drawings. Working drawings, including plans, elevations, sketches, scale details, and wall section details are prepared from preliminary sketches. Introduces computer drafting.

## ARC 201 Architectural Design I <br> $3 \quad 9 \quad 0$ <br> 6

Prerequisite: ARC 107
Basic design principles; development of design as it relates to the details, structure, and aesthetic functions of buildings; design presentations and architectural models; and group and individual problems in design. Develops computer drafting in three dimensions.

ARC 202 Environmental Design $\begin{array}{lllll}2 & 3 & 0 & 3\end{array}$
Prerequisite: ARC 107
Design principles of regional and city planning, research reports, maps, and problems in environmental design. Problem solving using computer data.
$\begin{array}{llllll}\text { ARC } 220 & \text { Architectural Drafting } & 2 & 9 & 0 & 5\end{array}$
Prerequisite: ARC 108
Includes commercial working drawings; materials used in commercial buildings; systems of construction; and drawing of structural plans and details as prepared for building construction, including steel, concrete, and timber structural components. Appropriate details and drawings necessary for construction are studied. Reference materials are used to provide the draftsman with skills and knowledge in locating data and in using handbooks.
$\begin{array}{llllll}\text { ARC } 221 & \text { Architectural Drafting } & 2 & 9 & 0 & 5\end{array}$
Prerequisite: ARC 220
Individual or group projects which involve the coordination of working drawings for commercial work. Consideration is given to coordination of mechanical and electrical features with structural and architectural components. A two-week problem in model building or architectural presentation work is included.

## $\begin{array}{lllllll}\text { ARC } 222 & \text { Architectural Drafting } & 2 & 9 & 0 & 5\end{array}$

Prerequisites: ARC 221; CIV 101; DFT 235
Preparation of a complete set of working drawings for the architectural structure, coordinating floor plans, elevations, wall sections, and details. Site and landscaping plans are studied and drawn. Final assembly of the complete document for construction purposes made. Plans include environmental and energy considerations.
$\begin{array}{lllllll}\text { ARC } 233 & 2 & 0 & 0 & 0 & 2\end{array}$
Study of the professional relationship of the architectural firm to clients, contractors, suppliers, consultants, and other architects. Ethics of the profession as applied to the draftsman's role in the architectural firm are emphasized as well as the legal aspects of architectural practice.

ART
ART 160 Art Appreciation 30003

Exploratory study of the visual experience; intended to enhance the student's understanding and enjoyment of art.

## ART 170 Color and Design $\quad 5 \quad 0 \quad 0 \quad 5$

Study of principles common to all visual work emphasizing color, line, shape, space, volume, and texture and their psychological and physical effects on the viewer.

|  |  |  | Clinical/Credit |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| BIOLOGY | Class | Lab | Shop | Hours |  |  |
| BIO $\quad 100$ | Introduction to Human Biology | 5 | 0 | 0 | 5 |  |

Prerequisite: ENG 095 or equivalent score on the reading placement test Introduces the normal structure and function of the human body. Presents the cell as the basic building block of the human organism and introduces some basic concepts in chemistry to provide a basis for understanding the body functions. Includes medical terminology appropriate to each body system used in describing various body parts, medical procedures, and disease states. Ways of detecting disease states are considered. The laboratory augments the study of the various body systems and teaches procedures for assessing vital signs and responding to emergency situations. Designed for students in the medical secretary curriculum.


Foundation of facts and principles in the normal structure and related functioning of the following body systems: skeletal, muscular, digestive, circulatory, respiratory, urinary, reproductive, endocrine, integumentary, nervous, and special sense organs. Presents principles and concepts of physiology and immunology. Presentation of the normal body as a basis for understanding variations from the normal.

BIO 107 Anatomy and Physiology I $4 \quad 2 \quad 0 \quad 5$
A study of the structure and normal function of the human body with man identified as a living organism composed of living cells, tissues, organs, and systems. Included are the basic anatomical and physiological aspects of the integumentary, skeletal, muscular, respiratory, cardiovascular, and lymphatic systems. The laboratory portion includes relevant experiments to augment the student's learning of body structure and functions.

## BIO 108 Anatomy and Physiology II $4 \quad 2 \quad 0 \quad 5$

Prerequisite: BIO 107
A continuation of the study of the structure and normal function of man as a living organism. Included are the basic anatomical and physiological aspects of the nervous, endocrine, urinary, digestive, and reproductive systems, the special senses, and fluid and electrolyte balance. The laboratory portion includes relevant experiments to augment the student's learning of body structure and function.

|  |  |
| :--- | :--- |
|  |  |
|  | Class | Lab | $c$ | Clinical/Credit |
| :---: | :---: | :---: | :---: |
| Shop | Hours |

Prerequisite: A minimum score of 75 on the science placement exam or BIO 101
Study of the microscopic and macroscopic structure of the human body. Includes a study of normal physiology as a basis for understanding pathophysiological states. Covers cells, tissues, body organization, and integumentary, cardiovascular, respiratory, and digestive systems.
$\begin{array}{lllllll}\text { BIO } & 151 & \text { Human Anatomy and Physiology II } & 3 & 2 & 0 & 4\end{array}$ Prerequisite: BIO 150
Continues the study of the structure and function of the human body including a comprehensive study of normal human nutrition. Covers the nervous system, endocrine system, and special senses.

## BIO 152 Human Anatomy and Physiology III $3 \quad 2 \quad 0 \quad 4$

Prerequisite: BIO 151
Continues the study of the structure and function of the human body. Covers the muscular, skeletal, reproductive, and urinary systems along with fluid and electrolyte balance.

| BIO 206 | Microbiology | 3 | 2 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: BIO 108 or BIO 150
A study of basic microbiology and its relationship to health and disease. Includes basic laboratory practice; microbial physiology; environmental, medical, and applied microbiology.

| BIO 207 | Advanced Microbiology | 2 | 2 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: BIO 206
Indepth study of human pathogens and their relationship to the disease process including immunological and epidemiological considerations.

| BIO 210 | Radiation Biology | 4 | 0 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: RDT 205
Study of radiobiology with emphasis on the effects of ionizing radiation in the human body. The use of radiation and radioactive materials in nuclear medicine and radiation therapy considered along with protective measures.

| BIO 250 | General Biology I | 3 | 2 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: Specified score on reading placement test
Introduction to basic biological concepts and principles; a study of the chemical and physical properties of the living cell; cell structure-function relationship; and cell reproduction and genetics.

BIO 251 General Biology II $\begin{array}{lllll}3 & 2 & 0 & 4\end{array}$
Prerequisite: Specified score on reading placement test
A survey of the five kingdoms with emphasis on structure-function relationships and on phylogenetic complexity. In addition, vertebrate nutrition and digestion, gas exchange, blood and transport systems, and animal excretion will be studied.

# Clinical/Credit <br> Class Lab Shop Hours 

$\begin{array}{llllll}\text { BIO } 252 \text { General Biology III } & 3 & 2 & 0 & 4\end{array}$
Prerequisite: BIO 251
A continuation of the study of vertebrate systems including skeletal, muscular, reproductive, endocrine, and temperature regulating systems. The structure, growth, transport system, and reproductive system of vascular plants will be studied. Ecosystems, ecology, and evolution are also considered.
$\begin{array}{llllllll}\text { BIO } & 1104 & \text { Introduction to Microbiology } & 2 & 2 & 0 & 3\end{array}$
Presentation of the basic principles of microbiology to aid students in understanding the relationship of microorganisms with the maintenance of health and the cause, control, and prevention of disease.

## Clinical/Credit <br> Class Lab Shop Hours

## BUSINESS

BUS 102 Beginning Typewriting $\begin{array}{lllll}2 & 3 & 0 & 3\end{array}$
Emphasis on study of the keyboard, mechanics of the typewriter necessary for the acquisition of elementary typewriting skills, and development of speed and accuracy.

## BUS 103 Intermediate Typewriting $\begin{array}{lllll}2 & 3 & 0 & 3\end{array}$

Prerequisite: BUS 102 or equivalent
Development of speed and accuracy with further mastery of correct typewriting techniques as applied to tabulation, manuscript, correspondence, and business forms.

## $\begin{array}{lllllll}\text { BUS } & 104 & \text { Advanced Typewriting } & 2 & 3 & 0 & 3\end{array}$

Prerequisite: BUS 103
Emphasis on production typing problems and speed building. Attention to the development of the student's ability to function as a typist, producing mailable copy.

## BUS 105A Introduction to Shorthand $2 \quad 3 \quad 0 \quad 3$

Beginning course in theory and practice of reading and writing Gregg shorthand.

## BUS 105B Introduction to Shorthand 203003

Prerequisite: BUS 105A or equivalent
Sequel to BUS 105A; emphasis on phonetics, penmanship, word families, brief forms, and phrases.
$\begin{array}{lllllll}\text { BUS } & 106 & \text { Beginning Shorthand } & 4 & 6 & 0 & 7\end{array}$
Prerequisite: ENG 101S (minimum grade of "B")
Corequisites: BUS 113
Beginning course in theory and practice of reading and writing Gregg shorthand. Emphasis on phonetics, penmanship, word families, brief forms, and phrases.
$\begin{array}{llllllll}\text { BUS } & 107 & \text { Intermediate Shorthand } & 4 & 6 & 0 & 7\end{array}$
Prerequisite: BUS 106
Corequisites: BUS 114
Continued study of theory with greater emphasis on dictation and elementary transcription.

|  | Class | Lab | Clinical/Credit <br> Shop |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Hours |  |  |  |


| BUS | 110 | Electronic Calculator | 2 | 2 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: MAT 110 or MAT 100
Training in techniques, processes, operations, and applications of electronic calculator.

BUS 112 Filing | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- |

Fundamentals of indexing and filing, combining theory and practice by the use of miniature letters, filing boxes, and guides. Students will also become familiar with modern filing equipment.
$\begin{array}{lllllll}\text { BUS } & 113 & \text { Machine Transcription I } & 5 & 0 & 0 & 5\end{array}$
Prerequisites: BUS 103; ENG 1015 (minimum grade of " $B$ ")
Introductory course in the correct techniques of operating the dictating and transcribing units, plus fundamentals of transcription such as spelling, punctuation, grammar, letter placement, and the use of reference materials.
$\begin{array}{lllllll}\text { BUS } & 114 & \text { Machine Transcription II } & 5 & 0 & 0 & 5\end{array}$
Prerequisite: BUS 113 (minimum grade of "C")
Continuation of BUS 113 with additional emphasis on producing mailable business correspondence.

## $\begin{array}{lllllll}\text { BUS 115M Medical Law and Ethics } & 3 & 0 & 0 & 3\end{array}$

Study of the principles of office conduct, ethical responsibility of the office staff with regard to information acquired, and obligations and responsibilities of the medical office worker or transcriber. Laws governing medical practice are also included.

BUS - 117 Electronic Calculator: Secretary $\begin{array}{lllll}2 & 3 & 0 & 3\end{array}$
Prerequisite: MAT 110
Problem solving activities for efficient machine operation, verifying techniques, machine programming, and concepts of business mathematics widely used in both business and personal situations.
BUS 123 Business Finance $\quad 3 \quad 0 \quad 0 \quad 0 \quad 3$

Prerequisite: ACT 152
Financing of business units, as individuals, partnerships, corporations, and trusts. A detailed study of short-term, long-term, and consumer financing is included.

BUS 134 Personal Grooming | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- |

Designed to help students recognize the importance of physical, intellectual, social, and emotional dimensions of personality. Emphasis is placed on poise, grooming, and methods of personal improvement.
BUS 136 Introduction to Credit Unions $\quad 3 \quad 0 \quad 0 \quad 0 \quad 3$

A systematic introduction to the credit union movement, the nature of credit unions, their history and a brief explanation of affiliated organizations, including the NCUA.

## Clinical/Credit Class Lab Shop Hours

The legal basis for the operation of credit unions is examined along with share drafts and VISA cards, traditional services, and the roles and functions of credit union management. The developing credit union financial system and the basics of credit union insurance and bonding are also explained. SC/NC grading.

## BUS 137 Management: Credit Unions $3 \quad 0 \quad 0 \quad 0 \quad 3$

Study of management principles: motivation, organization, manager's role in human behavior, decision-making, planning, directing, controlling and development. General elements of management as well as means of application towards credit union operations. Also consultation and training as management tools.

BUS 140 Lotus 1-2-3 $\begin{array}{lllll}2 & 2 & 0 & 3\end{array}$
In one package Lotus provides information management (electronic filing), spreadsheet (electronic worksheet for analysis and forecasting), and a business graphics program (spreadsheet information displayed in graphic form).

## BUS 141 dBASE III $2 \begin{array}{llll}2 & 0 & 3\end{array}$

A software package (using the IBM PC XT) that introduces the most powerful and popular data management system available on the market today. Uses powerful yet simple commands that are the next best thing to speaking English, making it very userfriendly.

## BUS 142 Personnel Administration:

Credit Unions 300003
Study of management applications to office and personnel situations: systems and procedures, office layout, records management, information media, supervisory skills, development of office employees, salary administration, job evaluation, labor relations, performance appraisal, training methods, benefit program and management responsibility in personnel relations.

BUS 143 Accounting I: Credit Unions $\begin{array}{lllll}3 & 2 & 0 & 4\end{array}$
The generation and flow of financial information through the accounting system for external reporting. Areas include: principles, accounting cycles, financial statements analysis of revenue and expense, analysis of asset, liability and equity accounts and present value concepts.

BUS 145 Risk Management and Insurance: Credit Unions 300003

Concepts and principles involved in the production and operation of risk management and control. Achievement of financial objectives through risk management tools. Also utilization of insurance, self-insurance and loss prevention as management tools.
Topics include: Concept of risk, risk management function; identification measurement and control of risk; insurance concepts; personal property and liability insurance risk; selection of type of insurance and organization.

## BUS 146 Economics: Credit Unions $\begin{array}{lllll}3 & 2 & 0 & 4\end{array}$

A systematic study and analysis of economic activities. Topics: Economic concepts, national income, pricing, supply and demand, income, savings and living standards, business organization, labor and industrial relations, government economic role, business cycles and forecasting, banking system, economic problems and other economic systems.

## Clinical/Credit <br> Class Lab Shop Hours

| BUS | 147 | Marketing: Credit Unions | 3 | 0 | 3 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

The concepts of planning and developing a marketing program and techniques of strategy.

Topics: Market structure, buyer behavior, product packaging and branding, distribution, promotion, pricing, integration of marketing programs, controlling of program and cost value to society.

| BUS | 148 | Financial Counseling: |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Credit Unions | 3 | 0 | 0 |

Study of financial needs and resolutions of consumers.
Topics: Family components, social security, life insurance and annuities, savings and investments, estate planning, wills and trusts, consumer education, types, techniques, evaluation and ethics of counseling.

## BUS 149 Credit \& Collections: <br> Credit Unions 30003

Aspects of extending credit and policies of collection of accounts.
Topics: Role of credit, types of consumer credit, basis of credit, decision making in credit, scoring systems, practices and systems of collection, business and government credit functions, and control of credit operations.

BUS 150 Business Law: Credit Unions 30003
A study of law as it applies to general business and a working knowledge of legal terminology.
Topics: Contracts, agency, commercial paper, bankruptcy, social forces and legal rights.

BUS 151 | Money \& Banking: |
| :---: | :---: | :---: | :---: | :---: |
| Credit Unions |$\quad 3 \quad 0 \quad 0 \quad 3$

Stresses the structure of financial institutions and their role in the financial and economic fields.

Topics: Money and its functions, federal reserve system, interest rates, monies role and impact on the economy including the national debt. History and creation of money is also reviewed.

| BUS | 153 | Data Processing: Credit Unions | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

This course is designed to provide students with an up-to-date introduction to the principles of computers and data processing.
Topics: Computer functions, hardware, software, systems and the integration of the systems into business and credit union settings.

## BUS 155 Cash Register: Electronic $0 \quad 2 \quad 0 \quad 1$

Designed to acquaint students with the fundamentals of operating the SWEDA 2650 Electronic Cash Register. Offered only for students not taking BUS 231 for graduation or elective.

| BUS | 165 | Introduction to Business | 5 | 0 | 0 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Survey of the business world with particular attention to the structure of various types of business organizations, methods of financing, internal organization, management, functions of business and relationships in society, and current problems.

## BUS 166 Business Law I 3 0 0

Study of the law as it applies to ordinary business transactions, including the law of contracts, agency and employment, and commercial paper. Exposure to legal problems frequently arising in business and social life.

## BUS 167 Business Law II 3 0 0

Continuation of BUS 166. Includes the law of personal property and bailments, sales, insurance, and torts.

## BUS 170 Introduction to Microcomputer

 Applications $2 \quad 2 \quad 0 \quad 3$A general introduction to the microcomputer and various tutorial software packages. Strictly an applications course-will not cover programming.

## BUS 171 Word Processing for IBM PC:

$\begin{array}{lllll}\text { Displaywrite } & 2 & 2 & 0 & 3\end{array}$
A word processing software program developed for use on the IBM PC microcomputer. This course is designed to give the student a basic understanding of the operation and application of the system. The student should have typing skills.

## BUS 181M Administrative Medical Office

 Assistant Procedures 300003Provides adequate training for the assistant to be efficient in the medical office. Emphasis is placed on medical ethics and law; receptionist's duties; telephone techniques; mail processing procedures; records management billing, collecting, and
banking procedures; and accident insurance.

## BUS 182M Clinical Assistant Procedures 3 0 0

Continuation of medical office training covering a vast area of clinical techniques, such as microbiology, pharmacology, diagnostic laboratory procedures, first aid and medical emergencies, and administration of medications. Further study in assisting with physical therapy, minor surgery, etc.

## BUS 183L Legal Typing Practice 3 0 0

Prerequisite: BUS 103
Training in the functions, operations, and duties performed in a legal office. The course includes typing legal documents, reviewing general information about tasks assigned, following established procedures, performing general office routine, and learning the responsibilities of a legal secretary.

|  | Clinical/Credit |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Class | Lab | Shop | Hours |  |
| BUS | 183M Medical Typing Practice | 3 | 0 | 0 | 3 |

Prerequisite: BUS 103
Training in the functions, operations, and duties performed in a medical office. Technical material acquaints the prospective medical assistant with commonly used medical vocabulary and procedures.

BUS 184D Terminology and Vocabulary: Dental 30003
An introductory course in dental assisting and dental terminology. The student will learn many of the basic root words, prefixes, and suffixes upon which many dental terms are built. Also provides a basic introduction to many aspects of dentistry, including dental anatomy, oral pathology, radiography, chairside procedures, and dental specialties.

## BUS 184M Terminology and Vocabulary: Medical I 300003

Prerequisite: BIO 100
Introduction to the study of the structure of medical words and terms. Emphasis is placed on spelling and defining commonly-used prefixes, suffixes, root words, and their combining forms.

## BUS 185M Terminology and Vocabulary:

$\begin{array}{lllll}\text { Medical II } & 3 & 0 & 0 & 3\end{array}$
Prerequisite: BUS 184M
Continuation of the study of medical words and terms with emphasis on words as they pertain to anatomy, physiology, diseases, operations, tumors, drugs, and related descriptive terms.

## BUS 186M Terminology and Vocabulary:

Medical III 3 0 0
Prerequisite: BUS 185M
Continuation of BUS 185 M with additional study emphasizing the various systems of the body.

BUS 188 Medical Transcription I $4 \begin{array}{llll} & 4 & 0 & 5\end{array}$
Prerequisites: BUS 104, 113, 186M
Machine transcription from cassette recordings produced by the American Medical Record Association of materials routinely transcribed in a medical office. Units include history and physical, radiology, operation, pathology, and autopsy reports and discharge summaries.

BUS 189 Medical Transcription II 4 |  | 4 | 0 | 5 |
| :--- | :--- | :--- | :--- |

Prerequisite: BUS 188
Continuation of BUS 188 with units containing work in the following areas: psychiatry, pediatrics, obstetrics and gynecology, corrective surgery, and the endocrine, respiratory, genitourinary, gastrointestinal, cardiovascular, and neurological systems.

BUS 191 Electronic Keyboarding $\begin{array}{lllll}2 & 3 & 0 & 3\end{array}$
Prerequisite: ENG 101S (minimum grade of "B") or permission of instructor Corequisite: BUS 104
Designed to give the student intensive training on the IBM Electronic 75/85 Typewriters through programmed instruction.
BUS 192 Word Processing Applications I $\quad 2 \quad 3 \quad 0 \quad 3$

Prerequisite: BUS 104 and permission from instructor Designed to give the student a basic understanding of the operation and application of the IBM Displaywriter System through programmed instruction and diskettes.

## BUS 193 Word Processing Applications II 203003

Prerequisite: BUS 192 and permission from instructor
Designed to explore advanced applications using the IBM Displaywriter System including advanced tables, math features, simple and advanced text tables, and advanced procedures for organizing one's work station.

BUS 194 Word Processing: Reportpack $2 \begin{array}{lllll} & 3 & 0 & 3\end{array}$
Prerequisite: BUS 193 and permission from instructor
Covers electronic filing on the IBM Displaywriter System including storing text and data on diskettes in an organized fashion, retrieving text and data from a file, creating repetitive letters using the merge feature, creating mailing lists from data stored in the file, and creating various reports from stored data.

BUS 213 Machine Transcription III 5
Prerequisites: BUS 114 (minimum grade of "C")
Emphasis on refinement of machine transcription skills and developing proficiency in producing mailable copy.

BUS 214 Business Seminar 2000002
Corequisite: Cooperative Education Field Experience
Prerequisite: 100 hours of required courses with 2.0 grade-point average. Medical Secretaries must also have completed BUS 189.
Explores career planning principles and career development and job hunting techniques. Designed to increase awareness of one's abilities, teach goal-setting and decision-making skills, and provide direct interaction with employers and job search tools such as resumes, applications, correspondence, and interviews.
BUS 216 Office Procedures $5 \quad 0 \quad 0 \quad 5$

Prerequisites: BUS 113 (minimum grade of "C"), ENG 206
Designed to acquaint students with the responsibilities encountered by a general office worker during the work day, including receptionist duties, handling the mail, telephone techniques, handling the multi-office switchboard, travel information, telegrams, office records, purchasing supplies, office organization, and scheduling appointments.
$\begin{array}{lllllll}\text { BUS } 219 & \text { Credit Procedures and Problems } & 3 & 0 & 0 & 3\end{array}$
Prerequisite: ACT 150
Principles and practices in the extension of credit and the collection of accounts. Federal and state laws pertaining to credit extension and to collection are included.
$\begin{array}{llllll}\text { BUS } 222 & \text { Intermediate Accounting } & 5 & 2 & 0 & 6\end{array}$
Prerequisite: ACT 152
Intensive review of the accounting cycle, including study of financial statements and closing procedures. Includes a more detailed study of current assets including cash, temporary investments, receivables, and inventories.

|  |  | Clinical/Credit |  |  |  |
| :--- | :--- | :--- | :---: | :---: | :---: | :---: |
| BUS | 223 | Class | Lab | Shop | Hours |

Prerequisite: BUS 222
Advanced study of inventories, investments, and intangible assets. Examines long-term liabilities and stockholder's equity accounts and the statements of changes in financial position.

## BUS 225 Cost Accounting $\begin{array}{lllll}3 & 2 & 0 & 4\end{array}$

Prerequisite: ACT 152
Nature and purposes of cost accounting. Includes accounting for direct labor, materials, and factory overhead; job cost and standard cost principles and procedures; selling and distribution costs; budgets; and executive use of cost figures.

| BUS 226 | Payroll Accounting | 3 | 2 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: ACT 151
An intensive study of federal and state income tax requirements. Preparation of forms for social security and income withholding payments and unemployment taxes. Comprehensive payroll problem includes accounting for payroll and preparation of tax forms.

BUS 229 Taxes $\begin{array}{llll}3 & 2 & 0 & 4\end{array}$
Prerequisite: ACT 152
Federal and state income tax preparation. Includes preparation of income tax forms for sole proprietorship, recording partnership income on the individual return, calculation of capital gains, accounting for rental property, and calculation of self-employment taxes.

| BUS 231 | Sales and Inventory Procedures | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Emphasis on selling procedures, customer relations, marketing and displaying merchandise, use of the cash register, credit card sales, and inventory record-keeping as required for a general sales clerk.

## BUS 232 Sales Development $\begin{array}{lllll}3 & 0 & 0 & 3\end{array}$

Study of the fundamentals of retail, wholesale, and specialty selling as applied to the sales demonstration.

## BUS 233 Personnel Management $\begin{array}{lllll}3 & 0 & 0 & 3\end{array}$

Study of the personnel department; policies of recruitment, selection, placement, training, and promotion; and employee health and safety.

BUS 235 Business Management | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- |

Study of the application of planning, staffing, controlling, directing, and financing to decision making.

BUS 239 Marketing for Bankers $\begin{array}{lllll}5 & 0 & 0 & 5\end{array}$
Survey of the marketing process with a detailed study of functions, policies, and institutions.

BUS 243 Advertising | 3 | 2 | 0 | 4 |
| :--- | :--- | :--- | :--- |

Study of advertising appeals, product and market research, media selection, and testing the effectiveness of mass communications.

BUS 247 Business Insurance | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :--- |

Presentation of the basic principles of various types of insurance.
BUS 248 Medical Insurance 3 0 $\mathbf{3}$ 0
Practical approach to smooth operation and efficiency in the handling of insurance claims in the medical office. Offers the opportunity to work with the major insurances including BC-BS, Medicare, CHAMPUS, workers' compensation, and others.
$\begin{array}{llllll}\text { BUS } 259 & 2 & 3 & 0 & 3\end{array}$
Prerequisite: BUS 216
Culmination of typing skills development involving general clerical duties such as typing invoices, insurance forms, statements of account, form letters, reports, payrolls, purchase orders, and monthly reports. A simulation is used that gives realistic patterns of interaction with coworkers to enable students to learn firsthand the personal traits and human relations skills needed for successful employment.

## BUS 269 Auditing <br> 500 <br> 5

Study of the audit profession. Stresses professional responsibilities and ethics. Introduces the audit process, including an overview, methods of obtaining audit evidence, and audit program planning. Closely examines evaluation of internal control and the reporting function.

## BUS 270 Computer Application of

 Accounting $1 \quad 4 \quad 0$3
Prerequisite: EDP 112
Computerized practice set on the computer. The student works with accounts receivable, payroll, general ledger, and accounts payable.
BUS 271 Office Management 300003

Study of basic management principles as applied to the office as a business service center.
$\begin{array}{lllllll}\text { BUS } & 272 & \text { Principles of Supervision } & \mathbf{3} & \mathbf{0} & \mathbf{0} & \mathbf{3}\end{array}$
Study of the responsibilities and duties of a supervisor as related to his supervisors, subordinates, and associates.

| BUS | $290 A$ | Special Problems in Business | 1 | 0 | 0 | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| BUS | $290 B$ | Special Problems in Business | 1 | 0 | 0 | 1 |
| BUS | 290 C | Special Problems in Business | 1 | 0 | 0 | 1 |

Designed for students who want to expand their knowledge and ability in certain areas of business management, accounting, or secretarial skills. The course is structured to meet the specific objectives of each student and is supervised by an appointed member of the business education faculty.

BUS 1103 Small Business Operations $\quad 3 \quad 0 \quad 0 \quad 3$
Introduction to the business world; includes problems of small business operations, basic business law, business forms and records, financial problems, ordering and inventorying, layout of equipment and offices, methods of improving business, and employer-employee relations.

## Clinical/Credit <br> Class Lab Shop Hours

BUS 1105 Industrial Organizations 300030

Methods, techniques, and practices of modern management in planning, organizing and controlling operations of a manufacturing concern. Introduction to the competitive system and the factors constituting product costs.

|  |  |  | Clinical/Credit <br> Shop |  |  | Hours |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |

Brief history of carpentry and present trends of the construction industry. Involves operation, care, and safe use of carpenters' handtools and power tools in cutting, shaping, and joining construction materials used by the carpenter. Major topics of study include theoretical and practical applications involving materials and methods of construction, building layout, preparation of site, footings and foundation wall construction, and form construction and erection.

## CAR 1102 Carpentry: Millwork and

 $\begin{array}{lllll}\text { Cabinetmaking } & 3 & 0 & 15 & 8\end{array}$Prerequisites: CAR 1101; DFT 1110
Cabinetmaking and millwork as performed by the general carpenter for building construction. Use of shop tools and equipment emphasized in learning methods of construction of millwork and cabinetry. Practical applications include measuring, layout, and construction of base and wall cabinets, built-in desks, door and window frames, stairs, and interior and exterior cornices and trim. Materials and finishes are also studied.

## $\begin{array}{lllllll}\text { CAR } 1103 & \text { Carpentry: Framing } & 3 & 0 & 15 & 8\end{array}$

Prerequisites: CAR 1101; DFT 1111
Principles and practices of frame construction beginning with the foundation sills and including floor joists, subfloors, wall studs, ceiling joists, rafters, bridging, bracing, sheathing, and interior wall partitions. Roof construction includes the layout and construction methods of common types of roof, using standard after construction, truss construction, and post and beam construction. Application and selection of sheathing and roofing is included. Consideration is given to coordination of carpentry work with installation of electrical, air conditioning, heating, plumbing, and mechanical equipment.

CAR 1104 Carpentry: Finishing I | 3 | 0 | 18 | 9 |
| :--- | :--- | :--- | :--- | :--- |

Prerequisites: CAR 1103; DFT 1111
Emphasis on exterior and interior trims and finishes. Included are materials and methods used in finishing carpentry such as exterior cornices, door and window trims, interior flooring, door and window facings, moldings, and cornice construction; installation of hardware; and installation of built-in equipment and cabinets.

## CAR 1109 Carpentry: Millwork and Cabinetmaking I

$0 \quad 0 \quad 6$
2
Cabinetmaking and millwork as performed by the general carpenter for building construction. Safe use of shop tools and equipment emphasized in learning methods of construction of millwork and cabinetry. Practical applications include measuring, layout, construction of base and wall cabinets, built-in desks; materials and finishes are also studied. CAR 1109, 1110, and 1111 series is equivalent to CAR 1102.

CAR 1110 Carpentry: Millwork and Cabinetmaking II $0 \quad 0 \quad 6$ 2

Continues the topics introduced in CAR 1109. Interior cornices and trim are introduced. Materials and finishes are also studied. CAR 1109, 1110, and 1111 series is equivalent to CAR 1102.

CAR 1111 Carpentry: Millwork and Cabinetmaking III 3 O 3

Continues CAR 1109 and CAR 1110. Materials and finishes selections are further studied. CAR 1109, 1110, and 1111 series is equivalent to CAR 1102.

## $\begin{array}{lllllll}\text { CAR } 1113 & \text { Carpentry: Estimating } & 3 & 0 & 3 & 4\end{array}$

## Prerequisites: DFT 1111; MAT 1112

Practical course in quantity "take off" from prints of jobs performed by the carpenter; figuring the quantities of materials needed and costs of building various components and structures.

CAR 1114 Building Codes $3 \quad 0 \quad 0 \quad 3$
Prerequisite: CAR 1103
Corequisite: CAR 1104
Study of building codes and the minimum requirements for local, county, and state construction regulations. Attention is given to safety, sanitation, mechanical equipment, and materials, and to a review of the minimum property requirements of the Federal Housing Administration and the North Carolina State Code.

## COMMERCIAL ART

CAT 102 Drawing I $1 \begin{array}{llll} & 4 & 0 & 3\end{array}$
Emphasis on basic principles and fundamentals of drawing. Includes application of these basic techniques in problems in perspective drawing and drawing from nature.

## CAT 103 Drawing II $1 \begin{array}{llll}1 & 4 & 0 & 3\end{array}$

Prerequisite: CAT 102
Course consisting of a series of problems in which students explore color and advanced wet and dry media.

CAT 104 Drawing III 1 |  | 1 | 4 | 0 |
| :--- | :--- | :--- | :--- |

Prerequisite: CAT 103
Course consisting of a series of problems concentrating on graphic interpretation of still-life, landscape, and figure.

## CAT 105 Beginning Drawing I

120 2

Course consisting of a series of problems in which the student will explore fundamentals of drawing as topics of materials, shape, line, and value are introduced.

## $\begin{array}{ll}\text { CAT } 106 \text { Beginning Drawing II } & 1\end{array} 2$

Prerequisite: CAT 105 or permission of department chairperson
Continues the emphasis on topics introduced in CAT 105 and through problems, perspective and volume are treated as students continue to develop skills in the fundamentals of drawing.

## $\begin{array}{lllllll}\text { CAT } & 107 & \text { Drafting for Art } & 1 & 3 & 0 & 2\end{array}$

Introduction to the field of drafting. Includes a study of drawing principles and practices for print reading and describing objects in the graphic language. Basic skills and techniques of drafting included are the use of drafting equipment, lettering, freehand orthographic and pictorial sketching, geometric instruction, orthographic instruction, drawing of principal views, and standards and practices of dimensioning. The principles of isometric, oblique, and perspective drawing are introduced.

## CAT 108 Drafting for Art <br> 1 . 30 <br> 2

Prerequisite: CAT 107
Application of orthographic projection principles to the more complex drafting problems; primary and secondary auxiliary views, simple and successive revolutions, and sections and conventions will be studied. Introduction of the graphical analysis of space problems. Problems of practical design elements involving points, lines, planes, and a combination of these elements shall be studied. Dimensioning practices approved by the American Standards Association will also be included. Introduction is given to the intersections and developments of various types of geometrical objects.

## CAT 109 Drawing IV $\begin{array}{lllll}1 & 4 & 0 & 3\end{array}$

Prerequisite: CAT 104
Course consisting of a series of problems involving expression interpretation of graphic form; and stressing sophistication of concept and execution.
CAT 110 Art History to $1300 \quad 3 \quad 0 \quad 0 \quad 3$

Brief survey of art and its development in western civilization with emphasis on the development of art forms of expression to thirteen-hundred.
CAT 111 Art History Since $1300 \quad 3 \quad 0 \quad 0 \quad 3$

A brief survey of art and its development in western civilization with emphasis on the development of art forms of expression from thirteen-hundred to the modern era.
CAT 112 Introduction to Typography $\begin{array}{lllll}3 & 0 & 0 & 3\end{array}$
A survey of the evolution of type-both style and proportion. An introduction to the common characteristics, the measurement, fitting of type.
$\begin{array}{lllllll}\text { CAT } 113 & \text { Typography and Phototypography } & 3 & 0 & 0 & 3\end{array}$
An introduction to phototypography and applications to compugraphic typesetter.

# Clinical/Credit <br> Class Lab Shop Hours 

## $\begin{array}{lllllll}\text { CAT } & 120 & \text { Illustration Techniques } & 1 & 4 & 0 & 3\end{array}$

Prerequisite: CAT 109
Course introducing various media used in creating dynamic visual presentations, the object of which is to stimulate the student's awareness of alternative means of expression.

CAT 121 Design I $3 \quad 6 \quad 0 \quad 6$
Introduction to basic design and its elements and concepts. Deals with problems in balance, value, line, texture, and shape. Work with basic tools and materials to explore some of the design possibilities of the two-dimensional format included.

## CAT 122 Design II <br> 360 <br> 6

Prerequisite: CAT 121 or portfolio
Continuation of Design I with emphasis on the fundamentals and theories of color and its application and design potential.
$\begin{array}{llllll}\text { CAT } 123 \text { Layout and Design I } & 2 & 6 & 0 & 5\end{array}$
Prerequisites: CAT 107, 108, 121, 122
Introduction to the basic techniques of layout and graphic design including paste-up, mechanicals, typography, and production.

## $\begin{array}{llllll}\text { CAT } 210 & \text { Production Techniques } & 1 & 4 & 0 & 3\end{array}$

Prerequisites: All 100 level drawing or design courses
Introduction to production techniques. Includes the exploration of mechanical type and its formation and uses. Airbrush techniques and the commercial uses of silkscreen printing are also included. Each student should acquire a working knowledge of each medium through laboratory exercises provided.
$\begin{array}{lllllll}\text { CAT } & 212 & \text { Advertising Illustration } & 1 & 4 & 0 & 3\end{array}$
Introduction to the use of the illustration in advertising. Students will explore the uses of media and illustration styles.

CAT 213 Advertising Illustration $\quad 1 \quad 4 \quad 0 \quad 3$
Prerequisites: CAT 212, all 100 level drawing or design courses
Advanced problems in advertising illustration with emphasis on originality and the readiness of each student to explore assigned tasks and problems.

CAT 214 Type and Letter Form Design $\quad 1 \quad 4 \quad 4 \quad 0 \quad 3$
Prerequisites: All 100 level drawing or design courses
Includes hand exercises with the pencil, pen point, and lettering brush as well as mechanical procedures and laboratory exercises to acquire knowledge of availability of type and its usage.
$\begin{array}{lllllll}\text { CAT } 218 & \text { Photomechanical Techniques } & 2 & 6 & 0 & 5\end{array}$
Prerequisites: PHO 116, 217; all 100 level drawing or design courses
Advanced darkroom techniques concerning both tonal and graphic arts photography. Students explore means of producing finished photo art work for client presentation.
CAT 224 Layout and Design II $\quad 3 \quad 6 \quad 0 \quad 6$

Prerequisites: CAT 123; all 100 level drawing or design courses
Introduction to intermediate layout and design techniques for offset printing,

## Clinical/Credit <br> Class Lab Shop Hours

including the preparation of camera-ready art work. Laboratory problems include an introduction to the graphic art darkroom procedures necessary for offset printing and an introduction of the offset press operation.

CAT 225 Graphic Design I |  | 3 | 6 | 0 | 6 |
| :--- | :--- | :--- | :--- | :--- |

Prerequisites: CAT 224; all 100 level drawing or design courses
Study of advanced problems in layout and design techniques and advanced darkroom procedures necessary for offset production. Laboratory exercises include multicolor offset production problems.

CAT 226 Graphic Design II |  | 3 | 6 | 0 | 6 |
| :--- | :--- | :--- | :--- | :--- |

Prerequisites: CAT 225; all 100 level drawing or design courses
Includes use of simulated professional working conditions in utilizing advanced layout and design techiques for printing. Students will explore a variety of problems and present solutions for general class critique and discussion.

## CAT 235 Portfolio Development $1 \begin{array}{llll} & 4 & 0 & 3\end{array}$

Students become familiar with specific areas of interest and prepare personal portfolios for presentation to prospective employers.

## CAT 241 Painting: Water Color $0 \begin{array}{llll} & 6 & 0 & 3\end{array}$

Introduction to the methods of water-color painting. The fluidity of the medium, dry brush effects, and the use of tools and instruments of painting are included. Emphasis wil be placed on the integrity of the medium.

CAT 242 Drawing: Pastels | 1 | 4 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- |

Introduction to techniques of pastels, including experimenting with application of chalk to various papers. The use of tools of the draft, methods of applying chalk to the paper surface, and utilizing the paper itself as a moving force in the medium are also included.

## CAT 244 Fashion Illustration $\begin{array}{lllll}1 & 4 & 0 & 3\end{array}$

Study of the clothed figure, with attention to the functional relationship of fashion design to the human form and to the study of draped fabric. Graphic interpretations of a live model in gesture and rendering fabric effects is emphasized.

## CAT 245 Painting: Water Color II $0 \begin{array}{lllll} & 6 & 0 & 3\end{array}$

The field of illustration will be explored using water color as a medium. Special attention will be given to the organization of forms, the many aspects of color, the application of paint as texture and light, and the special effects of various instruments. Work will be done from magazine cutout collages and from actual on-location field trips.

CAT 250 Special Problems in Commercial $\begin{array}{lllll}\text { and Graphic Design } & 1 & 4 & 0 & 3\end{array}$
Designed for students who wish to expand their knowledge and ability in particular areas of interest. Permission to enroll must be obtained from department chairman.

CAT 251 Special Problems in Commercial and Graphic Design
$\begin{array}{llll}3 & 6 & 0 & 6\end{array}$
Course designed for the exceptional student who wishes to develop a particular project in a specific area of interest. Permission to enroll must be obtained from department chairman.

## Clinical/Credit Class Lab Shop Hours

## CHEMISTRY

| CHM | 099 | Chemical Principles | 3 | 2 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Introduces basic chemical principles including atomic and molecular structure, chemical nomenclature, formulas, equations, and chemical reactions. Designed for the student with no chemistry background.
$\begin{array}{lllllll}\text { CHM } & 101 & \text { Chemistry } & 4 & 2 & 0 & 5\end{array}$
Review of the physical and chemical properties of substances; chemical changes; elements, compounds, and gases; chemical combinations; weights and measurements; theory of metals; acids, bases, salts, solvents, solutions, and emulsions; electrochemistry, electrolytes, and electrolysis; and application of chemistry to industry.

## $\begin{array}{lllllll}\text { CHM } & 110 & \text { Chemistry for Allied Health } & 3 & 2 & 0 & 4\end{array}$

Prerequisite: MAT 100
A survey of general, organic, and biological chemistry with emphasis placed on the aspects of chemistry that apply to physiological and biochemical processes.

| CHM 250 | Inorganic Chemistry | 3 | 2 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: MAT 101
Study of inorganic chemistry including matter and energy, atoms, chemical bonds, chemical reactions and equations, gases, solutions, acids, bases, salts, ionization, and radiation.

| CHM | 251 | Organic Chemistry | 3 | 2 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: CHM 250
Study of organic compounds including nomenclature, properties, and reactions of hydrocarbons and derived compounds including alcohols, ethers, carbonyl compounds, amines, and amides.

Prerequisite: CHM 251
Study of the structure and intermediary metabolism of carbohydrates, lipids, proteins, nucleic acids, hormones, vitamins, and enzymes.

|  |  |  | Clinical/Credit |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| CIVIL ENGINEERING | Class | Lab | Shop | Hours |  |
| CIV | 101 | Surveying | 2 | 0 | 6 |

Prerequisites: MAT 102; ARC 107
Study of the theory and practice of plane surveying, including taping, differential and profile leveling, cross sections, earthwork computations, transit stadia, and transit tape surveys. Layout of footings, floor levels, site work, and mapping included. Problem solving using computer data.

Triangulation of ordinary precision, use of plane tablet, calculation of areas of land, land surveying, topographic surveys, and mapping are included in this course.

CIV 103 Surveying
$2 \quad 6 \quad 0 \quad 4$
Includes a study of route surveys by ground and aerial methods; simple, compound, reverse, parabolic, and spiral curves; geometric design of highways; and highway surveys and plans, including mass diagrams.

## CIV 105 Architectural Materials

 and Methods I $3 \quad 3 \quad 0 \quad 4$Materials used in the construction of architectural structures are studied. Field trips to construction sites and a study of manufacturers' specifications for materials and of properties and standard sizes of structural materials and construction techniques are included.

## CIV 106 Architectural Materials

 and Methods II 3 04
Prerequisite: CIV 105
Study of building materials and construction methods for commercial buildings.

## CIV 110 Surveyor Practices 1 0 0

Study of the legal principles of surveys and resurveys, including boundary control and interpretation of deed descriptions. Legal, judicial, and historical aspects of land surveying also studied.
CIV 114 Statics
5000

Prerequisite: MAT 102
Study of forces, resultants, and types of force systems; moments; equilibrium of coplanar forces for analytical and graphic methods; stresses and reactions in simple structures; equilibrium of forces in space; and center of gravity, centroids, moment of inertia, and hydrostatic load analysis. Problem solving using computer data.
CIV 204 Surveying $\quad 2 \quad 0 \quad 6 \quad 4$

Study of aerial photogrammertry, applications of aerial surveys, building and road construction, surveying, lines and grades for foundation layout, building construction, bridge layout, and sewer and pipe line surveys.

| CIV 216 | Strength of Materials | 3 | 2 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisites: CIV 114; MAT 103
Study of fundamental stress and strain relationship; shear and bending moments; stresses and deflections in beams and columns. Design of members also included. Problem solving using computer data.

## CIV 221 Reinforced Concrete

 $\begin{array}{lllll}\text { Construction } & 3 & 2 & 0 & 4\end{array}$
## Prerequisite: CIV 216

Analysis and design of reinforced concrete beams, floor systems, columns, use of CRSI Design Handbook, introduction to ultimate strength design, and principles of prestressed and precast concrete are studied. Field inspection trips are included.

# Clinical/Credit <br> Class Lab Shop Hours 

CIV
223 Codes, Contracts, and Specifications 2 0 0

Study of the basic principles and methods significant in contract relationships; legal considerations in construction work; and the National Building Code and local building codes. Interpreting and outlining specifications also included.


Designed to provide an overview of the criminal justice system including its philosophy, objectives, and legal limitations in a democratic society.

CJC 102 Legal Research I $1 \begin{array}{llll} & 2 & 0 & 2\end{array}$
Methods of legal research; proper citation of authority; acquaintance with legal treaties, texts, reports, and the use of Shepard's Citations.

CJC 109 Interviewing $\begin{array}{lllll}3 & 0 & 0 & 3\end{array}$
Prerequisite: Permission of instructor or coordinator
Designed to provide a knowledge of the fundamental techniques employed in interviewing; introduction to interrogation and overview of sources of information available to investigators.

CJC 112 Motor Vehicle Laws $\begin{array}{lllll}3 & 0 & 0 & 3\end{array}$
Study of the traffic enforcement codes with primary emphasis on North Carolina law.


Study of the laws which deal with the rights, custody, and control of individuals under the supervision of the judicial system.

CJC 115 Criminal Law I 300003
Study of criminal laws dealing with offenses against the person. Emphasis is placed on North Carolina law.

CJC 116 Criminal Law II $3 \quad 0 \quad 0 \quad 3$
Prerequisite: CJC 115 or permission of instructor or coordinator
Study of criminal laws dealing with offenses against property. Emphasis placed on North Carolina law.

| CJC | 120 | Principles of Organization | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Introduction to the principles of organization and administration with emphasis upon theories and techniques utilized in public agencies.

| CJC | 121 | Personnel Supervision | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: CJC 120 or permission of instructor or coordinator Study of the principles and theories employed in modern personnel supervision.

CJC 125 Criminal Procedures and North Carolina Court System

300 3

Designed to provide the student with a knowledge of legal aspects of criminal procedures from the initial investigation through the final appeal.

CJC 151, 152, 153, 154, 155, 156
Readings in Criminal
$\begin{array}{lllll}\text { Justice } & 1 & 0 & 0 & 1\end{array}$
Designed for students who wish to specialize or expand their knowledge in certain areas of criminal justice. Under the supervision of police science faculty members, the student studies materials relative to concepts in criminal justice and writes critical analyses. Times for students' independent study and individual conferences are allotted with the supervising instructor.

## CJC 204 Evidence Photography $\begin{array}{lllll}3 & 3 & 0 & 4\end{array}$

Study of photographic principles and their application to evidence photography. Students develop skills in photographic techniques and the use of various types of equipment through lab practice.

| CJC 205 | Evidence | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Instruction covers the legal aspects of the various kinds and degrees of evidence and the rules governing the admissibility of evidence in court.

| CJC | 210 | Techniques of Investigation | 4 | 2 | 0 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisites: CJC 204, 211
Course designed to instruct the student in the fundamental concepts of investigation.

CJC 211 Criminalistics 4 | 4 | 2 | 0 | 5 |
| :--- | :--- | :--- | :--- |

Prerequisite: CHM 101
General survey of the methods and techniques employed in modern scientific investigations with emphasis on evidence which is compared by physical means.

CJC 235 Forensic Science
$\begin{array}{llll}3 & 2 & 0 & 4\end{array}$
Prerequisite: CHM 101
Survey of the physical sciences and their application to the field of investigation with emphasis on evidence which is compared chemically.

|  |  | Clinical/Credit |  |
| :---: | :---: | :---: | :---: |
| Class | Lab | Shop | Hours |
|  |  |  |  |
| 0 | $10-20$ | 0 | $1-2$ |


| COE | $102 \mathrm{~A}, \mathrm{~B}$ |
| :--- | :--- |
| COE | $103 \mathrm{~A}, \mathrm{~B}$ |
| COE | $104 \mathrm{~A}, \mathrm{~B}$ |
| COE | $105 \mathrm{~A}, \mathrm{~B}$ |
| COE | $106 \mathrm{~A}, \mathrm{~B}$ |
| COE | $107 \mathrm{~A}, \mathrm{~B}$ |

## Clinical/Credit <br> Class Lab Shop Hours

Through Cooperative Education, students work in part-time or full-time positions related to their programs of study or career interests and for employers selected and/or approved by the institution. Students are supervised by a faculty member or cooperative education coordinator from the institution. Generally, a student may receive a maximum of two credit hours during any one quarter, but may not receive more than the number allowable toward graduation in the chosen degree or diploma program.
*A (1), B (2) indicates credit hours possible.
Cooperative Education is a part of the instruction in approved programs for the number of credit hours provided by Curriculum Standards of the Department of Community Colleges. Co-op credit substitutes for technical courses on a credit for credit basis. (Curricula in which Cooperative Education is not allowed are indicated.)
Cooperative Education courses do not qualify for veterans' benefits.

|  | Class | Lab | Clinical/Credit <br> Shop | Hours |
| :--- | :---: | :---: | :---: | :---: | :---: |

Includes a study of professional ethics, grooming and personality development; and sterilization, sanitation, first aid, and bacteriology. The practical work is devoted to fingerwaving, pin curling, roller curling, manicuring, marcelling, hair cutting, and hair relaxing.

COS 1102 Cosmetology II $0 \quad 0 \quad 40 \quad 12$
Study of the theory and practical application of permanent waving (cold and heat wave), tinting and bleaching, anatomy, facials, and scalp treatments.

Study of the theory and practical application of hair styling and wig care; disorders of skin, nails, and hair; electricity; chemistry; and operational management.
$\begin{array}{llllll}\text { C.OS } & 1104 & \text { Cosmetology IV } & 0 & 0 & 40 \\ 12\end{array}$
Study of the theory and practical application of advanced hair styling, operational management, and salesmanship.
$\begin{array}{lllllll}\text { COS } & 1105 & \text { Cosmetology I-A } & 0 & 0 & 20 & 6\end{array}$
Includes a study of professional ethics, grooming, and personality development. The practical work is devoted to fingerwaving, pin curling, roller curling and manicuring. $\operatorname{COS} 1105$ and 1106 are equivalent to $\operatorname{COS} 1101$.
$\begin{array}{lllllll}\text { COS } 1106 & \text { Cosmetology I-B } & 0 & 0 & 20 & 6\end{array}$
Continues all topics introduced in 1105 plus sterilization, sanitation, first aid, and bacteriology. The practical work is devoted to continuation of practical work introduced in 1105 and marcelling, hair cutting and hair relaxing are introduced. COS 1105 and 1106 are equivalent to COS 1101.

|  |  | Clinical/Credit |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| COS | 1107 | Class | Lab | Shop | Hours |
|  | 0 | 0 | 20 | 6 |  |

Study of the theory and practical application of permanent waving (cold and heat wave), tinting and bleaching. COS 1107 and 1108 are equivalent to COS 1102.
$\begin{array}{lllllll}\text { COS } 1108 & \text { Cosmetology II-B } & 0 & 0 & 20 & 6\end{array}$
Continues all topics introduced in 1107 plus anatomy, facial, and scalp treatment. COS 1107 and 1108 are equivalent to COS 1102.

| COS | 1109 | Cosmetology III-A | 0 | 0 | 20 | 6 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Study of the theory and practical application of hairstyling and wig care; disorders of skin, nails, and hair. COS 1109 and 1110 are equivlent to COS 1103.

COS 1110 Cosmetology III-B $\quad 0 \quad 0 \quad 0 \quad 20 \quad 6$
Continues all topics introduced in COS 1109 plus electricity; chemistry and operational management. COS 1109 and 1110 are equivalent to COS 1103.
$\begin{array}{lllllll}\text { COS } & 1111 & \text { Cosmetologh IV-A } & 0 & 0 & 20 & 6\end{array}$
Study of the theory and practical application of advanced hair styling, operational management and salesmanship. COS 1111 and 1112 are equivalent to COS 1104.
$\begin{array}{lllllll}\text { COS } & 1112 & \text { Cosmetology IV-B } & 0 & 0 & 20 & 6\end{array}$
Continues all topics introduced in COS 1111. COS 1111 and 1112 are equivalent to $\operatorname{COS}$ 1104.

|  |  |  | Clinical/Credit |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| CORRECTIONAL. SCIENCE | Class | Lab | Shop | Hours |  |
| CSC 201 | Marriage and the Family | 3 | 0 | 0 | 3 |

Study of courtship, engagement, marriage, parenthood, and family living in contemporary American society. Emphasis is placed on social, economic, sexual, and legal aspects of family living and the adjustment of individuals to their respective roles in the family.

CSC 202 \begin{tabular}{llllll}
Introduction to Recreation <br>
Services

$\quad 2$

$\mathbf{2}$ \& 0 \& 3
\end{tabular}

This course is designed to introduce the student to the historical and philosophical foundations of leisure and recreation. The student will develop concepts concerning recreation, the meaning of leisure and recreation, the socioeconomic movements which have affected the growth and development of recreation, the economic importance of recreation, the social institutions providing recreation services, and the types of areas and facilities used in recreation. The student will also spend two hours a week doing practical work in an appropriate setting to meet the laboratory requirement.

## CSC 203 Survey of Corrections $\begin{array}{lllll}3 & 0 & 0 & 3\end{array}$

Introduction and overview of fundamental processes, trends, and practices of juvenile and adult probation, institutional treatment, parole, and contemporary community-

Clinical/Credit<br>Class Lab Shop Hours

based correctional programs, both public and private. Review of the history and philosophy of corrections, with emphasis on the constitutional rights of offenders included.

CSC 207 Confinement Facilities Administration 3 0 $0 \quad 3$

Supervision and administration of confinement facilities, involving techniques of inmate supervision, security, medical care of prisoners, food preparation, sanitation, and various legal aspects controlling detention facilities, correctional institutions, and jails.

| CSC | 213 | Dynamics of Substance Abuse | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Introduction to the problem of substance abuse (alcohol, drugs, narcotics) in society. Designed to equip criminal justice, social service, and other human service workers with increased knowledge concerning history and classification of drugs of abuse; social impact and physical and psychological results of their abuse; and the various facilities and treatment modalities being used.

## CSC 224 Rehabilitation Techniques $\begin{array}{llllll}\mathbf{3} & \mathbf{0} & \mathbf{0} & \mathbf{3}\end{array}$

Explores the different avenues of rehabilitation; new and innovative techniques of rehabilitation emphasized as they relate to successful methods.

Study of the rationale for group and individual testing. Includes the administration as well as the uses of tests of intelligence, interest, and achievement in educational and career planning. Practicum experience closely correlated with classroom activities so that students may apply knowledge and skills to actual on-the-job learning situations.

## $\begin{array}{lllllll}\text { CSC } & 229 & \text { Career Information } & 2 & 2 & 0 & \mathbf{3}\end{array}$

Study of the career and educational information available to aid students in career decision-making. Includes a study of the world of work; sources of occupational information; and sociological and psychological factors which influence career planning. Practicum experience correlated with classroom activities so that students apply knowledge and skills to actual on-the-job learning situations.

CSC 234 Community-Based Corrections | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- |

Exploration of philosophy and programs of juvenile and adult probation supervision, aftercare parole, halfway homes, work and educational release-furlough, as well as executive clemency and interstate compact practices. Dilemma of surveillancecustody/control factors vs. supervision-treatment examined. Introduction to classification of offenders, followed by analysis of possible treatments. Citizen-agency relationships investigated, along with potentials of utilizing citizen volunteer programs.

|  |  |  |  | Clinical/Credit |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| DRAFTING |  | Class | Lab | Shop | Hours |  |
| DFT | 101 | Technical Drafting |  |  |  |  |

Introduction to the field of drafting. Includes a study of drawing principles and practices for print reading and describing objectives in the graphic language. Basic skills and techniques of drafting included are the use of drafting equipment, lettering, freehand orthographic and pictorial sketching, geometric instruction, orthographic instruction, drawing of principal views, and standards and practices of dimensioning. The principles of isometric, oblique, and perspective drawing are introduced.

| DFT | 102 | Technical Drafting | 1 | 0 | 3 | 2 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: DFT 101
Application of orthographic projection principles to the more complex drafting problems, primary and secondary auxiliary views, simple and successive revolutions, and sections and conventions. Introduction of the graphical analysis of space problems stressed. Problems of practical design elements involving points, lines, planes, and a combination of these elements are studied. Dimensioning practices approved by the American Standards Association are included. Introduction to intersections and developments of various types of geometrical objects.

## DFT 104 Blueprint Reading:

 $\begin{array}{lllll}\text { Mechanical } & 3 & 0 & 0 & 3\end{array}$Interpretation and reading of blueprints. Information on the basic principles of the blueprint, including lines, dimensioning procedures, and notes.

## DFT 105 Blueprint Reading and

 Sketching $\quad 3 \quad 0 \quad 0 \quad 3$Prerequisite: DFT 104
Further practice in interpretation of blueprints as they are used in industry: study of prints supplied by industry, making plans of operation, introduction to drafting room procedures, and sketching as a means of passing on ideas.

DFT 106 \begin{tabular}{llllll}
Blueprint Reading and <br>
Technical Sketching

$\quad 2$

$\mathbf{2}$
\end{tabular}

General course in interpreting and reading blueprints. Information includes the basic principles of the blueprint, lines, views, dimensioning procedures, and notes. Emphasis placed on reading of blueprints common to the building systems. Sketching as a means of passing on ideas and information introduced.

## DFT 110 Computer-Aided Drafting I (CAD) $\begin{array}{llllll}1 & 3 & 0 & 3\end{array}$

Prerequisite: EDP 112
Study of drafting fundamentals and use of instruments associated with each phase or drafting concept with continuous reference to computer-aided drafting throughout the process. Final week will be devoted to computer-aided drafting.

## DFT 111 Computer-Aided Drafting II (CAD) $\begin{array}{llllll}1 & 3 & 0 & 3\end{array}$

Prerequisite: DFT 110
Practical exercises to guide students to an understanding and application of CAD menus and symbol libraries. Emphasizes proficiency in using the CAD system and its advanced features for problem solving as they related to using the CAD plotter for producing finished drawings.

# Clinical/Credit <br> Class Lab Shop Hours 

| DFT | 230 | Structural Drafting | 2 | 6 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisites: ARC 220; CIV 105
Concentrated study and drawing of structural plans with emphasis on details and shop drawings of the structural components of buildings including steel, reinforced concrete, and timber structures. Appropriate symbols, conventions, dimensioning practices, and notes used by the draftsman included. Emphasis also on drafting and appropriate drawings for fabrication and erection of the structural components.

## $\begin{array}{llllll}\text { DFT } 233 & \text { Building Codes } & 1 & 3 & 0 & 2\end{array}$

Study of building codes and their effect on specifications and drawings. Covers North Carolina building code books. DFT 233 together with DFT 234 are equivalent to DFT 235.

## DFT 234 Contract Documents $\begin{array}{lllll}2 & 0 & 0 & 2\end{array}$

Study of contract documents client-architect-contractor responsibilities, duties, and mutual protection agreements. DFT 233 together with DFT 234 are equivalent to DFT 235.

## DFT 235 Codes, Specifications, and

 Contract Documents 304

## Prerequisite: ARC 220

Study of building codes and their effect on specifications and drawings. Purpose and writing of specifications and their legal and practical application to working drawings are studied. Contract documents analyzed and studied to determine client-architectcontractor responsibilities, duties, and mutual protection.

## DFT 236 Construction Estimating and

 Field Inspecting $\quad 3 \quad 3$ 4Prerequisite: DFT 235
Includes interpretation of working drawings for a project; preparation of material and labor quantity surveys from plans and specifications; and approximate and detailed estimates of costs. Students study material take-off, labor take-off, subcontractors' estimates, overhead costs, and bid and contract procedures. Detailed inspection of the construction by comparing the finished work to the specifications is also included.

DFT 1103 Blueprint Reading:
$\begin{array}{llllll}\text { Mechanical } & 0 & 0 & 3 & 1\end{array}$
Interpretation and reading of blueprints as they relate to air conditioning, heating, and refrigeration. Information on the basic principles of the blueprint, lines, views, dimensioning procedures, and notes.

DFT 1104 Blueprint Reading:
Mechanical $\quad 3 \quad 0 \quad 0 \quad 3$
Interpretation and reading of blueprints as they relate to machining and welding metal. Information on the basic principles of the blueprint, lines, views, dimensioning procedures, and notes.

## DFT 1105 Bluepring Reading:

Mechanical $\quad 3 \quad 0 \quad 0 \quad 3$
Prerequisite: DFT 1104
Further practice on interpretation of blueprints as they are used in industry; study of
prints supplied by industry, making plans of operations, introduction to drafting room procedures, and sketching as a means of passing on ideas.

DFT 1106 | Blueprint Reading: |
| :--- | :--- | :--- | :--- | :--- |
| Mechanical |$\quad 3 \quad 0 \quad 0 \quad 3$

Prerequisite: DFT 1105
Advanced blueprint reading and sketching as related to detail and assembly drawings used in machine shops. Interpretation of drawings of complex parts and mechanisms for features of fabrication, construction, and assembly.

Clinical/Credit
Class Lab Shop Hours
DFT $1110 \begin{aligned} & \text { Bluepring Reading: } \\ & \text { Building Trades }\end{aligned}$ Building Trades 300003

Principles of interpreting blueprints and specifications common to the building trades. Development of proficiency in making three-dimensional views and pictorial sketches.


Prerequisite: DFT 1110
Principles of interpreting blueprints and specifications common to the building trades. Practice in reading details for grades, foundations, walls, elevations, chimneys, fireplaces, arches, and cavity wall construction. Development of proficiency in making three-dimensional views and pictorial sketches.

## DFT 1112 Blueprint Reading and

 Sketching II 3 0 0
## Prerequisite: DFT 1111

Designed to develop abilities in reading complex drawings in the masonry field. Blueprints of residential and commercial buildings studied with emphasis on the plot plan, floor plan, basement and/or foundation plan, walls, and various detailed drawings of masonry work.

DFT 1113 \begin{tabular}{llllll}
Blueprint Reading and <br>
Sketching: Electrical

$\quad 3$

\& 0 \& 0 \& 3
\end{tabular}

Prerequisite: DFT 1110
Interpretation of schematics, diagrams, and blueprints applicable to electrical installations with emphasis on electrical plans for domestic and commercial buildings. Sketching schematics, diagrams, and electrical plans for electrical installations using appropriate symbols and notes according to the applicable codes included.

## DFT 1114 Blueprint Reading and Sketching: Masonry

3003

Prerequisite: DFT 1112
A study of different types of structural designs and details for commercial construction. A study of different construction trades and how each trade relates to the masonry trade.

DFT 1116 Bluepring Reading:
Air Conditioning
1030

## Prerequisite: DFT 1104

A specialized course in drafting for the air conditioning, heating, and refrigeration student. Emphasis will be placed on reading of blueprints that are common to the trade:

Clinical/Credit<br>Class Lab Shop Hours

blueprints of mechanical components, assembly drawings, wiring diagrams and schematics, floor plans, heating system plans including duct and equipment layout plans, and shop sketches. The student will make tracings of floor plans and layout air conditioning systems.

## DFT 1117 Blueprint Reading: Welding $\quad 3 \quad 0 \quad 0 \quad 3$

Prerequisite: DFT 1104
Study of trade drawings in which welding procedures are indicated. Interpretation, use, and application of welding symbols, abbreviations, and specifications.

DFT 1118 Pattern Development and Sketching $3 \quad 0 \quad 0 \quad 3$
Continued study of welding symbols; methods used in layout of sheet steel; sketching of projects; and jigs and hold devices involved in welding. Special emphasis placed on developing pipe and angle layouts by the use of patterns and templates.

|  |  |  | Clinical/Credit |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| ECONOMICS | Class | Lab | Shop | Hours |  |
| ECO 108 Consumer Economics | 3 | 0 | 0 | 3 |  |

Designed to help students use their resources of time, energy, and money. Students given opportunities to build useful skills in buying, managing finances, increasing resources, and understanding the economy.

## ECO 150 Economics I 3 0 $0 \quad 3$

Fundamental principles of microeconomics including the institutions and practices by which people gain a livelihood. Emphasis placed on basic conditions for the market system and how the market process functions in the real world. Supply and demand, price and cost, and current economic problems stressed.

ECO 151 Economics II $3 \quad 0 \quad 0 \quad 3$
Continuation of a study of the principles of economics, with emphasis on macro-issues such as national output and income, international trade and finance, and current economic problems.

Prerequisite: ECO 151
Continuation of the study of basic economic principles. Emphasis placed on current macro- and microeconomics problems and application of economic principles to short-range forecasting.

ECO 201 Cost-Benefit Analysis 300303
Study of methods for project evaluation, including decision criteria, identifying and quantifying cost and benefits, and procedures for performing a cost benefit analysis.
ELECTRONIC DATA PROCESSING Class Lab Shop Hours

| EDP | 101 | Personal Computer Familiarization | 2 | 2 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Presents an overview of personal computers. Topics include computer hardware, operating systems, operations, word processing, spread sheets, graphics, and introduction to BASIC programming.

## *EDP 110 Popular Software for the

 $\begin{array}{llllll}\text { Personal Computer } & 2 & 2 & 0 & 3\end{array}$Introduction to word processing, spread sheets, graphics, databases, and file processing packages.

*EDP 112 BASIC I | 2 | 2 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- |

A general introduction to microcomputers and their capabilities and to the BASIC programming language. Intended for novices only.
$\begin{array}{lllllll}\text { *EDP } 113 \text { BASIC II } & 2 & 4 & 0 & 4\end{array}$
Prerequisite: EDP 112 or any programming language
Reviews the BASIC language conventions and introduces file processing for business and personal use.

## EDP 114 Introduction to Computer

 Concepts 3 0 0Introductory course in computers for students pursuing degree in data processing or desiring a general non-technical knowledge of terminology and concepts. No previous knowledge or experience in data processing required.
*EDP 115 FORTRAN $\quad 2 \quad 4 \quad 0 \quad 4$
Fundamental course in FORTRAN programming. The FORTRAN language structure, statements, and programming methods and techniques are studied. Students develop program logic and write FORTRAN programs for solving sample problems.
*EDP-116 Assembly Language I $\begin{array}{llllll}\text { I } & 2 & 4 & 0 & 4\end{array}$
Study of symbolic computer languages with emphasis on a particular example of such a language. Students develop program logic and write programs using Assembly Language to solve appropriate assigned problems.

*EDP 117 Assembly Language II 2 | 4 | 4 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- |

Continuation of Assembly Language to provide students more depth and experience using a symbolic programming language.
*Fee of $\$ 2.50$ per lab hour

*EDP 118 COBOLI $\quad$ Class | $c$ | Clinical/Credit |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Lab | Shop | Hours |

Designed to provide basic training in structured COBOL programming. The COBOL language programming methods and techniques are studied. Students develop program logic and write structured COBOL programs for solving sample problems.

## *EDP 119 COBOL II 2404004

Continuation of training in COBOL programming techniques and methods. Designed to provide students with the opportunity to apply skills learned in COBOL I to typical business applications with emphasis on arrays, tables, and control breaks, and disc file organization.

| *EDP | 130 | Beginning Graphics for <br> Microcomputers | 2 | 2 | 0 |
| :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: EDP 112 or familiarity with BASIC and microcomputers
Introduces monochromatic and color X, Y axes plotted graphics, shape tables, forms design, business graphics such as bar charts, and icon and mouse-generated graphics using a package.

| *EDP 140 | Pascal | 2 | 2 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: EDP 113 or permission of instructor
Beginning course in Pascal including basic syntax, input/output, calculations, IF's, CASE, and multi-dimensional arrays through the use of structured logic.

## $\begin{array}{llllllll}\text { *EDP } 145 & \text { Programming with dBASE III } & 2 & 2 & 0 & 3\end{array}$

Prerequisite: Completion of a programming course or approval of instructor.
Uses Level 1 commands as an introduction, with the majority of the courses being devoted to programming in dBASE III.

| EDP | 150 | Introduction to Computers | 5 | 0 | 0 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Presents the basic concepts of data processing fundamentals, including programming business economics problems for a computer.

## *EDP 211 Applications I 204

Designed to provide students with sufficient knowledge in computer methodology to permit the use of computers in business. Emphasis centers on the development of a typical business computer, including complete documentation, using a team programming approach.

## *EDP 212 Applications II $\begin{array}{lllll}2 & 4 & 0 & 4\end{array}$

Emphasizes the preparation and utilization of operations data used in a typical business, case problems involving systems established for collecting the data, and generating information for organizational units. Audit trails enabling the tracing of transactions back to the original source or forward to the first report analyzed. Simulated data used to demonstrate programming techniques required in processing management information. Structure of data files receives major emphasis. Stıdents design, program, and test and entire business application with minimum assistance.
$\begin{array}{lllllll}\text { *EDP } 214 \text { Computer Systems I } & 2 & 2 & 0 & 3\end{array}$
Study of computer systems involving concepts of architecture and programming such as channels, interrupts, multiprogramming, job scheduling, file devices, and file organization.

## *EDP 223 Introduction to RPG II $\begin{array}{lllll}2 & 4 & 0 & 4\end{array}$

Study of a report generator language appropriate for use with a small computing system. Students develop program logic and write programs to solve appropriately related sample business problems.

| *EDP 224 | RPG II | 2 | 4 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: EDP 223
Continuation of EDP 223 with special emphasis on applications and programming procedures of the smaller business.

EDP 230 Internship I $0 \begin{array}{llll}10 & 0 & 1\end{array}$
Cooperative endeavor between Pitt Community College and industry to give students on-the-job training experience. Students work in computer operations for a given company, on location, for a minimum of 10 hours per week.

EDP 231 Internship II | $\mathbf{0}$ | 10 | $\mathbf{0}$ | $\mathbf{1}$ |
| :--- | :--- | :--- | :--- | :--- |

Continuation of the on-the-job training begun in EDP 230.
$\begin{array}{lll}\text { *EDP } 233 & \begin{array}{l}\text { Customer Information Control } \\ \text { System (CICS) }\end{array}\end{array}$
Provides instruction in writing telecommunications application programs to run under control of the Customer Information Control System (CICS). Also, students learn the concepts and operation of the information display system to fully utilize the display format facility of the CICS.

| *EDP | 234 | Interactive Workstation <br> Programming | 2 | 4 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: EDP 224
Designed to provide the student with sufficient knowledge of on-line programming techniques for the IBM System/36 computer. Emphasis on terminal utilization, screen design, screen generators, and coding rules and techniques.

## EDP 240 Internship I <br> $0 \quad 10 \quad 0$ <br> 1

Cooperative endeavor between Pitt Community College and industry to give students on-the-job training experience. Students work in computer operations for a given company, on location, for a minimum of 10 hours per week.
EDP 241 Internship II $\quad 0 \quad 10 \quad 0 \quad 1$

Continuation of the on-the-job training begun in EDP 240.
*Fee of $\$ 2.50$ per lab hour

## EDUCATION

EDU 102 Child Health, Safety, and Nutrition 500000

Study of the factors influencing a young child's health with emphasis on safety precautions and treatment procedures. Also, a focus on nutrition concepts and requirements for the child. Student will develop nutrition and health-related activities for young children.

## EDU 103 Preschool Orientation $1 \begin{array}{llll}\mathbf{1} & \mathbf{0} & 6 & 3\end{array}$

Supervised learning activities related to policies and procedures used in operating a child development center.

| EDU | 104 | Preschool Observation | 1 | 0 | 6 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: EDU 103
Supervised learning activities related to observing children individually and in group activities.

EDU 106 Practicum in Elementary School $1 \quad 0 \quad 15 \quad 6$

Program of supervised practices as an assistant in the education of children ages five to eight.

## EDU 107 Practicum in Preschool

Experiences $1 \quad 0 \quad 15 \quad 6$
Program of supervised practice in the care and education of preschool children.
EDU 108 Early Childhool Curriculum $\quad 5 \quad 0 \quad 0 \quad 5$

Examination of early childhood curriculum areas. Focus on age appropriate activities to enhance the curiosity, interst, knowledge, and abilities of young children.

Examination of direct and indirect guidance techniques in working with young children.
EDU 111 Language Arts Techniques $\quad 3 \quad 0 \quad 0 \quad 3$

Study of the components of language arts and language acquisition of young children. Includes exploration of activities and materials that facilitate development.

## EDU 115 Audiovisual and Media

Instruction 300003
Introduces the multi-media approach to teaching young children. Provides experiences in the use of audiovisual equipment and duplicating machines. Includes experience with a laminating process and making transparencies and other visual aids while developing science and social studies units.

EDU 201 | Children's Issues in Today's |
| :--- |
| Society |

Discussion of current topics relating to children.

EDU 202 Discipline Strategies in the Classroom 300003

Survey of various approaches to disicpline. Attention given to the more popular models with practical guides for selecting a positive and personal approach.

## EDU 203 Exceptional Child 50000050

Introductory course for those who may work with exceptional children. Examination of the characteristics and problems relating to educating typical children.

## $\begin{array}{lllllll}\text { EDU } 204 & \text { Parent Education } & \mathbf{1} & 0 & 0 & 1\end{array}$

A self-directed study for students who wish to expand their knowledge in working with parents. Under supervision of faculty members, students will plan a project and investigate information relative to parenting today.

## EDU 224 A, B, C Seminar-Practicum:

$\begin{array}{llllll}\text { Elementary School } & 1 & 0 & 15 & 6\end{array}$
Prerequisite: Student must have completed at least five quarters of twelve credit hours each at Pitt Community College and maintained a cumulative grade point average of 2.0 or better.
The seminar-practicum experience involves students with the learning processes in an elementary school. These experiences enable the students to gain exposure in many facets in education as well as to do specialized study in given areas. Through "learning by doing," the student may correlate his knowledge and skills to an actual teaching situation.

EDU 225 A, B, C Seminar-Practicum: $\begin{array}{llllll}\text { Preschool } & 1 & 0 & 15 & 6\end{array}$

The practicum and seminar experience involves students with the learning process in a variety of educational settings. These experiences enable the students to gain exposure to many facets of education as well as to do specialized study in given areas. Through "learning by doing," students correlate knowledge and skills to actual teaching situations.
EDU 229 Infant Care Activities 3 0 0

Exploration and development of curriculum, activities, and materials for infants. Also, an examination of ways to promote development through caregiving activities.

## EDU 231 Creative Activities $\quad 5 \quad 0 \quad 0 \quad 5$

Development of teacher-made materials and activities for early childhood curriculum areas. The student will establish and organize a presechool file of resources and materials.

## EDU 232 Preschool Administration $\begin{array}{lllll}\text { and Supervision } & 3 & 0 & 0 & 3\end{array}$

Designed to assist students in establishing policies and procedures for the operation of a center for the daily group care of young children.

EDU 233 Curriculum Planning for the Young Child 3 0 0 3

Examination of curricula, schedules, and classroom arrangement. Emphasis on developing and writing lesson plans and behavioral objectives.

## EDU 240 Organizing the CDA Portfolio

| Class | Lab | Shop | Hours |
| :---: | :---: | :---: | :---: |
| 3 | 0 | 0 | 3 |

Prerequisites: EDU 104, 225A, 225B
Develops a system whereby the CDA candidate/intern documents evidence of demonstrated competence in thirteen functional areas of child caregiving.

## EDU 250 Introduction to Education $4 \begin{array}{lllll}\mathbf{4} & 2 & 0 & 5\end{array}$

Study of education as an institution in society. Emphasis is on the educational system in the U.S. including historical, philosophical, sociological, an psychological foundations of American education. Additional topics included are local, state, and federal organization of education, current issues and innovations in the schools; and teaching as a profession. During scheduled laboratory hours, students complete a minimum 16 hours as participants in public school classrooms. Not a practice teaching course.

## Clinical/Credit <br> Class Lab Shop Hours

## ELECTRICITY

ELC 101 Fundamentals of Electricity I 404

6
Corequisite: MAT 101
Study of the elementary principles of electricity, including basic electric units, Ohm's Law, Kirchoff's Law, network theorems, magnetics, basic electrical measuring instruments, inductance, capacitance, sine wave analysis, and non-resonant resistive, inductive, and capacitive networks.

ELC 102 Fundamentals of
$\begin{array}{lllll}\text { Electricity II } & 4 & 4 & 0 & 6\end{array}$
Prerequisite: ELC 101
Study of series and parallel resonant-circuit analysis, resonant and non-resonant transformer analysis, basic diode power analysis, and an introduction to electromechanical devices.

## ELC 112 Alternating and Direct

Current 2006
4
Study of the electrical structure of matter; the electron theory; and the relationship between voltage, current, and resistance in series, parallel, and series-parallel circuits. Ohm's Law and Kirchoff's Law and the relationships and applications of electricity to modern industrial machinery are included.

## ELC 113 Alternating Current and Direct Current Machines

 $\begin{array}{lllll}\text { and Controls } & 2 & 0 & 6 & 4\end{array}$Prerequisite: ELC 112
Study of the fundamental concepts in single and polyphase alternating current circuits, voltages, current, power measurements, transformers, and motors. Instruction given in the use of electrical test instruments in circuit analysis. Includes a study of the basic concepts of AC and DC machines; simple system controls; and an introduction to the types of controls used in small appliances, including thermostats and timers or sequencing switches.

|  | Class | Lab | Clinical/Credit |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Shop |  |  |  | Hours


| ELC | 121 | Electrical Troubleshooting | 1 | 0 | 3 | 2 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisites: ELC 112, 113
Utilization of all service tools, instruments, and equipment necessary to analyze all aspects of service and repair, using the procedures employed in service and repair in industry. Students expected to demonstrate ability and initiative in the troubleshooting problems presented.

ELC 210 Rotating Devices | 2 | 2 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- |

Prerequisites: ELC 102; PHY 102
Introduction to electrical machinery. Includes an analysis of AC and DC motor and generator principles, synchros and servomechanisms, and alternators and dynamotors. Basic theory, operation, and maintenance of these devices and systems emphasized.

## ELC 1102 Applied Electricity 3 0 $\begin{array}{lllll} & 3 & 4\end{array}$

The use and care of test instruments and equipment used in servicing electrical apparatus for air conditioning and refrigeration installations. Electrical principles and procedures for troubleshooting of the various electrical devices used in air conditioning, heating, and refrigeration equipment. Included will be transformers, various types of motors and starting devices, switches, electrical heating devices, and wiring.

## ELC 1103 Fundamentals of Basic

 Electricity 3000003An introductory course in electrical circuits to illustrate voltage, current, and power in a variety of circuit configurations including proper circuit placement of meters. This course will be taught using the Applie Ile computer with an interactive software package. ELC 1103, 1104, and 1105 are equal to ELC 1110.

## ELC 1104 Fundamentals of DC Circuit

 Analysis 300003An introductory course teaching the fundamental concepts of direct current circuits using the Apple Ile computer with an interactive software package. Both tutorial and drill and practice problems will be included. ELC 1103, 1104, and 1105 are equal to ELC 1110.

ELC $1105 \begin{aligned} & \text { Fundamentals of AC Circuit } \\ & \text { Analysis }\end{aligned}$
Analysis $3 \quad 0 \quad 0 \quad 3$
Prerequisite: ELC 1103, 1104 or equivalent
An introductory course teaching the fundamentals of alternating current circuits. Included is extensive coverage of inductive and capacitive circuits driven with either AC or DC sources. This course will be taught using the Apple lle computer with an interactive software package. ELC 1103, 1104, and 1005 are equal to ELC 1110.

ELC 1108 D.C. Current | $\mathbf{3}$ | 0 | 6 | 5 |
| :--- | :--- | :--- | :--- | :--- |

Study of the electrical structure of matter and electron theory, and the relationship between voltage, current, and resistance in series, parallel, and series-parallel circuits. Includes an analysis of direct current circuits by Ohm's Law and Kirchoff's Law and a study of the sources of direct current voltage potentials. ELC 1108 and ELC 1109 series is equivalent to ELC 1112.

ELC 1109 A.C. Current $\quad 2 \quad 0 \quad 6 \quad 4$
Prerequisite: ELC 1108
Fundamental concepts of alternating current flow, reactance, impedence, phase angle, power, and resonance; and an analysis of alternating current circuits. ELC 1108 and ELC 1109 series is equivalent to ELC 1112.

## ELC 1110 Direct Current Theory

 and Practice $5 \quad 0 \quad 12 \quad 9$Study of the structure of matter and the electron theory; the relationship between voltage, current, and resistance in series, parallel, and series-parallel circuits. Includes an analysis of direct current circuits by Ohm's Law and sources of direct current potentials. ELC 1103, 1104 and 1105 are equal to ELC 1110.

ELC 1111 Alternating Current Theory $\begin{array}{lllll}\text { and Practice } & 5 & 0 & 12 & 9\end{array}$
Study of the fundamental concepts of alternating current, including the generation of sine waves and other non-sinusoidal waveforms, reactance, impedance, power, resonance, and alternating current circuit analysis.

## ELC 1112 Direct and Alternating

 Current $5 \quad 0 \quad 12 \quad 9$Study of the electrical structure of matter and electron theory, and the realtionship between voltage, current, and resistance in series, parallel, and series-parallel circuits. Includes an analysis of direct current circuits by Ohm's Law and Kirchoff's Law and a study of the sources of direct current voltage potentials; fundamental concepts of alternating current flow, reactance, impedence, phase angle, power, and resonance; and an analysis of alternating current circuits.

## ELC 1113 Alternating Current and Direct

$\begin{array}{llllll}\text { Current Machines and Controls } & 5 & 0 & 12 & 9\end{array}$
Prerequisite: ELC 1112
Study of the fundamental concepts in single and polyphase alternating current circuits, voltages, currents, power measurements, transformers, and motors. Instruction is given in the use of electrical test instruments in circuit analysis. Includes a study of the basic concepts of AC and DC machines and simple system controls and an introduction to the types of controls used in small appliances, including thermostats and timers or sequencing switches.

ELC 1114 Electrical Safety $\begin{array}{lllll}\mathbf{1} & \mathbf{0} & \mathbf{0} & \mathbf{1}\end{array}$
Emphasis on the use of electrical test equipment to insure job safety and to prevent shock. Appropriate first-aid techniques for treating shock victims also included.
Class Lab Shop Hours

## ELC 1115 Machine Control <br> 306

Study of the fundamental concepts in single and polyphase alternating current circuits, voltages, current, power measurements, transformers, and motors. Instruction is given in the use of electrical test instruments in circuit analysis. ELC 1115 and ELC 1116 series is equivalent to ELC 1113.

## $\begin{array}{lllllll}\text { ELC } & 1116 & \text { Machine Control } & 2 & 0 & 6 & 4\end{array}$

Prerequisite: ELC 1115
Study of the basic concepts of AC and DC machines and simple system controls and an introduction to the types of controls used in small appliances, including thermostats and timers or sequencing switches. ELC 1115 and ELC 1116 series is equivalent ELC 1113.

## ELC 1122 Residential Wiring I <br> 20064

Prerequisite: DFT 1113
Study of the fundamentals of residential wiring, including blueprint reading, planning, layout, and installation of wiring in residential applications such as services, switchboard, lighting, fusing, wire sizes, branch circuits, and conduits. ELC 1122 and ELC 1123 series is equivalent ELC 1124.

ELC 1123 Residential Wiring II $\quad 3 \quad 0 \quad 3 \quad 3 \quad 4$
Prerequisite: ELC 1122
Application of National Electric Code Regulations in actual building mockups. ELC 1122 and ELC 1123 series is equivalent to ELC 1124.

ELC 1124 Residential Wiring $\quad 6 \quad 0 \quad 9 \quad 9$
Prerequisite: DFT 1113
Study of the fundamentals of residential wiring, including blueprint reading, planning, layout, and installation of wiring in residential applications such as services, switchboards, lighting, fusing, wire sizes, branch circuits, and conduits. Also includes application of National Electric Code Regulations in actual building mockups.

ELC 1125 Commercial and Industrial $\begin{array}{lllll}\text { Wiring } & 5 & 0 & 12 & 9\end{array}$

Prerequisite: ELN 1118
Layout, planning and installation of wiring systems in commercial and industrial complexes, with emphasis on blueprint reading and symbols, the related National Electrical Codes, and the application of the fundamentals of commercial and industrial wiring through practical experience in wiring, conduit preparation, and installation of simple systems.

## ELC 1126 Commercial Wiring $\quad 3 \quad 0 \quad 6 \quad 5$

Prerequisite: ELN 1118
Layout, planning and installation of wiring systems in commercial and industrial complexes, with emphasis on blueprint reading and symbols. ELC 1126 and ELC 1127 series is equivalent to ELC 1125.

| ELC | 1127 | Industrial Wiring | 2 | 0 | 6 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: ELC 1126
National Electrical Codes, and the application of the fundamentals of commercial and industrial wiring through practical experience in wiring, conduit preparation, and installation of simple systems. ELC 1126 and ELC 1127 series is equivalent to ELC 1125.

A study of the National Electrical Code. To include service calculations for residential, commercial, and industrial buildings; branch circuits and feeder calculations; and the rules governing electrical wiring in North Carolina.

|  |  |  | Clinical/Credit |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| ELECTRONICS | Class | Lab | Shop | Hours |  |  |
| EiN | 100 | Introduction to Electronics | 3 | 2 | 0 | 4 |

Introduction to electronics principles and laboratory techniques. The care and proper use of laboratory equipment is emphasized. Techniques of recording and use of laboratory data are taught.

## ELN 101 Electronic Instruments and

 $\begin{array}{lllll}\text { Measurements } & 1 & 4 & 0 & 3\end{array}$Prerequisite: ELC 102
Study of basic electronic instruments and theories of operation, functions, tolerances, and calibration of both service and laboratory instruments. Laboratory experiences provide opportunities for application of each instrument studied.

## ELN 104 Theory and Application of Solid

 State Devices $1 \quad 2 \quad 0$2
Prerequisite: A working knowledge of D.C. and A.C. electricity is recommended. A first course in the theory and application of diodes, transistors, silicon controlled rectifiers, triacs and other solid state devices. Laboratory will consist of building and testing simple circuits using the above components.
ELN 105 Control Devices $\quad 4 \quad 4 \quad 0 \quad 6$

Prerequisite: ELC 102
Study of the electrical characteristics of transistors. Emphasis on basic parameters and applications of each type of control device in the three terminal, two port system.

## ELN 110 Fundamentals of Electricity

 and Electronics $\quad 2 \quad 4 \quad 0 \quad 4$Basics of AC and DC circuits, including circuit analysis and the use of electrical components and measuring devices. Introduction of electronic devices also included.

## ELN

111 Electronic Components and Systems $2 \begin{array}{llll}2 & 2 & 0 & 3\end{array}$
Introduces the basics of various electromechanical equipment and electronic devices and systems. Provides a working knowledge of selected electromechanical devices, various electronic components, circuits, and control devices.

ELN 201 Microcomputer Concepts $2 \begin{array}{lllll}2 & 2 & 0 & 3\end{array}$
Introduction to the programming and operation of microcomputers. Topics include computer concepts, applications and use, operations, software, and the elements of basic programming. Emphasis on microcomputer applications.

|  |  |  | Clinical/Credit |  |  |
| :--- | :--- | :---: | :---: | :---: | :---: |
| ELN | Class | Lab | Shop | Hours |  |
|  | Microcomputer Hardware | 2 | 2 | 0 | 3 |

Designed to develop a basic understanding of the microcomputer components and control systems. Emphasis on the use and service of the microcomputer and its applications.

| ELN | 205 | Application of Transistors | 5 | 6 | 0 | 8 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: ELN 105
Practical applications of transistors to basic audio amplifiers, power supplies, and oscillators.

| ELN 210 | Semiconductor Circuit <br> Analysis | 5 | 4 | 0 | 7 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: ELN 205
Circuit analysis of solid state circuits. Includes theory of operation and circuitry associated with transistors, unijunction transistors, silicon controlled rectifiers, triacs, silicon controlled switches, and other solid state devices. Applications of each device studied.

## ELN 211P Communication Circuits $\quad 4 \quad 4 \quad 0 \quad 6$

Prerequisite: ELN 205
Emphasizes the principles involved in the use of components and devices studied and provides for practice in testing the components and using them in simple relationships in circuits with other units.

## ELN 214 Fundamentals of Digital

 Electronics I 3 0 34
Prerequisites: ELN 105; MAT 103
Study of wave shaping techniques, clipper and clamper circuits, multivibrators, gate circuits, and counter circuits. Includes binary, octal, hexidecimal, binary-coded decimal number systems as well as Boolean algebra and the reduction of circuit components by Boolean algebra and Karnaugh maps.

ELN $215 \begin{aligned} & \text { Fundamentals of Digital } \\ & \text { Electronics II }\end{aligned}$
Prerequisite ELN 214
A study of digital circuits and systems and circuits concentrating on the circuits in microcomputer systems.

| ELN 220 | Electronic Systems | 5 | 4 | 0 | 7 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Corequisite: ELN 215
Block diagram course: includes investigations of numerous electronic systems, using modules or blocks of circuits already studied which have been arranged to produce complex electronic systems. The systems are explained and reduced to functions and then to block diagrams. AM, FM, and Single Sideband transmitters and receivers; multiplexing; TV transmitters and receivers; pulse-modulated systems; computers; telemetry; navigational systems; and sonor and radar considered.

| Microprocessors | 3 | 0 | 3 | 4 |
| :--- | :--- | :--- | :--- | :--- |

Corequisite: ELN 215 or equivalent preparation in digital electronics
Introduces the student to the fundamentals and to the hardware and software of
microprocessors and microcomputers as they are used to synthesize digital circuits for instrumentation and control.
$\begin{array}{lllllll}\text { ELN } & 235 & \text { Industrial Instrumentation } & 3 & \mathbf{0} & \mathbf{3} & \mathbf{4}\end{array}$
Prerequisite: ELN 205; PHY 104
Introduction to the use of industrial electromechanical and electronic circuits and equipment. Includes methods, techniques, and skills required for installation, service, and operations of industrial control systems. An analysis of sensing devices for detecting changes in pressure, temperature, humidity, sound, light, and electricity; associated circuitry and indicating and recording devices are included.

ELN 236 Instrumentation and Controls $\quad 2 \quad 2 \quad 0 \quad 3$
Study of the concepts and applications of various devices to control and monitor energy conversion systems. Special emphasis on applications for energy conservation.
ELN 245 Electronic Design Project $\quad 0 \quad 4 \quad 0 \quad 2$

Prerequisite: ELN 205
Students are required to design and construct projects approved by the instructor. Includes selection of project and design, construction, and testing of the completed project. Projects may include AM and FM transmitters or receivers, amplifiers, test equipment, control devices, simple counters, lasers, or masers.

## ELN 1103 Introduction to Electronic

Devices $5 \quad 0 \quad 12 \quad 9$
Introduction to vacuum tubes and semiconductors used to control direct and alternating current. Characteristics of diodes, triodes, tetrodes, pentodes, and transistors in power suppliers, voltage amplifiers, power amplifiers, and oscillators, and the advantages, disadvantages, and uses of each. ELN 1131, 1133 and 1137 are equal to ELN 1103.

## ELN 1104 Circuit Applications I $4 \quad 0 \quad 9 \quad 7$

Study of vacuum tubes and semiconductor devices with characteristic curves and manufacturers' data used to determine how and why a circuit configuration behaves in a predetermined manner. The applications and uses of the different configurations and simple design characteristics of each are included.

ELN 1105 Circuit Applications II $4 \begin{array}{lllll}\mathbf{4} & 0 & 9 & 7\end{array}$
Study of electronic components and circuits used in industrial applications. Included is a study of sensory devices and detectors, the associated circuitry and indicating devices, relays, switching and monitoring circuits, and other devices applicable to the field of industrial electronics.

## ELN 1106 Maintenance and Analysis of

 $\begin{array}{llllll}\text { Electronic Systems } & 5 & 0 & 9 & 8\end{array}$Study in the analysis and maintenance of electronic systems. Included are component troubles and their effects on circuit behavior as related to electronic systems used in private entertainment and to equipment used in business and industrial applications.
ELN 1107 Communications $\quad 3 \quad 0 \quad 0 \quad 3$

Study of the history, operating principles, and methods of communication.

Clinical/Credit<br>Class Lab Shop Hours

Telephones, radio, television, telemetry, and other types of communications used in private and industrial applications are included.

## ELN 1108 Digital Concepts I $\quad 3 \quad 0 \quad 3 \quad 4$

Introduces study of digital computer fundamentals including binary numbers, logic circuits, arithmetic circuits, bistable circuits, registers, and memories. ELN 1132 and 1135 are equal to ELN 1108.

ELN 1110 Digital Concepts II | 3 | 0 | 3 | 4 |
| :--- | :--- | :--- | :--- | :--- |

Continues study of digital computer fundamentals including circuits, operations, microprocessing, and programming. ELN 1134 and 1136 are equal to ELN 1110.

## ELN 1111 Electronic Trouble-shooting $\quad 3 \quad 0 \quad 0 \quad 3$

Study of electronic troubleshooting methods and procedures for radio, high fidelity stereo, tape recorders, television, cameras and video tape recorders, CB and mobile radio, electronic organs, and digital circuits. Included is the use of electronic instruments, test equipment, tools, and auxiliary items.

ELN 1116 Industrial Electronics $\quad 2 \quad 0 \quad 3 \quad 3$
Prerequisite: ELC 1116
Study of basic theory, operating characteristics, and application of vacuum tubes such as diodes, triodes, pentodes, and gaseous control tubes. ELN 1116 and ELN 1117 series is equivalent to ELN 1118.

## ELN 1117 Industrial Electronics $\begin{array}{lllll}1 & 0 & 3 & 2\end{array}$

Prerequisite: ELN 1116
An introduction to amplifiers using triodes, power supplies using diodes, and other basic applications. ELN 1116 and ELN 1117 series is equivalent to ELN 1118.

ELN 1118 Industrial Electronics $\quad 3 \quad 0 \quad 6$
Prerequisite: ELC 1113
Study of basic theory, operating characteristics, and application of vacuum tubes such as diodes, triodes, pentodes and gaseous control tubes. Includes an introduction to amplifiers using triodes, power supplies using diodes, and other basic applications.
$\begin{array}{lllllll}\text { ELN } & 1119 & \text { Industrial Electronics } & 3 & 0 & 6 & 5\end{array}$
Prerequisite: ELN 1118
Study of basic industrial electronic systems such as motor controls, alarm systems, heating systems and controls, magnetic amplifier controls, welding control systems using thyratron tubes, and other basic types of systems commonly found in most industries.
ELN 1125 Radio Receiver Servicing $\quad 5 \quad 0 \quad 0 \quad 5$

Study of the principles of radio reception and practices of servicing. Included are block diagram and schematics of radio receivers, servicing techniques of AM and FM receivers by resistive measurements, signal injection and signal tracing, voltage analysis, and methods of locating faulty stages and components.

ELN 1127 Television Receiver Circuits
and Servicing $\quad 10 \quad 0 \quad 18 \quad 16$

Study of the principles of television reception and practices of servicing. Included are block diagrams and schematics of monochrome and color television receivers, servicing techniques by resistive measurements, voltage and image analysis, and methods of locating and repairing defective components.

## ELN 1131 Fundamentals of Electronic

 Devices I 03
Prerequisite: ELN 1103, 1104, 1105 or equivalent
An introductory course relating to the basic understanding of solidstate devices and circuits. This course will be taught using the Apple lle computer with an interactive software package. ELN 1131, 1133 and 1137 are equal to ELN 1103.

## ELN 1132 Fundamentals of Digital

 Circuits 200 2Prerequisite: ELN 1131 or equivalent A course designed to teach the fundamentals of Boolean Algebra and basic digital electronic circuits. This course will be taught using the Apple Ile computer with an interactive software package. ELN 1132 and 1135 are equal to ELN 1108.

ELN 1133 Fundamentals of Operational Amplifiers 300003

Prerequisite: ELN 1131 or equivalent
A course designed to teach the fundamentals of operational amplifier operation and some of the most common applications of these devices. This course will be taught using the Apple lle computer with an interactive software package. ELN 1131, 1133, and 1137 are equal to for ELN 1103.

ELN 1134 Fundamentals of Microprocessors $\quad 2 \quad 0 \quad 0 \quad 0$
Prerequisite: ELN 1132
A course using the Apple Ile computer with an interactive software package that to teach microprocessor architecture, computer arithmetic, and memory organization. Addressing modes and internal register operation are taught through on-screen simulation of a microprocessor's internal registers and their contents. ELN 1134 and 1136 are equal to ELN 1110.

ELN 1135 Fundamentals of Pulse and
Logic Waveforms 200002
Prerequisite: ELN 1132 or equivalent
A course using the Apple Ile computer with an interactive software package to teach the fundamentals of pulse-type waveforms including how they are generated and the terminology used to identify them. ELN 1132 and 1135 are equal to ELN 1108.

ELN 1136 Fundamentals of Microcomputer
Interfacing
200
2
Prerequisite: ELN 1132 or equivalent
A course using the Apple lle computer with an interactive software package covering the basic concepts and circuit configurations most frequently encountered in interfacing microcomputers with devices and systems in the outside world. ELN 1134 and 1136 are equal to ELN 1110.

|  |  |  | inical/Credit |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Class | Lab | Shop |  |
| ELN | 1137 | Fundamentals of Electronic Devices II | 3 | 0 | 0 |  |
| Prerequisite: ELN 1131 or equivalent |  |  |  |  |  |  |
| A course using the Apple lle computer with an interactive software package covering the basic devices and circuits that form the foundation of modern industrial control systems. Emphasis is placed on power-control circuits using semiconductor devices. ELN 1131, 1133 and 1137 are equal to ELN 1103. |  |  |  |  |  |  |
| ELN | $1138$ | Fundamentals of Req Power Supplies | 3 | 0 | 0 |  |
| Prerequisite: ELN 1131 or equivalent |  |  |  |  |  |  |
| A cour <br> to tea powe | usin the suppli | g the Apple Ile compu undamental characteri s. | ive soft of ope | are ation | ckage <br> of regu | esig |


\left.|  |  |  | Clinical/Credit |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| ENGLISH | Class | Lab | Shop | Hours |  |
| ENG | 010 | Reading | 0 | 5 | 0 |$\right] 1$

Students work on oral English with emphasis on conversation, discussion, telephone use, and interviewing.

## $\begin{array}{lllllll}\text { ENG } & 012 & \text { Written Communication } & 0 & 5 & 0 & 1\end{array}$

Students improve their written English through keeping a journal, writing letters, paragraphs, and essays.

| ENG 013 | Media Evaluation | 0 | 5 | 0 | 1 | 209 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Students study a variety of media including books, periodicals, radio, television, and film, and evaluate them in terms of their values and the intended message.

ENG 014 Directed Individual Reading $\quad 0 \quad 5 \quad 5 \quad 0 \quad 1$
Students apply their reading skills by reading and reporting informally.
$\begin{array}{lllllll}\text { ENG } & 015 & \text { Fundamentals of English Usage } & 0 & 5 & 0 & 1\end{array}$
Designed to improve students' written English usage. Focuses on common problems in writing edited American English.

ENG 091 Reading Development | 10 | 0 | 0 | 10 |
| :--- | :--- | :--- | :--- | :--- |

Individualized course designed to review the reading fundamentals as needed by the student.

ENG 092 Reading Development | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- |

Prerequisite: ENG 091 or equivalent
Individualized course designed to improve the student's reading achievement through a variety of materials.

|  |  |  | $c$ | Clinical/Credit |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Class | Lab | Shop | Hours

Prerequisite: ENG 092 or equivalent
Individualized course designed to increase reading efficiency, with emphasis on the reading necessary in the individual's curriculum.
ENG 094 Reading Development 30003

Prerequisite: ENG 093 or equivalent
Individualized course designed to promote the student's reading vocabulary and comprehension.

ENG 095 Reading Development 30 | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :--- |

Prerequisite: ENG 094 or equivalent score on reading placement test, 10.0-11.9 Individualized course designed for the student with reading skills between the 10.0 and 11.9 grade equivalent levels. The student's reading skills are diagnosed and a program of study is designed according to the diagnosis.

ENG 100G Basic Grammar 3
Prerequisite: ENG 091 or equivalent
Designed to offer basic instruction in grammar. Subject is approached in a practical manner to lay a foundation for improvement in writing skills.

ENG 100A Basic Grammar Lab $0 \quad 2 \quad 0 \quad 1$
Designed to improve the student's skills in specifically defined areas of basic grammar. For students who score below a specified score on English Placement Test, make "I" or " F " in Basic Grammar previous quarter, or upon request.


Prerequisite: ENG 091 or equivalent
Designed to aid the student in clarity of expression. Functional approach with emphasis on grammar, diction, sentence structure, and punctuation. Intended to stimulate students to apply the basic principles of English grammar in daily situations.

ENG 101A Grammar Lab $0 \quad 2 \quad 0 \quad 1$
Prerequisite: "C" or lower on Eng 100G or upon student request
Individualized course designed to improve the student's skills in specific areas of grammar.

ENG 101S Grammar 50000050
Prerequisite: Satisfactory placement test score or ENG 094 and/or ENG 101
Required of all beginning secretarial, medical secretarial, and general office technology students. Emphasis placed on grammar, punctuation, and spelling. Students should earn a minimum grade of 85 on this course before entering the shorthand or machine transcription classes.

Prerequisite: ENG 101
Corequisite: ENG 093 or equivalent
Designed to aid the student in the improvement of self expression in business and technical composition. Emphasis is on the sentence, paragraph, and whole composition.

ENG 102A Composition Lab $\quad 0 \quad 2 \quad 0 \quad 1$
Prerequisite: C or lower on ENG 101 or by student request Individualized course designed to improve the student's writing skills.

| ENG | 103 | Report Writing | 3 | 0 | 0 | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |

Prerequisites: ENG 102 and at least two quarters of curriculum work
Designed to instruct students in writing for business and industry and tailored to individual curriculums wherever possible. Emphasis is on memos, various types of short reports, graphic communications, proofreading and editing, and the formal report.
ENG 105 Effective Reading 3000

Prerequisite: Permission of instructor or completion of curriculum reading requirements.
Individualized course for students wishing to improve their reading efficiency. Areas of concentration will be selected, based on each student's needs, from rate, vocabulary, comprehension, and reading-study skills insspecific subject areas.

## ENG 106 Spelling Techniques $\quad 3 \quad 0 \quad 0 \quad 3$

Designed to improve spelling ability. Participants study the relationship of spoken English to spelling, spelling patterns, and commonly misspelled words. They also study vocabulary in their areas of concentration such as medicine, law, or architecture.

ENG 107 Word Analysis | 2 | 0 | 0 | 2 |
| :--- | :--- | :--- | :--- | :--- |

Prerequisite: Enrollment by permission of instructor and by request of the Business Division and of the T201 advisors.
Designed for students who wish to improve their knowledge of scientific terminology, Greek and Latin prefixes, suffixes, and roots. Word analysis is primarily a lecture course designed to increase a student's success in courses dealing with medical terminology.

ENG 150 Composition I | $\mathbf{3}$ | $\mathbf{0}$ | 0 | $\mathbf{3}$ |
| :--- | :--- | :--- | :--- | :--- |

Prerequisites: Specified scores on English and reading placement tests or ENG 101 and ENG 094
Essential skills of standard written English and the application of those skills in expository and analytical writing. Essays of varying length on subjects drawn from readings in essays and short fiction.

ENG 151 Composition II $30 \begin{array}{llll}3 & 0 & 0 & 3\end{array}$
Prerequisite: ENG 150
Corequisite: LIB 150
Techniques of library research and the writing of research papers. Subjects for writing assignments are drawn from readings in short fiction and novels.


Prerequisite: ENG 150
Readings in poetry and drama. Papers are written on subjects drawn from readings.
ENG 204 Oral Communications $\quad 3 \quad 0 \quad 0 \quad 3$

Introduction to interpersonal communication to enable the student to communicate with others effectively. Focuses on the nature of the communication process, including self-perception, group interaction, and language as a symbolic process. Students make several speeches near the end of the course.

## ENG 206 Business Communications 30003

Prerequisites: BUS 102; ENG 102
Designed to develop skills in writing business communications: letters, memoranda, employment resumes, and applications.

## ENG 217 Children's Literature 3 0 0

Designed to familiarize students with the well-known authors and illustrators of children's literature and to introduce them to the best quality books for young people. Emphasis is on the use of these materials with the children to obtain maximum pleasure and learning.

ENG 250 British Literature I | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- |

Prerequisites: ENG 151, 152
Study of British literature from Beowulf to the Romantic Period.
ENG 251 British Literature II $\begin{array}{lllll}3 & 0 & 0 & 3\end{array}$
Prerequisites: ENG 151, 152
Continuation of ENG 250; study of British literature from the Romantic Period to the present.

ENG 260 American Literature I | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- |

Prerequisites: ENG 151, 152
Major works of American literature from the colonial period through World War I.
ENG 261 American Literature II 3 0 0
Prerequisites: ENG 151, 152
Continuation of ENG 260; major works of American literature from World War I to the present.

ENG 270 Introduction to Theatre $\begin{array}{lllll}3 & 2 & 0 & \mathbf{4}\end{array}$
Introduction to theatre, including techniques of production. Stage scenery, design, set construction, stage techniques, makeup, lighting, costuming, prop construction, and theatre jargon are included.

## ENG 270L Introduction to Theatre Lab $0 \begin{array}{lllll} & 5 & 0 & 0\end{array}$

Practical stage craft and scenery design through application of techniques learned in ENG 270.

## ENG 271 Basic Acting Techniques $\begin{array}{lllll}3 & 2 & 0 & 4\end{array}$

Prerequisite: ENG 270
Basic course in acting techniques as applied to technical theatre and stage craft production. The beginning student learns stage terminology and receives training in techniques, processes, operation, and application of play production.

| ENG 271L Basic Acting Techniques Lab | $\mathbf{0}$ | $\mathbf{5}$ | $\mathbf{0}$ | $\mathbf{0}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Corequisite: ENG 271 |  |  |  |  |
| Basic acting techniques through practical application. |  |  |  |  |


| ENG | 272 | Problems in Production | 3 | 2 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: ENG 270
Advanced course of study in stage scenery and design with the major emphasis on special and advanced technical theatrical problems of production. Special effects, advanced lighting techniques, set construction difficulties, sound effects, and theatrical management are emphasized. Publicity and public relations are also included.
ENG 272L Problems in Production Lab $\quad 0 \quad 5 \quad 0 \quad 0$

Corequisite: ENG 272
Advanced stage design through practical application.

| ENG 273 | Acting and Directing <br> Techniques | 3 | 2 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: ENG 271
Advanced course in acting and directing techniques. Major emphasis on play selection, community involvement, publicity, other communicative media (television, radio, motion picture). In addition, students become fully acquainted with all aspects of the financial management of the theatre.

## ENG 273L Acting and Directing

 Techniques Lab $0 \quad 5 \quad 0 \quad 0$Corequisite: ENG 273
Advanced acting and directing techniques through practical application.

| ENG | 274 | Advanced Directing <br> Techniques | 3 | 2 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: ENG 273
Study of drama from the director's point of view. Students assist in directing scenes and acts of short plays and in scene synopsis.

ENG 274L Advanced Directing Techniques Lab $0 \quad 5 \quad 5 \quad 0 \quad 0$

Corequisite: ENG 274
Advanced directing techniques through practical application.

| ENG | 275 | Playwriting Techniques | 3 | 2 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: ENG 274
Study of the play as a form of cretive expression; includes analysis of the play for plot, action, and character development. Each student writes and directs a one-act play.

ENG 275L Playwriting Techniques Lab $\quad 0 \quad 5 \quad 0 \quad 0$
Corequisite: ENG 275
Advanced playwriting techniques through practical application.
ENG 1000 Reading Improvement $\begin{array}{lllll}10 & 0 & 0 & 10\end{array}$
Individualized course designed to review the reading fundamentals as needed by the student.

# Clinical/Credit Class Lab Shop Hours 

ENG 1101 Reading Improvement 20000020
Prerequisite: ENG 1000 or equivalent
Individualized course designed to improve students' reading skills through use of various materials.
$\begin{array}{lllllll}\text { ENG } & 1102 & \text { Communication Skills } & 3 & 0 & 0 & 3\end{array}$
Prerequisite: ENG 1101 or equivalent
Designed to improve students' communication skills in specific work situations. Learning experiences include completing job applications, job interviews, letter writing, telephone communications, technical vocabulary, and customer communications.

## ENG 1108 Efficient Reading 20000020

Prerequisite: Permission of instructor or completion of curriculum reading requirements
Individualized course for students wishing to improve their reading efficiency. Areas of concentration will be selected, based on each student's needs, from rate, vocabulary, comprehension, and reading-study skills in specific areas.

|  | Class | Lab | Clinical/Credit <br> Shop | Hours |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| FORESTRY |  |  |  |  |  |
| FOR 208 | Forest Surveying | 2 | 0 | 3 | 3 |

Relocation of old corners and lines and the legal aspects of land surveys. Forest road layout.

GEOGRAPHY
GEO 150 Introduction to Geography $\quad 5 \quad 0 \quad 0 \quad 5$
Prerequisite: Specified score on reading placement test or ENG 094
Major physical and cultural elements of the environment and their influence on human activity.

|  |  |  | Clinical/Credit |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| GERIATRIC | Class | Lab | Shop | Hours |  |  |
| GCA | 1001 | Geriatric Care | 8 | 8 | 12 | 16 |

Prepares graduates to provide basic health and personal care for older persons. The curriculum emphasizes the multiple processes of aging (i.e. physical, social, and psychological), communication, nutrition, therapeutic activities (i.e. reality orientation, arts and crafts, music therapy, life review therapy, and remotivation therapy), accident and fire safety, death and dying, drug usage, human sexuality, resources and services for

## Clinical/Credit Class Lab Shop Hours

the aged, and employment skills. Clinical experiences may be obtained in skilled nursing and intermediate care facilities, family care homes and homes for the aged and disabled, adult day care centers, and other long-term care facilities.

|  |  |  | Clinical/Credit |  |  |
| :--- | :--- | :---: | :---: | :---: | :---: |
| HEALTH | Class | Lab | Shop | Hours |  |
| HEA 110 | First Aid and Medical <br> Terminology | 2 | 2 | 0 | 3 |

Provides students with the basic skills necessary to provide first aid in common emergencies. Instruction also includes an introduction to anatomy and basic medical terminology used in legal matters.

## HEA 111 Cardiopulmonary Resuscitation $\quad 1 \quad 0 \quad 0 \quad 1$

Designed to qualify students to receive basic rescuer certification. Provides skills in one and two rescuer CPR, infant CPR, and conscious and unconscious airway obstruction in the adult and child.

HEA 112 First Aid $1 \begin{array}{lllll}1 & 0 & 0 & 1\end{array}$
A multimedia course which uses demonstration films, and programmed workbook and practice sessions resulting in Red Cross First Aid Certification.

## HEA 150 Personal and Community

Health 3 0 0
Investigation of mental, social, and physical health problems related to man's internal and external environment in technological and leisure oriented societies. The objective is efficient and effective performance in daily living through maintenance of optimal personal and community health.

## Clinical/Credit <br> Class Lab Shop Hours

## HISTORY

HIS 150 American History I 5000005
Prerequisite: Specified score on reading placement test or ENG 094 History of the United States from its beginning to the end of Reconstruction.

HIS 151 American History II | 5 | 0 | 0 | 5 |
| :--- | :--- | :--- | :--- | :--- |

Prerequisite: Specified score on reading placement test or ENG 094 History of the United States from Reconstruction to the present.
$\begin{array}{lllllll}\text { HIS } & 160 & \mathbf{W} & \mathbf{5} \text { World History to } 1500 & 0 & \mathbf{5}\end{array}$
Prerequisite: Specified score on reading placement test or ENG 094 Development of civilization from prehistory to the Reformation.

HIS 161 History of Europe Since 1500 5 0
Prerequisite: Specified score on reading placement test or ENG 094 European civilization from the Renaissance to the present.

|  |  |  | Clinical/Credit |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| HUMAN SERVICES | Class | Lab | Shop | Hours |  |
| HSA | 100 | Basic Health Science | 3 | 0 | 0 |

Introduction to the normal structure and functioning of the human body, briefly covering all systems. The normal body is studied as the basis for understanding variations from normal and the need to maintain homeostasis. Included within each system is pertinent information concerning hygiene, nutritional requirements, basic first aid, and medical terminology.

## HSA 102 Orientation Lab I $\quad 0 \quad 2 \quad 0 \quad 1$

Designed to promote professional, program, and personal identification and development. Emphasizing verbal and nonverbal interaction in interpersonal communication. Strongly recommended for all first-year Human Services Technology students.

HSA 111 Introduction to Human
$\begin{array}{lllll}\text { Services } & 3 & 0 & 3 & 4\end{array}$
Introduction to the history of human services and related theories and systems. Agencies, institutions, and programs which help meet human services needs are studied in broad context of social and political systems. Guest lecturers, representative of human services occupations, and field trips to agencies and institutions delivering human services offer a familiarization with the components of the delivery system.

## $\begin{array}{lllllll}\text { HSA } 112 \text { Group Processes I } & 1 & 0 & 3 & 2\end{array}$

Introduction to interpersonal concepts and problems of communication in interpersonal transactions. Designed to allow students to become more aware of themselves and their feelings about themselves and other people with whom they come in contact. To facilitate this self-awareness and personal growth, students work in small groups, learning through analyses of their own experiences including feelings, reactions, perceptions, and behavior.

Prerequisite: Permission of instructor
Students spend six hours per week in laboratory experiences under the supervision of a qualified instructor. Emphasis on the application of concepts and principles from related course content.

| HSA 113 | Group Processes II | 1 | 0 | 3 | 2 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: HSA 112 or permission of instructor
Continued study of interpersonal relationships in small group interactions. Students work in small groups during the quarter, learning through analyses of their own experiences, including feelings, reactions, perceptions, and behavior, using the framework of transactional analysis.

## HSA 113P Practicum II <br> 106 <br> 3

Prerequisite: Permission of instructor
Continuation of Practicum I.

|  |  | Clinical/Credit |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :---: | :---: |
|  | HSA | Class | Lab | Shop | Hours |

Study of purpose, structure, focus, and techniques employed in effective interviewing. Laboratory experiences providing opportunities for observation, practice, recording, and summarizing personal histories under faculty supervision. Importance of interview as client's initial encounter with system is stressed; interviewing to meet need of client rather than of system.

HSA 115 Field Experience | 2 | 0 | 30 | 12 |
| :--- | :--- | :--- | :--- | :--- |

Work in a human services agency, institution, or program under the supervision of agency staff and college personnel. Students have an opportunity to apply and practice what has been learned in the program while learning from the professionals in the field.

HSA 116 Group Processes III | 1 | 0 | 3 | 2 |
| :--- | :--- | :--- | :--- | :--- |

Final formal group experience. Attention given to the development of the students' abilities to communicate with others as well as to facilitate communication between others.
HSA 201 Mental Health Care 40003050

Prerequisite: HSA 100
Orientation to the policies, procedures, and practices commonly accepted in mental health institutions. An introduction to basic patient care principles and techniques in meeting the needs of patients during observation, ambulation, and mildly mentally ill stages. Lab experiences present practice in basic patient care under the direction of a faculty member.

HSA 202 Orientation Lab II 0 | 0 | 0 | 1 |
| :--- | :--- | :--- | :--- | :--- |

Continuation lab of HSA 102 for Human Services Technology students to enhance professional and personal development. Emphasis placed on verbal and nonverbal techniques to facilitate interpersonal communication. Strongly recommended for second-year Human Services Technology students.

HSA 209 Treatment Modalities 4 |  | 4 | 2 | 0 | 5 |
| :--- | :--- | :--- | :--- | :--- |

Analysis and application of the major approaches to psychotherapy and counseling, involving theory, characteristics, and techniques.

HSA 210P Practicum III 1 | $\mathbf{1}$ | 0 | 6 | 3 |
| :--- | :--- | :--- | :--- |

Students placed six hours per week in an agency to obtain job experience related to course work; supervised by qualified agency personnel.

HSA 215 Human Services Seminar 300030
In-depth review of current issues and trends within the field of mental health. Students expected to demonstrate the knowledge and experience gained in previous study and training in group conferences and oral reports.

Overview of the types of activities (occupational, recreational, play, music, drama, nonverbal) utilized as therapeutic techniques with particular emphasis on the purpose of each: ways of creating and holding interest in the activity; and the role of the Human Services Associate in assisting patients to particpate.
$\begin{array}{lllllll}\text { HSA } & 225 & \text { Crisis Intervention } & 4 & 0 & 0 & 4\end{array}$
Designed to introduce students to basic theories and principles of crisis intervention from a historical as well as practical orientation. Provides students with necessary skills in crisis intervention since practical application is correlated with theory. Allows students to prepare themselves emotionally and psychologically to handle emergency crisis situations.

## INSURANCE

Study of risk, function of life and health insurers, interpretation of laws relating to life, accident and health insurance, classifications, life insurance contract provisions, general agent responsibilities, types of health insurance, and social insurance.

INS 216 Property and Casualty $\begin{array}{lllll}\text { Insurance } & 4 & 0 & 0 & 4\end{array}$

Study of risk, function of property and casualty insurers, interpretation of laws relating to property and casualty, property exposures including fire, liability exposures, personal and commercial liability protection, individual and group health coverage.

INS 215 Life, Accident and Health Insurance 4

## Clinical/Credit Class Lab Shop Hours

ISC

## 201 Industrial Organization and

 Management30003
Organizational structure for industrial management including operational and financial activities. Includes accounting, budgeting, credit and industrial risks, forecasting and markets, selection and layout of physical facilities, selection, training, and supervision of personnel as found in typical industrial organizations.

## ISC 202 Quality Control <br> 300 <br> 3

Prerequisite: MAT 101
Provides an overview of quality control activity and its scope throughout the entire business system of a company. Among the topics discussed are the elements of quality control work, the organization required to get the work accomplished, methods of measuring the effectiveness of the function, and the integration of the various qualityrelated activities of the organization into a quality system.

ISC 203 Motion Economy $\begin{array}{lllll}3 & 0 & 0 & 3\end{array}$
Provides a systematic, practical, and logical treatment of motion and time study as utilized in today's business and industrial enterprise. Covers direct and indirect work and office activities and looks at the broad range of work measurement techniques. Recently developed concepts and techniques evaluated.

|  | Clinical/Credit |  |  |
| :---: | :---: | :---: | :---: |
| Class | Lab | Shop | Hours |
| 3 | 0 | 0 | 3 |

Common sense approach to cost reduction. Provides students with an opportunity to review in depth the concept and techniques of value analysis and engineering. Emphasis is placed upon identifying and removing unnecessary production costs.
$\begin{array}{lllllll}\text { ISC } 205 & \text { Maintenance Management } & \mathbf{3} & 0 & 0 & 3\end{array}$
Administration, decision making, setup, and inspection of various program such as preventive maintenance, repair parts, inventory control, and organization and functions of maintenance. Various aspects of management, engineering, resources analysis, and maintenance facilities covered.

## ISC 209 Plant Layout $4 \begin{array}{llll}\mathbf{4} & 0 & 0 & 4\end{array}$

Provides a practical study of factory planning with emphasis on the most efficient arrangement of work areas to achieve lower manufacturing costs. Sample layouts for small and medium sized industries covered. Also, the effective use of personnel, money, machinery, and materials.
$\begin{array}{lllllll}\text { ISC } 213 & \text { Production Planning } & 4 & 0 & 0 & 4\end{array}$
Introduces the production function of the business or industry in its daily manufacturing process. Functions reviewed are forecasting, product planning and control, scheduling, dispatching, and routing. Case histories are discussed in the classroom and courses of corrective action are developed. Actual layouts are utilized for planning and control.

| ISC 231 | 5 | 0 | 0 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Provides a basic understanding of industrial materials, machines, and processes utilized in today's manufacturing and assembling plants. Reviews the rapid development of new materials, mechanization and automation, and the complex process of manufacturing.
$\begin{array}{lllllll}\text { ISC } 232 & \text { Labor Relations } & 4 & 0 & 0 & 4\end{array}$
Covers the history of the labor movement in the United States with its structural and legal framework; examines the negotiation, administration, and major contents of the labor contract itself. Special studies of arbitration cases which illustrate the theories in realistic terms provided.
ISC 1101 Industrial Safety $\quad 3 \quad 0 \quad 0 \quad 3$

A study of the development of industrial safety: accident occurrence and prevention, analysis of accident causes and costs, basic factors of accident control, safety education and training, accident reporting and records, employer and employee responsibility, safety organizations, first aid, mechanical safeguards, personal protective equipment use, materials handling, fire prevention and fire protection, safety codes, and accident statistics.

## Clinical/Credit <br> Class Lab Shop Hours

## JOURNALISM

$\begin{array}{llllllll}\text { JOU } & 150 & \text { Introduction to Journalism } & 3 & 0 & 0 & 3\end{array}$
Basic familiarization with principles of the newspaper in categories such as basic newswriting, principles of production, layout and design, staff organization, sports writing, feature writing, editorial writing, and the purposes and functions of a newspaper.

JOU 150L Introduction to Journalism

| Lab | 0 | 2 | 0 | 0 |
| :--- | :--- | :--- | :--- | :--- | :--- |

Application of skills acquired in Introduction to Journalism.

## $\begin{array}{lllllll}\text { JOU } & 151 & \text { Essentials of Newswriting } & 3 & 0 & 0 & 3\end{array}$

Analysis of the newswriting procedure, including fact gathering, style, purpose, principles, editing, and maintenance of objectivity.

JOU 151L Essentials of Newswriting
Lab 0 $\quad 2 \quad 0 \quad 0$
Application of skills and knowledge pertaining to newswriting.
JOU 152 Newspaper Layout and
Production $\quad 3 \quad 0 \quad 0 \quad 0 \quad 3$
Analysis of the basic principles of layout and design. Students attain a functional knowledge of the process involved in offset and letterpress lithography.


# Clinical/Credit <br> Class Lab Shop Hours 

Examination of the applicable statutory and common law principles including the form and adequate execution of documents; the functions of judgments and estates in the determination of whether a title to real estate is marketable; the study and function of various documents, indices, and files on public records in various county offices. Forms of abstracting title information from public records and summaries thereof included. Various typical problems and errors which may render a title unmarketable included.

## LEC 211 Real property and Title

Abstracting II $2 \begin{array}{lllll} & 2 & 0 & 3\end{array}$
Continuation of LEC 210.

LEC 212 Real Estate Transactions | 2 | 2 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- |

Includes the study of the preparation of simple contracts for sale of real estate, ordering title search, examining title searches and preparing simple titles, ordering title insurance, preparation of settlement sheet and holding closing, informing purchasers of needed documents and funds, disbursement of fund and recording documents, and preparation of certificate of title for lawyer's signature. Also covers the draftings of mortgages and deeds of trust, the closing procedures of these land financing transactions, and foreclosure upon default.

## LEC 218 Collection and Bankruptcy

 Procedure 3 0 0Study covers both voluntary and involuntary bankruptcy including the wage earner plan. Collection procedures including drafting collection letters, drafting and filing complaints, default judgments, executions, supplemental proceedings, liens and judicial sales, and receiverships.

## LEC 220 Family Law 300030

Study of the rights and obligations of the marriage contract; divorce; annulment; separation by court order and by consent; defenses to divorce; child custody; adoption, name change, and bastardy proceedings; alimony, child support, Aid to Dependent Children, and welfare; North Carolina juvenile law.

LEC 224 Torts 30003
Study of the principles behind personal injury settlements and litigation with an emphasis on North Carolina law.

LEC 229 Taxes 30003
Application of federal and state taxes to various businesses and business conditions. Study of the following taxes: income, payroll, intangible, capital gains, sales and use, excise, and inheritance.
LEC 232 Estate Administration $\quad 3 \quad 0 \quad 0 \quad 0 \quad 3$

Students instructed in the drawing of a will, making arrangements with the probate office for probate of will or issuance of letter of administration, preparing simple transfer of inheritance tax forms, marshaling of assets, payment of debts of estate, preparation of interim and final accounting, and preparation of refunding bonds and releases.

Teaches the paralegal how a lawyer prepares briefs prior to entering court proceedings. Students taught how to review a file; prepare subpoenas ready for the lawyer's signature; prepare exhibits for court; file pleadings; and index interrogations, depositions, admissions, and pleadings. Prepares students to interview witnesses and record statements in writing and on tape.

| LEC 250 | Paralegal Internship | $\mathbf{1}$ | 9 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisites: Completion of majority of course work and permission of the instructor or coordinator.
Students spend nine hours per week in an approved law office under the supervision of an attorney. Emphasis placed on exposing students to a variety of experiences encountered in the legal profession. The internship is an add-on elective.

|  |  |  | Clinical/Credit |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| LIBRARY SCIENCE | Class | Lab | Shop | Hours |  |
| LIB $\quad 150$ | Library Research Skills | 2 | 0 | 0 | 2 |

Library and its resources, usually taken concurrently with ENG 151.

|  |  | Clinical/Credit |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| MASONRY | Class | Lab | Shop | Hours |  |
| MAS 1101 | Bricklaying I | 4 | 0 | 18 | 10 |

History of the bricklaying industry. Clay and shell brick, mortar, laying foundations, laying bricks in a line, bonding, and tools and their uses. Laboratory work provides training in the basic manipulative skills.
$\begin{array}{llllll}\text { MAS } & 1102 & \text { Bricklaying II } & 4 & 0 & 18\end{array}$
Prerequisite: MAS 1101
Designed to give students practice in selecting the proper mortars, layout, and construction of various building elements such as foundations, walls, chimneys, arches, and cavity walls. Proper use of bonds, expansion strips, wall ties, caulking methods stressed.

## $\begin{array}{llllll}\text { MAS } 1103 & \text { Bricklaying III } & 4 & 0 & 18 & 10\end{array}$

Layout and erection of reinforced grouted brick masonry lintels, fireplaces, glazed tile, panels, decorative stone, granite, marble, adhesive terra cotta, and modular masonry construction theory and techniques.

MAS 1104 Bricklaying IV $\begin{array}{lllll}3 & 0 & 18 & 9\end{array}$
Continued application of techniques acquired in MAS 1103 with emphasis on further refining the skills of a mason.

## Prerequisite: MAS 1103

Figuring the quantities of materials needed and costs of building various components and structures. Practical course in quantity "take off" from prints of the more common type of jobs for bricklayers and masons.

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MAS 1114 Masonry Estimating II 
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Continuation of MAS 1113 with some emphasis being given to quantity "take off" from prints of the more complicated kind.

Class Lab | Clinical/Credit |
| :---: |
| Shop Hours |

## MATHEMATICS

| MAT | 099 | Developmental Mathematics | 5 | 0 | 0 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Course designed for students whose background in the area of mathematics is limited. Does not carry credit toward an associate degree.

## $\begin{array}{lllllll}\text { MAT 100R Computational Skills } & 5 & 0 & 0 & 5\end{array}$

Prerequisite: MAT 099
Fractions, decimals, and percents.

## MAT 100 Review of Fundamental Mathematics

50005

## Prerequisite: MAT 100R

Fractions, decimals, percents, ratios, proportions, areas, volumes, and an introduction to algebra.

Prerequisite: MAT 100
Basic algebraic operations, linear equations, factoring, algebraic fractions, graphing, systems of linear equations, exponents, and radicals.
$\begin{array}{llllll}\text { MAT } & 102 \text { Trigonometry } & 5 & 0 & 0 & 5\end{array}$
Prerequisite: MAT 101
The trigonometric functions, right and oblique triangles, radian measure, graphs of trigonometric functions, trigonometric identities, trigonometric equations, and inverse trigonometric functions.

MAT 103 Algebra II 5000005
Prerequisite: MAT 101
Exponentials, roots, quadratic equations, inequalities of one variable, first degree relations and functions, second degree relations and functions, systems of equations, and logarithmic functions.

MAT 104 Calculus I $3 \quad 0 \quad 0 \quad 3$
Prerequisite: MAT 103
The derivative with applications and integration with applications.

| MAT 110 | Business Mathematics | 5 | 0 | 0 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: Satisfactory placement test score or MAT 100R
Stresses the fundamental operations and their application to business problems. Topics covered include banking, price marketing, invoices, simple interest, discounts, charges for credit, and pertinent uses of mathematics in the field of business.
$\begin{array}{lllllll}\text { MAT } & 111 & 5 & 5 & 0 & 0 & 5\end{array}$
Course studies those mathematical concepts that will help EDP personnel to better understand the function of a computer and operations with a computer. Topics include number systems and arithmetic operations, sets, logic, Boolean algebra, statistics, scientific notation, and matrix algebra.

| MAT | 114 | Basic Math for Health <br> Professions | $\mathbf{2}$ | $\mathbf{0}$ | $\mathbf{0}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |

Develops the skills necessary to correctly compute medication dosages in the metric, apothecary, and household systems of measurement.

## $\begin{array}{lllllll}\text { MAT } 150 & 5 & 0 & 0 & 5\end{array}$

Prerequisites: MAT 101 and specified score on reading placement test or ENG 094
Course covers algebraic operations, exponents, radicals, linear equations, quadratic equations, absolute value, inequalities, graphing, variations, systems of equations, systems of inequalities, polynomial functions, and the binomial theorem.

## MAT 150A College Algebra I $\begin{array}{lllll}1 & 4 & 0 & 3\end{array}$

Prerequisites: MAT 101 and specified score on reading placement test or ENG 094 Course covers algebraic operations, exponents, radicals, linear equations, quadratic equations, absolute value, inequalities, and graphing. MAT 150A and MAT 150B together are equivalent to MAT 150.

## $\begin{array}{llllll}\text { MAT 150B College Algebra II } & 1 & 2 & 0 & 2\end{array}$

Prerequisite: MAT 150A
Continuation of MAT 150A. Course covers variation, systems of equations, systems of inequalities, polynomial functions, and the binomial theorem. MAT 150A and MAT 150B together are equivalent to MAT 150.

| MAT | 151 | College Trigonometry | 5 | 0 | 0 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: MAT 150
An analytical and graphical study of the properties of trigonometric functions and related concepts, trigonometric identities and their applications, graphs of trigonometric functions, graphs of inverse trigonometric relations and functions, trigonometric equations, and complex numbers.
$\begin{array}{lllllll}\text { MAT } & 180 & \text { Statistical Analysis I } & 5 & 0 & 0 & 5\end{array}$
Prerequisite: MAT 150
Sampling of probability distributions, measures of central tendency and dispersion, hypothesis testing, Chi-square, and regression.

MAT 201 Calculus II $3 \quad 0 \quad 0 \quad 3$
Prerequisites: MAT 102, 104
Continues MAT 104. Covers more advanced concepts of differentiation and integration. Introduces solutions of differential equations.

|  |  | Clinical/Credit |  |
| :---: | :---: | :---: | :---: |
| Class | Lab | Shop | Hours |
| 5 | 0 | 0 | 5 |

## MAT 250 Basic Concepts of Mathematics I

Prerequisite: MAT 101
The system of real numbers, its subsystems, and their properties from an algebraic and geometric point of view. Designed for elementary education majors.

## $\begin{array}{lllllll}\text { MAT } 251 & \text { Basic Concepts of Mathematics II } & 3 & 0 & 0 & 3\end{array}$

Prerequisite: MAT 250
A continuation of MAT 250. Upon completion of the course, the student should be familiar with the methods and language of geometry, be able to reason inductively from a series of examples, and be aware of some relationships of geometry to the real world. Designed for elementary education majors.

## $\begin{array}{lllllll}\text { MAT } 0099 & \text { Developmental Mathematics } & 5 & 0 & 0 & 5\end{array}$

Designed for students whose backgrounds in the area of mathematics are limited. Does not carry credit toward a diploma.

| MAT $\mathbf{1 0 0 0}$ Computational Skills | $\mathbf{5}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{5}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Prerequisite: MAT 0099 |  |  |  |  |
| Fractions, decimals, and percents. |  |  |  |  |

## $\begin{array}{lllllll}\text { MAT } & 1101 & \text { Fundamentals of Mathematics } & 5 & 0 & 0 & 5\end{array}$

Prerequisite: MAT 1000
Fractions, decimals, ratios, proportions, exponents, square roots, order of operations, signed numbers, and simple equations.

MAT 1102 Algebra $5 \begin{array}{llll}5 & 0 & 0 & 5\end{array}$
Prerequisite: MAT 1101
Basic algebraic operations, linear equations, exponents, graphing, systems of equations, and radicals.

## MAT 1103 Basic Geometry and

 Trigonometry 5000005Prerequisite: MAT 1101
Basic definitions and properties of plane and solid geometric figures, areas of plane figures, volumes of solids, trigonometric functions of any angle, and solution of right triangles.

## MAT 1111 Building Trade Mathematics: Masonry 3 0 $0 \quad 3$

Practical problems dealing with whole numbers, fractions, decimals, percents, and square roots as it relates to masonry materials.
$\begin{array}{lllllll}\text { MAT } & 1112 & \text { Building Trade Mathematics } & 3 & 0 & 0 & 3\end{array}$
Prerequisite: MAT 1101
Practical problems dealing with volumes, weights, ratios, and mensuration.

| MAT 1113 | Building Trade Mathematics: <br> Masonry | $\mathbf{3}$ | 0 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: MAT 1111
Practical problems dealing with linear, square, and volume mensuration as related to masonry.
Class
MAT $\quad \mathbf{1 1 2 3}$ Machinist Mathematics

Concludes with an introduction to compound angle problems.

|  |  | Clinical/Credit |  |
| :--- | :--- | :--- | :---: |
| Class Lab Shop Hours |  |  |  |

$\begin{array}{llll}3 & 0 & 3 & 4\end{array}$

| MEC | 101 | Machine Processes | 3 | 0 | 3 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Introductory course designed to acquaint students with basic hand tools, safety procedures, and machine processes of modern industry. Includes a study of measuring instruments, characteristics of metals, and cutting tools. Students become familiar with the lathe family of machine tools by performing selected operations such as turning, facing, threading, drilling, boring, and reaming.

## $\begin{array}{llllll}\text { MEC } 102 & \text { Machine Processes } & 3 & 0 & 3 & 4\end{array}$

Prerequisite: MEC 101
Advanced operations on lathe, drilling, boring, and reaming machines. Milling machine theory and practice. Study of the types of milling machines, cutters, jig and fixture devices, and the accessories used in a modern industrial plant. Safety in the operational shop is stressed.

| MEC | 104 | Applied Mechanics | 5 | 0 | 0 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisites: MAT 103 and PHY 104
This course covers the concepts and principles of statics, parallel, concurrent and noncurent force systems in coplanar and noncoplanar situations, concepts of centroids and center of gravity, and moments of inertia.
$\begin{array}{lllllll}\text { MEC } & 112 & \text { Machine Shop Processes } & \mathbf{1} & 0 & 3 & 2\end{array}$
Acquaints students with the procedures of layout work and the correct use of hand and machine tools. Experiences in the fundamentals of drill press and lathe operations, hand grinding of drill bits and lathe tools, and setup work applied to the trade.

| MEC | 114 | Shop Practice | 1 | 0 | 6 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: MEC 112
Designed to acquaint students with basic fundamentals of installation, maintenance, and repair of machine tools. Machine maintenance and accuracy emphasized. Slip and press fits produced to include bearing assembly. Miscellaneous hydraulic, pneumatic, and lubrication devices studied. Machine location, leveling and fastening discussed. Integration of machining and fabrication developed by related shop projects. Implementation and operation of preventive maintenance systems studied.

| MEC 201 | Manufacturing Processes I | 2 | 2 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: MEC 102
The newer concepts of work handling, automatic machining processes, chipless
production, new techniques in metal forming, analysis of high energy forming ultrasonic machining, electrolytic metal removal, chemical milling, numerical control systems, and production methods in manufacturing are covered.

## MEC 202 Manufacturing Processes II <br> 2 2 <br> 3

## Prerequisite: MEC 201

The newer concepts of work handling and automatic machining processes are emphasized. Concentrated study of production methods in manufacturing is included.

## MEC 205 Strength of Materials <br> $3 \quad 20$ <br> 4

Prerequisite: MEC 104
This course includes a study of principles and analysis of stresses which occur within machine and structure elements subjected to various types of loads such as static, impact, varying, and dynamic. An analysis of these stresses is made as applied to riveted and welded joints, beams, columns, and other components.

## MEC 210 Physical Metallurgy $3 \quad 0 \quad 3 \quad 4$

Introductory course in metallurgy; basic study of the properties of metals and alloys. Analysis of the structure of metals and alloys, atomic structure, nuclear structure, and nuclear reactions. Solid (crystalline) structures, methods of designating crystal planes, liquid and vapor phases, phase diagrams, and alloy systems.

MEC 222 Rigging and Material Handling 20003

Transporting, conveying, transferring, self-loading and bulk-handling equipment introduced. Use of wire rope, slings, chains, scaffolds, and ladders investigated. Proper storage of materials covered.
$\begin{array}{lllllll}\text { MEC } & 235 & \text { Hydraulics and Pneumatics } & 3 & 0 & 3 & 4\end{array}$
Basic theories of hydraulic and pneumatic systems. Combinations of systems in various circuits. Basic designs and functions of circuits and motors, controls, electrohydraulic servomechanisms, plumbing, filtration, accumulators, and reservoirs.
$\begin{array}{lllllll}\text { MEC } 237 \text { Control Systems } & 3 & 2 & 0 & 4\end{array}$
Prerequisite: PHY 104
This course covers the basic principles of electrical, electronic, and pneumatic control systems as related to industrial applications. The basic design and functions of circuits, motors, transducers, and servomechanisms, and a review of the National Electrical Code is included.
$\begin{array}{lllllll}\text { MEC } & 240 & \text { Introduction to Robotics } & 3 & 2 & 0 & 4\end{array}$
Prerequisites: MEC 235, 237, 270
This is a fundamental course in application, programming, and maintenance of robot devices.

MEC 250 MET Seminar 100001
Prerequisite: Completion of a minimum of four quarters of MET curriculum study. Provides an opportunity for students, in their final year of MET study, to meet as a group for the discussion of such topics as job opportunities, job interviews, continuing education options, and recent technological developments in the area of manufacturing engineering.

| MEC | 270 | Class | Lab | Clinical/Credit <br> Shop | Hours |
| :---: | :--- | :--- | :---: | :---: | :---: | :---: | :---: |
| Control (CNC) Machining |  |  |  |  |  |

Prerequisite: MEC 102, or permission of instructor
An introduction to the set-up, operation, and programming of Computer Numerical Control machine tools. Concepts, capabilities, and applications of CNC machining are to be explored. Equipment descriptions, operator controls, data input, program preparation and storage will be studied. Students will gain skills in manual parts programming, set-up, and operation of CNC machines. Operator safety and machine protection will be stressed.

| MEC | 271 | Class | Lab | Clinical/Credit <br> Shop | Operation of Computer Numerical <br> Control (CNC) Machine Tool <br> Equipment | 2 |
| :--- | :--- | :--- | :--- | :---: | :---: | :---: |

Prerequisite: MEC 270
An introduction to the set-up and operation of computer assisted Numerical Control Equipment. Description, operators controls and indicators, operation in set-up, data, input, automatic operation, and tool holders will be areas of study. Safety and machine protection will be stressed at all times.

| MEC | 272 | Programming of Computer Numerical <br> Control (CNC) Machine Tool <br> Equipment | 2 | 2 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: MEC 270
An introduction to the programming of equipment. Looping, macro sub-routines, drill cycle, spot facing cycle, deep hole drilling cycle, boring cycle, multihole row drilling cycle, inch dimension system, metric dimension system, facing cycle pocket milling cycle, internal hole milling cycle, and cutter diameter compensation will be areas of study. Safety and machine protection will be stressed at all times.

## MEC 273 Programming of Computer Numerical Control (CNC) Machine Tool Equipment

Prerequisite: MEC 272
A continuation of study in the programming of equipment. Circular interpolation, multi-quadrant circular interpolation, polar coordinates, cutter path transformation, continuous path milling, cam profile milling, and scaling will be areas of study. Looping and macro sub-routines will be used in program study whenever feasible.
$\begin{array}{lllllll}\text { MEC } & 298 & \text { Maintenance Problems I } & 2 & 0 & 3 & 3\end{array}$
Broadens the experiences of students in the areas of mechanics. Problems involving various types of equipment given to demonstrate the check list method of maintenance and preventive maintenance. The use of precision measuring tools and checking for accuracy, squareness, and correct center line distances stressed for prestart inspection. Study in everyday manufacturing problems and solutions. Includes a major emphasis on live projects. Projects include selection by the student of the proper feeds, speeds, linkage, and controls of power transmissions, as well as bearings and gears, installation, and repair. Special emphasis on interpretation of catalog information and reference material.

introduction to the machinist trade and the potential it holds for craftsman. Deals primarily with the identification, care, and use of basic hand tools and precision measuring insiruments. Elementary layout procedures of lathe, drill press, grinding (off-hand), and milling machines introduced both in theory and practice.

## MEC 1102 Machine Shop Theory and

| Practice | 3 | 0 | 12 | 7 |
| :--- | :--- | :--- | :--- | :--- |

Prerequisite: MEC 1101
Advanced operations in layout tools and procedures, power sawing, drill press, surface grinder, and milling machine shaper. Students irroduced to the basic operations on the cylindrical grinder; projects selected encompassing all the operations, tools, and procedures thus far used and those to be stressed throughout the course.

## MEC 1103 Machine Shop Theory and <br> Practice

3012

7
Prerequisite: MEC 7102
Advanced work on the engine lathe; turning, boring, and threading machines; grinder; milling machines; and shapers. Introduction to basic indexing and terminology with additional processes un calculating, cutting, and measuring of spur, helical, and worm gears and wheels. Trainees use precision tools and measuring instruments such as vernier height gauges, protraciors, and comparaiors. Basic exercises given on the turret lathe and on the tool and cutter grinder.

## MEC 1104 Machine Shop Theory and

$\begin{array}{lllll}\text { Practice } & 3 & 0 & 12 & 7\end{array}$
Prerequisite: MEC 1103
Development of class projects using previously learned procedures in planning, blueprint reading, machine operations, fina! assembly inspection. Additional processes on the turret lathe, cool and cutter grinder, cylindrical and surface grinder, and advanced milling machine operations. Special procedures and operations, processes, and equipment; observing safety procedures faithfully; and establishing good work habits and attitudes acceptable to the industry.

MEC 1105 Machine Shop Theory and
Bractice $3 \quad 0 \quad 1508$
Prerequisite: MEC 1104
Stresses the development of skills and understanding of machine precision parts. Advanced machine processes are taught using the standard machine tools as well as specialized or production equipment as applicable. Methods and procedures of checking and inspecting precision parts. Good housekeeping and safe working habits stressed at all times.

MEC 1106 Machine Shop Theory and Practice

3012
7
Prerequisite: MEC 1105
Emphasis placed on production methods and on machines, including setup and


#### Abstract

Elinical/Credit Class Lab Shop Hours


operation for mass production. Instruction given on the turret lathe, milling machines, cylindrical grinders, and other production machines. Considerable attention also given to specialized equipment, such as $\mathrm{N} / \mathrm{C}$ machinery, electrical discharge machines, gear hob or shaper, or others ās avallable.

## MEC 1107 Jigs and Fixtures <br> 206 <br> 4

Deveiops understanding of principles and uses of jigs and fixtures. Instructions in designing and drawing simple jigs and fixtures, as well as practice in their manufacture for use on course projects. Development of confidence and pride in producing high quality parts with the use of jigs and fixtures.

MEC 1112 Machine Shop Processes $\begin{array}{lllll}1 & 0 & 3 & 2\end{array}$
Asquaints students with the procedures of layout work and the correct use of hand and machine tools. Experiences in the fundamentals of drill press and lathe operations, hand grinding of drill bits and lathe tools, and setup work applied to the trade.
$\begin{array}{lllllll}\text { MEC } & 1115 & \text { Metallurgy: Ferrous Metals } & 2 & 0 & 3 & 3\end{array}$
investigates the properties of ferrous metals and tests to determine their uses. Instruction includes some chemical metallurgy to provide background for the understanding of the physical changes and causes of these changes in metals. Physical metallurgy of ferrous metals, producing iron and steel, theory of alloys, shaping and forming, steel, classification of steels, and cast iron are the topics for study.

MEC 1116 Metallurgy: Non-ferrous
Metals $\quad 2 \quad 0 \quad 3 \begin{array}{llll}3\end{array}$
Prerequisite: MEC 1115
Continuation of the study of physical metallurgy. Study of the non-ferrous metals: bearing metals (brass, bronze, lead), light metals (aluminum and magnesium), and copper and its alloys. Power: metallurgy, titantium, zirconium, indium, and vandium incuded.

MEC 1120 Duct Construction and $\begin{array}{llllll}\text { Installation } & 3 & 0 & 6 & 5\end{array}$
Study of the fabrication, installation, and maintenance of ducts using various materials and fittings to achieve correct air flow. Course covers safety, fabrication, tools and equipment, cutting and shaping, fasteners and fabrication practices, fans, insulation, ventilating hoods, layout methods, and development of duct systems. The student will study the installation of various duct systems and perform on-the-site modifications.

## MEC 1133 Electrical and Mechanical

 Maintenance 3 . 5To acquaint the student with the basic fundamentals of installation, maintenance, and repair of machines. Miscellaneous electrical, mechanical, hydraulic, pneumatic, and lubrication devices are installed and maintained. Methods of rigging and machine installation including location leveling and fastening are covered. The use of precision measuring tools and checking for accuracy, squareness and correct center line distances is stressed for prestart inspection.

## MEC 1134 Electrical and Mechanical Maintenance

306 5

## Prerequisite: MEC 1133

A study is made of those parts of the electrical code which affect the work of the industrial maintenance electrician. Practical experience is provided in wiring, installing, and connecting the various types of services for lighting, heating, and power installations. Training is provided in troubleshooting in the identification and testing of circuits and in making mechanical adjustments and related maintenance operations of various machines. Schematic diagrams showing the plan of operation for each system, electrical or mechanical, are used.

## MEC 1140 Hydraulics and Pneumatics

 Fundamentals 3 0 $\quad 3 \quad 4$Basic theories and uses of hydraulic and pneumatic systems and also the combination of systems. Basic designs and functions of circuits and motors, controls, electro-hydraulic servo-mechanisms, filtration, accumulators, and reservoirs. Installation and maintenance of the components will be made by the students.

## MEC 1147 Systems of Measurement and

 Measuring Tools $2 \quad 0 \quad 0 \quad 2$Study of measurement and the various systems. How to use and read the various rules, scales, calipers, micrometers, and other precision measuring tools used in mechanical work. Included is the reading of the basic electrical meters used in testing.

## MEC 1170 Introduction to Computer Numerical

 Control (CNC) Machining 1Prerequisite: MEC 1102 or permission of instructor
An introduction to the set-up, operation, and programming of Computer Numerical Control machine tools. Concepts, capabilities, and applications of CNC machining are to be explored. Equipment descriptions, operator controls, data input, program preparation and storage will be studied. Students will gain skills in manual parts programming, set-up, and operation of CNC Machines. Operator safety and machine protection will be stressed.

## 

Fundamentals of repairing machine tools and related equipment or accessories. Emphasis on manufacture of replacement parts; alignment or adjustment of pulleys, gears, gibs, and clutches; and modification or restoration of older equipment.

|  |  |  | Clinical/Credit |  |  |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: |
| MEDICAL |  |  |  |  |  |$\quad$ Class | Lab | Shop | Hours |  |  |
| :--- | :--- | :--- | :--- | :--- |
| MED 1100 | Hospital Ward Secretary: <br> Theory and Practice | 12 | 0 | 12 |

Designed to prepare qualified students to perform a variety of clerical duties such as maintaining the patient's charts, requesting equipment and services for the patient, requesting supplies and equipment for the nursing unit, and completing all forms
correctly. Emphasis placed on communication techniques including communication with the patient via the nurse-patient intercom, communication with the hospital staff, physicians, and visitors, as well as telephone communications. Clinical experiences provide opportunities for applying classroom learning in the hospital setting.

Clinical/Credit<br>Class Lab Shop Hours

## MENTAL HEALTH

MHA 131, 132, 133 Readings in
$\begin{array}{lllll}\text { Mental Health } 0 & 2 & 0 & 1\end{array}$
Designed for students who wish to specialize or expand their knowledge in certain areas of mental health. Under the supervision of mental health faculty members, students study materials relative to concepts in mental health and write critical analyses. Time for independent study allotted, and individual conferences with the supervising instructor arranged.
MHA 208 Change Agentry Lab I $0 \quad 0 \quad 3 \quad 1$

A four-day human relations training lab in a retreat setting off campus. Lab staffed by qualified trainers. Students are offered practice in the interpersonal and group skills they have learned in courses in group processes.

| MHA 210 | Change Agentry Lab II | 0 | 0 | 3 | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: HSA 112 or HSA 113 or HSA 116 or permission of the instructor A four-day human relations training lab which occurs in a retreat setting off-campus. The lab is staffed by qualified group leaders and the students are afforded an experience to practice the interpersonal and group skills they have learned in HSA 112, 113, or HSA 116.
$\begin{array}{llllll}\text { MHA 211P } & \text { Practicum IV } & 1 & 10 & 0 & 2\end{array}$
Students assigned six hours per week in a faculty-supervised clinical situation for application of knowledge and skills from related course work.

| MHA 215P Practicum V | 1 | 10 | 0 | 2 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| A continuation of MHA 211P. |  |  |  |  |
| MHA 231, 232, 233 Research in |  |  |  |  |
| Mental Health |  |  |  |  |

Designed for students who wish to specialize or expand their knowledge in certain areas of mental health. Under the supervision of mental health faculty members, students investigate and study materials and data from primary and secondary sources relative to concepts in mental health and prepare reports in the style appropriate to the discipline.
Class Lab Clinical/Credit

## MUSIC

MUS 101 Choral Music I $\quad 0 \quad 2 \quad 0 \quad 1$
A practical course in choral music. Course content will include exercises for improving range and quality of tone, music reading and blend of harmony. Music learned will be of a general nature, highlighting popular, folk, and religious songs.

MUS 102 Choral Music II $0 \quad 2 \quad 0 \quad 1$
A practical course in choral music extending the learning experiences of MUS 101. Course content will include exercises for improving the understanding of modes, dynamics, expression, and special effects. Music learned will be of a general nature.

MUS 103 Choral Music III $0 \quad 2 \quad 0 \quad 1$
A practical course in choral music, extending the learning experiences of MUS 101 and MUS 102. Course content will include refining of tonal quality and increasing performing and presentation skills. Also included will be the study of showmanship and the ability to project the feeling of the music to the audience. Music learned will be a general nature.

MUS 150 Music Appreciation $\begin{array}{lllll}3 & 0 & 0 & 3\end{array}$
Introduces music: its elements, forms, and stylistic features. The music of major composers is studied, with emphasis on development of aural awareness.

## Clinical/Credit <br> Class Lab Shop Hours

NURSING (A minimum grade of " C " is required for all NUR courses)
$\begin{array}{llllll}\text { NUR } 101 & \text { Fundamentals of Nursing } & 6 & 4 & 3 & 9\end{array}$
Corequisite: BIO 150; NUR 110
Introduces student nurse to the concept of wellness, to the patient and patient's environment, to beginning concepts of abnormal psychology, and to nurses' ethical, legal, and historical responsibilities. Emphasis on the nursing process, principles and techniques required to meet the needs of all patients, and methods of interpersonal communication. Stress on body mechanics, medical asepsis, and other supplementary nursing functions.

## $\begin{array}{lllllll}\text { NUR } & 102 & \text { Medical-Surgical Nursing I } & 8 & 2 & 12 & 13\end{array}$

Prerequisites: BIO 150; MAT 114; NUR 101, 110 (minimum grade of " C " in each) Corequisite: BIO 151
Introduces medical-surgical nursing with continuing emphasis on the nursing process. Includes causes and classification of diseases, body reactions (both physical and emotional), and pre- and post-operative care with emphasis on diseases of the blood, cardiovascular system, respiratory system, neurological system, endocrine and gastrointestinal system as related to the developmental stage of the patient. Includes pharmacologic concepts and nutritional aspects of disease process and diet therapy as related to the specific medical-surgical condition. Continuation from NUR 101 of therapeutic communication and legal, ethical, and sociological aspects of client care.
Class
NUR $\quad \mathbf{L a b}$
Lab
Clinical/Credit
Shop Hours

| NUR 104 | Maternal-Child Nursing I | 8 | 0 | 12 | 12 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisites: BIO 151; NUR 102 (minimum grade of "C" in each) Introduces the student to maternal child nursing with emphasis on the nursing process. Maternity component presents modern aspects of normal pregnancy with brief introduction to the complications that may affect pregnancy. Pediatric component reviews growth and development of each age group and relates each to hospitalization and common pediatric illnesses and conditions. Includes nutritional, emotional, pharmacological, and legal aspects specific to pregnancy and pediatrics. Integrates nurse-patient-family relationships and communication in content and clinical experience.
NUR 110 Pharmacology $\quad 2 \quad 0 \quad 0 \quad 2$

Corequisite: MAT 114
Presents sources, effects, legalities, and usage of therapeutic agents. Covers prescription of medications and nursing implications. Prepares the student to administer medications. Follows nursing process in observing, evaluating, and documenting the effects of medications.

| NUR | 121 | Health Assessment | 2 | 0 | 0 |
| :--- | :--- | :--- | :--- | :--- | :--- |

Corequisites: NUR 103, 104, 200, or special permission
Includes assessment of health status of clients throughout the life span using as tools the health history and physical assessment. Health promotion and health teaching are emphasized. Skills are practiced in the corequisite courses.

## 

Corequisite: NUR 103, 104 or permission of instructor
Explores issues and trends within the nursing profession, ethical and legal responsibilities, roles of the RN and LPN, job opportunities for nurses, and nursing organization. Emphasis on assuming the role of the graduate practical nurse. Includes preparation for the licensing examination for practical nurses and orientation to second level nursing.

| NUR 200 | Transition Nursing | 4 | 2 | 12 | 9 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisites: BIO 151, LPN
Introduces the nursing process as a basis for nursing practice. Lecture, discussion, and clinical practice assist the student in making the change from LPN to RN student. Clinical experiences focus on nursing care planning for adult patients with common health problems; gives the student the opportunity to demonstrate satisfactory performance of selected nursing skills.
NUR 201 Maternal Child Nursing II .. 6 0 15 11

Prerequisites: BIO 152; NUR 103, 104, 131 (minimum grade of "C" in each) Corequisite: BIO 206
Continuation of NUR 104. Maternity component focuses on care of complicated pregnancy, the premature, and the sick newborn with emphasis on patient and family teaching. Pediatric component follows a systems approach to pediatric health problems and offers greater depth in planning nursing care for the ill child. Includes aspects of nutrition, pharmachology, legal issues, and communication skills that specifically apply to maternal child care. Provides patient care experiences on the general pediatric and obstetrical units of the hospital and in selected community health agencies.

| NUR 202 | Psychiatric Nursing | $\mathbf{4}$ | 0 | 9 | 7 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisites: BIO 152; NUR 103, 104, 131 (minimum grade of "C" in each), PSY 180 A conceptual and developmental approach to the nursing process in the mental and physical care of clients both healthy and ill. Emphasis on cognizance and utilization of self as a tool in socio-psychotherapeutic interventions, development of verbal and nonverbal communication skills, formulation of therapeutic interpersonal skills, and legal-ethical issues facing the nurse in caring for the mentally ill client. Also emphasizes knowledge and identification of personality and behavior deviation experiences by the mentally ill client and the etiology, treatment, prevention, and rehabilitiation of mental illness. Includes pharmacologic and nutritional aspects of care as related to the mentally ill client.

NUR 203 Medical-Surgical Nursing III $\begin{array}{llllll} & \mathbf{6} & 0 & 15 & 11\end{array}$
Prerequisites: BIO 152; NUR 103, 104, 131 (minimum grade of "C" in each) Continues conceptual study of the biological and emotional components frequently occurring in illness of adults. Stresses implementation of patient care by the associate degree nurse. Provides opportunity for using previous and concurrent knowledge in planning, implementing, and evaluating patient care. Emphasis on utilizing the nursing process in the care of patients with respiratory, cardiovascular, urinary, and neurological dysfunction. Includes nutrition, pharmacology, and legal aspects of nursing. Clinical learning experiences selected on the basis of meeting clinical objectives and in accordance with the student's learning needs.
$\begin{array}{lllllll}\text { NUR } 204 & \text { Patient Care Management } & 4 & 0 & 6 & 6\end{array}$
Prerequisites: NUR 201, 203 (minimum grade of "C" in each)
Continues conceptual study of the biological and emotional components frequently occurring in illness of adults. Concentrates on increasing the nursing student's ability to use cognitive, affective, and psychomotor skills in managing the needs of adults exposed to the stress of more complex medical-surgical problems. Places special emphasis on therapeutic communications and group dynamics. Provides the opportunity to plan, direct, and evaluate total patient care for individuals and groups utilizing the concepts of patient care management. Addresses problems encountered by nurses as they make the change from student to staff nurse and current trends which affect the nursing profession.
Class Lab Shop Hours

NUR 210 Nursing Update: A Refresher $\begin{array}{llllll}\text { Course for Nurses } & 12 & 4 & 12 & 18\end{array}$

Designed to assist the inactive registered nurse to refresh and update nursing skills and knowledge. Focus on using the nursing process to deliver safe and effective care to adult medical-surgical patients. Approved by the Board of Nursing to enable previously licensed nurses to regain licensure which as lapsed.

## NUR 1100 Nursing Assistant Theory

 and Clinical Practice 9 0 21 16Designed to prepare qualified men and women to give effective bedside nursing care to selected patients. Students are taught the role of the nurse assistant, concepts of health and illness, functional relationships within the nursing care facility, fundamentals of effective interpersonal relationships, basic nursing procedures related to the daily needs of patients, and selected special procedures. Clinical experiences in hospitals and nursing homes provide students with the opportunity to apply the techniques learned in the classroom.

|  |  |  | Clinical/Credit |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| NUTRITION |  | Class | Lab | Shop | Hours |
| NUT | 101 | Basic Nutrition | 2 | 0 | 0 |

Prerequisite or Corequisite: BIO 101 or by permission of department chairperson The science of normal nutrition including the study of the nutrients and their function within the body and the physiological processes of digestion, absorption, and metabolism. Emphasizes sources and types of food necessary for the balanced diet. Includes social, cultural, and economic factors which influence dietary needs.

Class Lab | Clinical/Credit |
| :--- |
| Shop |
| Hours |

ORIENTATION
ORI 100 New Student Seminar
Acquaints the student with the physical, academic, and social environment at Pitt
Community College. Covers student academic regulations, administrtive procedures,
study skills, student service facilities and personnel, student motivation and positive
thinking, student social activities and the SGA, and career decision making.
ORI $\mathbf{1 5 0}$ Orientation and Study Skills

| Provides information about the community college and its resources and assists in |
| :--- |
| decision making and in developing sound study habits. Objective is to provide students |
| with sufficient information to succeed in college. |

# Clinical/Credit <br> Class Lab Shop Hours 

## PHYSICAL EDUCATION

PED 150 Foundations in Physical Education

20000
Investigation of efficiency of human performance through study of variables related to total fitness, physical fitness, diet, weight control, degenerative diseases, physiological effects of exercise, and motor skills development. Oriented toward physical activity as a way of life with emphasis upon the role that physical activity should play in leisure oriented societies; includes participation in physical activities.

| PED 160 | Adapted Activities | 0 | 2 | 0 | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: Permission of instructor

|  | PED | 161 | Archery | 0 | 2 | 0 | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | PED | 162 | Badminton | 0 | 2 | 0 | 1 |
|  | PED | 163 | Basketball-Elementary | 0 | 2 | 0 | 1 |
|  | PED | 164 | Bowling | 0 | 2 | 0 | 1 |
|  | PED | 165 | Conditioning | 0 | 2 | 0 | 1 |
|  | PED | 166 | Modern Dance-Elementary | 0 | 2 | 0 | 1 |
|  | PED | 167 | Modern Dance-Intermediate | 0 | 2 | 0 | 1 |
|  | PED | 168 | Social Dance | 0 | 2 | 0 | 1 |
|  | PED | 169 | Square Dance | 0 | 2 | 0 | 1 |
|  | PED | 170 | Field Hockey | 0 | 2 | 0 | 1 |
| 238 | PED | 171 | Golf | 0 | 2 | 0 | 1 |
|  | PED | 172 | Ice Skating | 0 | 2 | 0 | 1 |
|  | PED | 173 | Jui-Jitsu and Karate | 0 | 2 | 0 | 1 |
|  | PED | 174 | Lacrosse | 0 | 2 | 0 | 1 |
|  | PED | 175 | Recreational Activities | 0 | 2 | 0 | 1 |
|  | PED | 176 | Soccer-Elementary | 0 | 2 | 0 | 1 |
|  | PED | 177 | Softball-Elementary | 0 | 2 | 0 | 1 |
|  | PED | 178 | Swimming-Elementary | 0 | 2 | 0 | 1 |
|  | PED | 179 | Swimming-Intermediate | 0 | 2 | 0 | 1 |
|  | PED | 180 | Tennis-Elementary | 0 | 2 | 0 | 1 |


|  |  |  | Clinical/Credit |  |  |  |
| :--- | :---: | :--- | :---: | :---: | :---: | :---: |
|  |  | Class | Lab | Shop | Hours |  |
| PED | 181 | Tennis—Advanced | 0 | 2 | 0 | 1 |
| PED | 182 | Track and Field | 0 | 2 | 0 | 1 |
| PED | 183 | Volleyball | 0 | 2 | 0 | 1 |
| PED | 184 | Wrestling | 0 | 2 | 0 | 1 |
| PED | 196 | Aerobic Exercise | 0 | 2 | 0 | 1 |

A total fitness program designed to improve strength, endurance, flexibility, agility, and cardiovascular endurance. The course will also point out why people today have a particular need for aerobic exercise. It will explain the medical, physical, emotional, and cosmetic benefits of this type of program. Instructor will make specific suggestions for exercise for specific needs.

|  | Class | Lab | Clinical/Credit <br> Shop |
| :--- | :---: | :---: | :---: | :---: | :---: |
| PHILOSOPHY |  |  |  |


|  |  | Clinical/Credit |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| PHOTOGRAPHY | Class | Lab | Shop | Hours |  |

Introduction to the field of photographic equipment, and materials. A study of the fundamental techniques of the camera.

| PHO | 115 | Photography | 1 | 2 | 0 |
| :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: PHO 114
A study of the camera and its expressive possibilities in relation to the field of design and visual communications. Assigned camera projects, darkroom procedures, and equipment. PHO 114 and PHO 115 taken in series will substitute for PHO 116.

| PHO 116 | 2 | 4 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- |

Introduction to the field of photography, photographic equipment, and materials. Study of the fundamental techniques of the camera and its expressive possibilities in relation to the field of design and visual communications. Assigned camera projects, darkroom procedures, and equipment.
$\begin{array}{llllll}\text { PHO } 217 & 2 & 4 & 0 & 4\end{array}$
Prerequisite: PHO 116
Advanced photographic techniques and materials. Participation in studio and laboratory procedures illustrating the various applications and creative possibilities of photography in advertising.

PHO 218 Special Problems in $\begin{array}{lllll}\text { Photography } & 2 & 4 & 0 & 4\end{array}$

Students pursue approved special interest problems under the guidance and supervision of the instructor.

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PHO 219 Special Problems in
    Photography 2 4 4 0
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Students pursue approved special interest problems under the guidance and supervision of the instructor.

PHO 220 Special Problems in $\begin{array}{lllll}\text { Photography } & 2 & 4 & 0 & 4\end{array}$

Students pursue approved special interest problems under the guidance and supervision of the instructor.

|  |  | Clinical/Credit |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| PHYSICS |  | Class | Lab | Shop | Hours |
| PHY 101 | Technical Physics | 4 | 2 | 0 | 5 |

Corequisite: MAT 102
Fundamental course covering several basic principles of physics. Typical topics include systems of measurement, Newton's laws of motion, energy, equilibrium conditions, and statics.

| PHY 102 Technical Physics | 4 | 2 | 0 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisites: MAT 102; PHY 101
Continues PHY 101. Typical topics include momentum, elasticity, circular motion,

| PHY 103 Technical Physics | 4 | 2 | 0 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisites: MAT 102; PHY 101
Continuation of PHY 102 with specific attention given to topics related to architecture. Acoustics, light and illumination, and electricity are typical topics covered.

## $\begin{array}{llllll}\text { PHY } 104 \text { Technical Physics } & 3 & 2 & 0 & 4\end{array}$

Prerequisite: MAT 102; PHY 101
Continues PHY 102 with specific attention given to topics related to electronics. Includes rotary motion, simple harmonic motion, sound, circuits, and selected topics in electricity and magnetism.

| PHY 107 Radiologic Physics | 3 | 2 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- |

Corequisite: MAT 101
A course covering the basic physics princiles applicable to radiology. Typical topics include systems of measurement, work, energy, power, wave motion, electromagnetic spectrum, electricity, and magnetism.
Class Lab Shop Hours

PHY $108 \quad \begin{aligned} & \text { Physics for Respiratory } \\ & \text { Therapists }\end{aligned}$
Corequisite: MAT 101
A course covering the basic physics principles applicable to respiratory therapy. Typical topics include systems of measurement, work, energy, power, hydraulics, hydrostatics, gases, heat, and electricity.

## PHY 120 Introduction to the Metric $\begin{array}{lllll}\text { System } & 3 & 0 & 0 & 3\end{array}$

Involves familiarization with metric units and usage, conversions to and from the British Engineering System of units, and basic algebraic solutions for the unknown as applied to problems involving units.

## PHY 260 Physics and the Environment I $\quad 3 \quad 2 \quad 0 \quad 4$

Prerequisite: ENG 094 or equivalent; MAT 101
A conceptual physics course that relates some of the basic principles of physics to their uses and consequences in our world and lives. Major topics inlcude motion, properties of matter, heat, and sound. This is a science course designed primarily for nonscience majors, hence the use of mathematics is deemphasized, being used occasionally to avoid wordiness in communicating a concept. Laboratory experiences are designed to reinforce the concepts discussed in class.
$\begin{array}{lllllll}\text { PHY } 261 & \text { Physics and the Environment II } & 3 & 2 & 0 & 4\end{array}$
Prerequisite: PHY 260
A continuation of PHY 260 dealing with electricity and magnetism, light, atomic physics, and nuclear physics. Concepts are again emphasized, and mathematical computations used only occasionally.

## PHY 262 Solar Influences and

 $\begin{array}{lllll}\text { Applications } & 3 & 2 & 0 & 4\end{array}$Prerequisite: PHY 260
A non-calculus introductory course to the basic physics of how the sun physically influences the earth, and how this solar energy can be converted to other useful forms of energy. Particular attention is given to residential applications.

## $\begin{array}{lllllll}\text { PHY } 1101 & \text { Applied Science } & 3 & 2 & 0 & 4\end{array}$

Prerequisite: MAT 1101
Introduction to physical principles. Core topics include systems of measurement, properties of matter, solids and their characteristics, work, energy, power, and simple machines. Additional specialized topics for the various curricula are basic properties of liquids, gases, heating and refrigeration, and electricity.
$\begin{array}{lllllll}\text { PHY } & 1103 & \text { Principles of Electricity } & 3 & 2 & 0 & 4\end{array}$
Prerequisite: MAT 1101
Study of the electron theory, Ohm's Law, series and parallel circuits, AC and DC circuits, magnetism, and batteries as applied to the automobile ignition system.

|  |  | Clinical/Credit |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| PLUMBING | Class | Lab | Shop | Hours |  |
| PLU 1110 | Plumbing Pipework | 2 | 0 | 6 | 4 |

This course will introduce students to the tools, fittings, and small equipment used by plumbers. Most of the time will be spent in the shop where the student can learn how to handle these materials correctly. The student will perform operations such as threading, cutting, caulking, and sweating of the various kinds of pipe and tubing used in the trade.

|  |  |  | Clinical/Credit |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| POWER MECHANICS | Class | Lab | Shop | Hours |  |  |
| PME | 1010 | Air Conditioning | 2 | 0 | 3 |  |

Basic principles of air conditioning and the special application of these principles to farm equipment. Maintenance, troublshooting, and repair stressed.

## PME 1030 Electrical Systems in Farm

Equipment 3003034
Basic study of the electrical systems found in farm equipment. Special emphasis given to batteries, starters, generators, alternators, and ignition and lighting systems. Identification of trouble, servicing, and repair as applicable to electrical systems stressed.

PME 1040 Farm Harvesting Equipment 3 3. $0 \quad 6 \quad 5$
General maintenance and repair of harvesting equipment. Self-propelled grain combines and automatic tobacco harvestors given special attention in the classroom and in the field.

Prerequisite: Permission of instructor
Gives student experience in troubleshooting and repair of gasoline and diesel engines, power trains, and fuel systems associated with farm equipment. Provides opportunity to learn the operating principles of self-propelled and tractor drawn equipment and field experience in how to adjust field equipment. May substitute for part-credit in COE 101D.

## PME 1046 Shop Practices and Tool

Operations 3 0 6
Gives students experience in operating procedures of shop tools and the correct use of hand tools, cutting tools, and testing equipment. Gives opportunity to learn operation of shop tools such as drill press, valve grinders, and hand grinders and to cut threads with the tap and die sets and to operate test equipment for checking tractor components.

## PME 1050 New Tractor and Equipment Setup

103
2
Initial preparation of new tractors and equipment for customer delivery; unloading, assembling, and delivery of the tractor or equipment.

# Clinical/Credit <br> Class Lab Shop Hours 

## PME 1106 Fundamentals of Diesel

 Engines 1000Prerequisite: PME 1105
Continuation of practical application of principles introduced in PME 1105.
$\begin{array}{lllllll}\text { PME } & 1100 & \text { Engine Shop Practice } & 0 & 0 & 3 & 1\end{array}$
Prerequisite: PME 1101
Designed for students who need additional shop time in order to achieve the objectives of PME 1101.

## PME 1101 Internal Combustion Engine:

 $\begin{array}{lllll}\text { Gasoline and Diesel } & 5 & 0 & 12 & 9\end{array}$Development of a thorough knowledge of and ability in using, maintaining, and storing the various hand tools and measuring devices needed in engine repair work. Study of the construction and operation of components of gasoline and diesel engines. Testing of engine performance; servicing and maintenance of pistons, valves, cams and camshafts, fuel and exhaust systems, and cooling systems; proper lubrication; and methods of testing, diagnosing, and repairing.

## PME 1102 Electrical Systems $\quad 5 \quad 0 \quad 12 \quad 9$

Theory and operation of ignition, cranking, charging, lights, and accessories systems. The laboratory used to demonstrate various test equipment and electrical checks; students spend much lab time learning to use various pieces of auto electrical test equipment.

PME 1104 Fuel Systems: Gasoline
and Diesel $5 \quad 0 \quad 9 \quad 8$
Designed to give students a solid background in the theory and operation of carburetors, fuel pumps, and the newer emission control devices; a working knowledge of the auto and diesel fuel systems. In laboratory training periods students disassemble various carburetors, perform tests, and adjust to specifications. All test equipment demonstrated to and used by students.
$\begin{array}{lllllll}\text { PME } & 1105 & \text { Fundamentals of Diesel Engines } & 5 & 0 & 6 & 7\end{array}$
Development of a thorough knowledge and ability in using, maintaining, and storing the various hand tools and measuring devices needed in engine repair work. Study of the construction and operation of components of internal combustion engines. Testing of engine performance; servicing and maintenance of pistons, valves, cams and camshafts, fuel and exhaust systems, and cooling systems; lubrication; and methods of testing, diagnosing, and repairing diesel engines.
$\begin{array}{lllllll}\text { PME } & 1112 & \text { Foreign Car Fuel Systems } & 2 & 0 & 0 & 2\end{array}$
Thorough study of the fuel systems of foreign cars, including the carburetor, fuel pump, and fuel accessories.

PME 1123 Brakes, Chassis, and
$\begin{array}{lllll}\text { Suspension } & 3 & 0 & 9 & 6\end{array}$
Complete study of various braking systems employed on automobiles and lightweight trucks; emphasis on operation, proper adjustment, and repair. Servicing of power brakes emphasized. Principles and functions of the components of the automotive chassis. Practical job instruction in adjusting and repairing of suspension systems.

PME 1124 Power Trains 3 0 |  | 9 | 6 |
| :--- | :--- | :--- | :--- |

Comprehensive study of the principles of functions of the automotive power train. Includes study of the clutch, conventional transmission, drive shaft, and the rear axle assembly. Identification of trouble, servicing problems, and repair of the power train system covered.

| PME 1125 | Auto Servicing | 3 | 0 | 9 | 6 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisites: PME 1102, 1123; AHR 1101
Emphasis on the shop procedures necessary in trouble-shooting the various component systems of the automobile. Troubleshooting of automotive systems provides a full range of experiences in testing, adjusting, repairing, and replacing components. Close simulation to an actual automotive shop situation will be maintained.
$\begin{array}{lllllll}\text { PME } & 1126 & \text { Small Engine Repair } & 1 & 0 & 3 & 2\end{array}$
Four-cycle air-cooled engines, ignition, fueling, cooling, and lubrication systems. Maintenance and repair emphasized both in theory and practice.

PME 1135 Basic Fuel Systems:
Gasoline and Diesel $\quad 3 \quad 0 \quad 0 \quad 3 \quad 4$
Thorough study of the fundamentals of gasoline and diesel fuel systems. Lectures on carburetors and diesel principles and functions of components. Laboratory practice in application of service, repair, and diagnosis procedures. Assembly removal and replacement.

## $\begin{array}{lllllll}\text { PME } & 1136 & \text { Fundamental Hydraulics } & 2 & 0 & 6 & 4\end{array}$

Fundamental hydraulics and its use to transmit power. Study of components and their function: pumps, lines, cylinders, valves, gauges, and controls. Covers systems servicing, test points, testing, and adjusting; proper care, use, installation, and storage of test equipment; minor repairs, assembly removal, and replacement.

Basic fundamentals, function, and operation of major components used to transmit power on heavy equipment. Covers clutches, transmissions, planetary gearing, torque converters, final drives, differentials, and brakes; servicing, testing, minor adjustment, assembly removal, and replacement.

| PME | 1184 | Practicum | 0 | 0 | 39 | 13 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Shop experiences under the supervision of a qualified shop foreman. Emphasis on the application of automotive servicing concepts and principles related to course content.

## $\begin{array}{lllllll}\text { PME } & 1202 & \text { Electricity/Electronics } & 3 & 0 & 9 & 6\end{array}$

Thorough study of theory and operation of individual automotive electrical units. Analysis and repair of all automotive electrical components. To supplement the engine electrical course for first year students and help them develop a knowledge of transistor circuits and their application to conventional electrical components and circuitry.
$\begin{array}{lllllll}\text { PME } 1204 & \text { Emission Controls } & 5 & 0 & 6 & 7\end{array}$
In-depth coverage of the operation of the P.C.V. system, exhaust emission control systems, evaporative emission control systems, and scheduled maintenance operations. All test equipment involved in diagnosing emission control problems is used by students.

| PME | 1208 | Specialized Auto Electronics | 1 | 2 | 0 | 2 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

To give the student a working knowledge of basic electricity and the use of various measuring devices used in servicing automobile electrical and computer systems. The student will cover Fundamentals, Series Circuits, Parallel Circuits, Schematics and Diagnosis, and Wire Repair.
$\begin{array}{lllllll}\text { PME } & 1209 & \text { Specialized Auto Electronics } & 1 & 2 & 0 & 2\end{array}$
A continuation of PME 1208. The student will cover semiconductors, transistors, and microprocessors.
$\begin{array}{lllllll}\text { PME } & 1210 & \text { Auto Engine Electronics } & 1 & 2 & 0 & 2\end{array}$
Through the use of films, lectures, and demonstrations, covers the purposes and functions of the solid-state logic systems and microcomputer used to accurately control carburetion, timing, and emission control. Ample time for hands on experience will be provided.
$\begin{array}{lllllll}\text { PME } 1224 & \text { Automatic Transmissions } & 5 & 0 & 12 & 9\end{array}$
Prerequisite: PME 1124
Instruction includes classroom study, demonstrations, and student participation in disassembly, reassembly and testing of selected transmissions. Special emphasis is placed on principles, function, construction, operation, servicing, and troubleshooting procedures and repair of various types of automatic transmissions.
$\begin{array}{lllllll}\text { PME } & 1227 & \text { Power Accessories } & 2 & 0 & 6 & 4\end{array}$
Designed to acquaint students with the operation, service, and repair of power operated seats, windows, tops, windshield wipers, and radio antennas. Course should insure the development of students' abilities to understand and trace out the circuits of the electrical accessories and enhance skills in diagnosing trouble and repairing damaged circuits. Application of knowledge in drawing and reading schematic diagrams of electrical circuits.

## PME 1230 Auto Service Excellence

Test Review 5000005
Complete review of all the eight tests given to auto mechanics for certification by the National Institute for Automotive Service Excellence. Particular attention given to test taking techniques.
Class Lab Shop Hours

## POLITICAL SCIENCE

$\begin{array}{llllll}\text { POL } 102 & \mathbf{N a t i o n a l} \text { Government } & 3 & 0 & 0 & 3\end{array}$
English and colonial background, the Articles of Confederation, and the framing of the Federal Constitution. The nature of the Federal union, states rights, Federal power, political parties. The general organization and functioning of the national government.

POL 103 State and Local Government | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- |

A study of state and local government, state-Federal interrelationships, and the functions and prerogatives of the branches. Problems of administration, legal procedures, law enforcement, police power, taxation, and revenues and appropriations. Special attention given to North Carolina.

POL 150 Introduction to U.S.
Government 500005
Prerequisite: Specified score on reading placement test or ENG 094
American national government with emphasis on its origins, development, structure, and functions.

## Clinical/Credit <br> Class Lab Shop Hours

## POLICE SCIENCE

|  | 102 | Criminology | 3 | 0 | 0 | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |

Survey of the historical and contemporary theories associated with the underlying causes of criminal behavior.
PSC 103 Penology 3 0 $0 \quad 3$

Study of the historical development of the U.S. prison systems and survey of contemporary methods employed by the North Carolina Youth Development Commission, Parole Board, Probation Commission, and Corrections Department.

## PSC 110 Juvenile Delinquency $5 \quad 0 \quad 0 \quad 5$

Study of the factors contributing to juvenile delinquency and evaluation of the methods employed in delinquency control. Special attention given to the role of juvenile agencies and to the legal procedures utilized in dealing with offenders.

## PSC 200 Basic Law Enforcement Training 14 2 $24 \quad 23$

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 prepares individuals to take the Justice Officers Basic Training certification examination mandated by the North Carolina Sheriff's Education and Training Standards Commission. Successful completion of this curriculum certificate program requires that the student satisfy the minimum requirements for certification by the Criminal Justice Commission and the Sheriff's Commission. Students 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.
Class Lab Shop Hours

| PSC 201 | Patrol Procedures | 4 | 2 | 0 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Overview of techniques and procedures employed in routine patrol and traffic control.


Study of the need for good community relations and the methodology employed in achieving these objectives by criminal justice agencies.

## $\begin{array}{lllllll}\text { PSC } & 213 & \text { Identification Techniques } & 3 & 2 & 0 & 4\end{array}$

Survey of contemporary identification techniques with primary emphasis on finger.. printing. Students develop skills in taking and classifying rolled impressions and in developing latent lifts through lab practice.
PSC 220 Police Administration $\quad \mathbf{3}$ 0 $\quad \mathbf{0} \quad 3$

An introduction to the principles of organization and administration with emphasis on the theories and techniques used in Law Enforcement agencies.

| PSC | 240 | Firearms and Defensive <br> Tactics | 2 | 2 | 0 | $\mathbf{3}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisites: Admission to a Criminal Justice program and permission of instructor or coordinator
Designed to develop respect for the needs, use, and legal liabilities associated with all firearms. Range practice provided with emphasis on the service revolver. Instruction also given in use of non-lethal weapons and in defensive tactics as used in handling arrested persons.

## PSC 241 Police Conditioning $\quad 0 \quad 2 \quad 0 \quad 1$

Provides instruction in basic physical fitness for persons entering the Law Enforcement profession.

|  |  |  | Clinical/Credit |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| PSYCHOLOGY | Class | Lab | Shop | Hours |  |
| PSY | 101 | Introduction to Psychology | 5 | 0 | 0 |$\quad 5$

Overview of the general characteristics of human behavior, including motivation, learning, perception, emotion, and intelligence, with emphasis on the application of scientific methods of psychological investigation and on the biological basis of behavior and experience. Special emphasis placed on behavior disorders and mental retardation in an attempt to help students apply the content of this course to job responsibilities.

## 

A general survey of psychology: The scientific method, learning development, psychopathology, social psychology, mental health, intelligence, and personality will be topics for discussion. Practical application of information to self and others will be stressed.

Prerequisite: PSY 102
Study of the nature and source of the problems of adolescents in western culture. The physical, emotional, social, intellectual, and personality development of adolescents.
PSY 104 Human Relations $\mathbf{3}$ 0 $\quad 0 \quad 3$

A study of methods of communication and the practitioners' understanding of themselves and others. The practitioner-patient relationship is stressed. Topics include therapeutic communication, death and dying, suicide, assertiveness training, and reduction of stress in one's own life.

## PSY 115 Child Growth and Development I $\begin{array}{llllll}3 & 0 & 0 & 3\end{array}$

Study of prenatal, infant, and toddler developmental sequence. Emphasis given to factors influencing development.

PSY 116 Child Growth and Development II $\begin{array}{llllll} & 3 & 0 & 0 & 3\end{array}$
Study of preschool, middle childhood, and adolescent developmental sequence. Emphasis given to factors influencing development.

PSY 120 Human Growth and Development | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: PSY 102 H or PSY 150 or permission of department chairperson Basic principles of physical, cognitive, and psychosocial development of the individual from conception to death-the human life span. Emphasis also placed on the detection of abnormal developmental patterns from observations and on conveying this information to significant others.
PSY 150 General Psychology I 4

Prerequisite: Specified score on reading placement test or ENG 094
Survey of fundamental principles of human behavior. Includes personality, learning, development, motivation, intelligence, scientific method, psychopathology, and social psychology.
PSY 151 General Psychology II $\mathbf{3}$ 0 0

Prerequisite: Specified score on reading placement test or ENG 094
Second half of survey of psychology. Includes physiological psychology, sensation, perception, and altered states of consciousness: sleep, thinking, memory, motivation, emotion, stress, sexuality.

PSY 160 Psychology of Memory and Learning 5000005

Prerequisites: PSY 150, 151 or permission of instructor A survey of the basic research and methods, beginning theory, and general principles of learning. This will include the topics of forgetting and memory storage and retrieval.

| PSY 170 Child Psychology | 5 | 0 | 0 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisites: PSY 150, 151 or permission of instructor The study of the growth and development of children from conception through adolescence with emphasis on the pre-pubescent child.

|  |  |  | $c$ | Clinical/Credit |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Class | Lab | Shop | Hours |  |
| PSY | 180 | Abnormal Psychology | 3 | 0 | 0 | 3 |

Prerequisite: PSY 150
The study of the behavior, assessment, treatment approaches, and causal factors involved in the various classifications of maladaptive behavior.

## 

Study of the psychological principles that help in understanding interpersonal relations in daily life. Attention given to personal and group dynamics so that students may apply the principles of mental hygiene to adjustment problems as students, workers, and members of the general community. Applications of psychological principles studied in relation to handling crisis situations dealing with stress, changing habits, and functioning in family life.
PSY 211 Behavior Disorders
500
5

Prerequisite: PSY 101 or PSY 150
Study of general patterns of abnormal behavior with emphasis on biological and environmental causal factors and human coping mechanisms.

| PSY | 221 | Learning and Behavior | 5 | 2 | 0 | 6 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: PSY 150
Introduction to the basic learning principles and concepts required to explain the acquisition and maintenance of behavior. Emphasis placed on positive and negative reinforcement, punishment, extinction, shaping, fading, chaining, recording, and charting behavior. Self-modification conducted by each student.

| PSY 222 | Exceptionality | 5 | 0 | 0 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- |

General concepts of intellectual, sensorial, motor, speech, and social variability among individuals.


Survey of environmental and physical factors that differentiate the addict. Emphasis given to the theories of cause and treatment.
$\begin{array}{lllllll}\text { PSY } 225 & \text { Tests and Measurements } & 3 & 0 & 0 & 3\end{array}$
Prerequisite: PSY 150
Study of the principles of psychological testing, general intelligence tests, differential testing of abilities, and measurement of personality traits.
PSY 228 Abnormal Psychology $\quad 3 \quad 0 \quad 0 \quad 3$

Provides instruction in mental hygiene, in the underlying causes of drug addiction and alcoholism, and in recognizing and dealing with abnormal individuals.

PSY 230 Psychology and Physiology $\begin{array}{lllll}\text { of Aging } & 3 & 0 & 0 & 3\end{array}$
Survey course intended to develop awareness of the inevitability of aging as part of the normal life cycle. Surveys the physical, psychological, and social changes occurring in late middle age and old age with emphasis on the care and treatment of the aged in our society.

Study of basic principles of human behavior. Problems of the individual studied in relation to society, group membership, and relationships within the work situation.

|  |  |  | Clinical/Credit |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| RADIOLOGIC TECHNOLOGY | Class | Lab | Shop | Hours |  |
| RDT 101 | Radiologic Technology I | 4 | 2 | 0 | 5 |

Orientation to the field of radiologic technology, including darkroom chemistry and film processing, the basic principles of radiologic exposure, elementary patient care procedures, introduction to medical terminology, and introduction to radiographic positioning as applied to those systems covered under BIO 107.

RDT 102 Radiologic Technology II 4 |  | 2 | 0 | 5 |
| :--- | :--- | :--- | :--- | :--- |

Prerequisites: RDT 101; BIO 107
A study of principles and basic radiographic technique. The radiographic lab will be used extensively for practical demonstrations.

## RDT 103 Radiologic Technology III $4 \quad 2 \quad 0 \quad 5$

Prerequisites: RDT 102; BIO 108
Techniques for basic views of the systems taught under BIO 108, such as soft tissue radiography and fluoroscopoy, and preparation of the patient and contrast media for these studies. Skull radiography will also be taught in this series.

## $\begin{array}{lllllll}\text { RDT } 111 & \text { Radiographic Positioning } & 4 & 2 & 0 & 5\end{array}$

Education in a radiographic laboratory including processing of radiographs, practice in ethical and attitudinal situations during patient contact. Covers patient care and basic positioning for studies of upper and lower extremities, shoulder and pelvic girdles, introduction to thoracic and abdominal viscera, and preparation of the patient for studies, and performance of examinations of the urinary system.

## RDT 112 Clinical Education $\quad 2 \quad 0 \quad 12 \quad 6$

Prerequisite: RDT 111
Education in a clinical setting; students continue to improve basic skills in darkroom technique and patient positioning for routine studies taught under BIO 107 and RDT 101. Practice of techniques for roentgenographic studies of the systems studied under BIO 108. Regular sessions of film critiques.

| RDT 113 | Clinical Education | 0 | 0 | 24 | 8 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: RDT 112
Education in a clinical setting with emphasis on the preparation and use of contrast media, preparation of the patient for such studies and the performance of examinations of the digestive tract, biliary tract, and urinary tract using contrast media. Students gain experience in fluoroscopic procedure and also make radiographs of the abdominal and thoracic viscera without the use of contrast media. Soft tissue radiography (exclusive of mammography) and location of foreign bodies touched upon. Regular film critique sessions.

## RDT 114 Clinical Education

00
27
9
Prerequisites: RDT 103, 113
Student spends the entire quarter gaining clinical education and developing skill in the techniques of those procedures covered during the first three quarters. Regular film critique sessions.
RDT 201 Topographic Anatomy $\quad 2 \quad 0 \quad 0 \quad 2$

Prerequisites: BIO 107, 108
Review of anatomy from the standpoint of topographic anatomy and the relationship of organs to each other. Stress is upon the location of each organ using surface landmarks and relation of the organ to other organs within the same anatomic regions.

## RDT 204 Radiologic Technology IV $4 \begin{array}{llll} & 2 & 0 & 5\end{array}$

Prerequisite: RDT 103
Continuation of the radiologic technology series. This course is designed to teach quality assurance and quality administration in the radiologic technology program. Special emphasis will be placed on radiation protection, equipment maintenance, trouble shooting, and the implementation and maintenance of a quality assurance program.

## RDT 205 Radiologic Technology V $4 \begin{array}{lllll} & 2 & 0 & 5\end{array}$

Prerequisite: RDT 204
Special radiographic procedures. Areas to be covered include foreign body localization, bronchography, pediatrics, sialography, pelvimetry, and vascular procedures. Emphasis directed toward all requirements necessary for performing these procedures, including equipment and methodology utilized.

## $\begin{array}{lllllll}\text { RDT } & 208 & \text { Radiologic Technology VII } & 6 & 0 & 0 & 6\end{array}$

Prerequisite: RDT 217
Devoted to a complete review of all subject matter covered during program. Emphasis on discussion of knowledge obtained during rotation through minor affiliates.

RDT 210 Pathology $\begin{array}{lllll}3 & 0 & 0 & 3\end{array}$
Prerequisite: BIO 108
Detailed study of various diseases with emphasis on the ones most commonly seen in the radiology department. Radiographic appearance of the disease and the effect on radiographic exposure required for accurate visualization will be dealt with in depth.

## $\begin{array}{llllll}\text { RDT } 215 & \text { Clinical Education } & 1 & 0 & 33 & 12\end{array}$

Prerequisite: RDT 114
Education in clinical area; radiography of the skeleton, the thoraic and abdominal viscera, and examination of the abdominal viscera using contrast media and fluoroscopy. Emphasis placed on ability to do pediatric radiography and views for radiography of the skeleton.

## $\begin{array}{lllllll}\text { RDT } 216 & \text { Clinical Education } & 0 & 0 & 24 & 8\end{array}$

Prerequisite: RDT 215
Emphasis placed on ability to assist and perform procedures studied in RDT 205. Students required to show proficiency in all of these areas.

## RDT 217 Clinical Education

|  |  | Clinical/Credit |  |
| :---: | :---: | :---: | :---: |
| Class | Lab | Shop | Hours |
| 0 | 0 | 30 | 10 |

Prerequisite: RDT 216
Students rotate for a two-week period through each minor affiliate, the Nuclear Medicine Department at the major affiliate, and the special procedures area at the major affiliate to gain knowledge in specialized procedures, nuclear medicine, radiation therapy, and advance imaging modalities.
$\begin{array}{lllllll}\text { RDT } 218 & \text { Clinical Education } & 0 & 0 & 27 & 9\end{array}$
Prerequisite: RDT 217
Students complete rotation through minor affiliates and specialized areas in major affiliates.

RDT 219 Review of Radiologic
Technology $\quad 3 \quad 0 \quad 0 \quad 0 \quad 3$
Systematic approach to the review of fundamental radiologic technology theory designed to facilitate the preparation of the graduate radiologic technologist for the written examination. Students encouraged to participate in group discussions, and thus share knowledge, information, and clinical experiences, thereby broadening their base of knowledge.
Class Lab Shop Hours

## RELIGION

$\begin{array}{lllllll}\text { REL } & 150 & \text { Introduction to Religion } & 5 & 0 & 0 & 5\end{array}$
Prerequisite: Specified score on reading placement test or ENG 094
Survey of the major religions of the world: Judaism, Zoroastrian religion, Christianity, Islam, Hinduism, Buddhism, Sikkhism, Jainism, Confucianism, Taoism, and Shinto.

REL 160 Introduction to Old Testament

Study of the Old Testament, with consideration of relevant cultures, history, and major personalities.

REL 161 Introduction to New Testament $5 \quad 0 \quad 0 \quad 5$
Study of the New Testament, focusing on the major teachings of Jesus, the major teachings of the apostle Paul, and the later writings. Special attention paid to the various books' similarities and dissimilarities; to the historical, cultural and religious background; and to the compilation of the New Testament.

|  |  |  | Clinical/Credit |  |  |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: |
| REAL ESTATE |  |  |  |  |  |$\quad$ Class | Lab | Shop | Hours |  |  |
| :--- | :--- | :--- | :--- | :--- |
| RLS | 101 | Fundamentals of Real Estate: <br> Salesman | 2 | 4 |

This course consists of instruction in fundamental real estate principles and practices, including real estate law, financing, brokerage, closing, valuation,' management, and taxation. Also included is instruction on residential building construction, land use, the
real estate market and the North Carolina Real Estate License Law and Rules/ Regulations of the North Carolina Real Estate Licensing Board.

## RLS 102 Fundamentals of Real Estate: <br> Real Estate Law $\quad 3 \quad 0 \quad 0$ <br> 3

Prerequisite: RLS 101
This course consists of advanced-level instruction in real property ownership and interests, transfer of title to real property, land use controls, real estate brokerage and the law of agency, real estate contracts, landlord and tenant law, mortgages/deeds of trust, property insurance, federal income taxation of real estate, the N.C. Real Estate License Law, Rules/Regulations of the N.C. Real Estate Licensing Board, and the Licensing Board's "Trust Account Guidelines."

## RLS 103 Fundamentals of Real Estate:

 Real Estate Finance $\quad 3 \quad 0 \quad 0$ 3Prerequisite: RLS 101
This course consists of advanced-level instruction on the major aspects of financing real estate transactions, including sources of mortgage funds, the secondary mortgage market, financing instruments, types of mortgage loans, underwriting mortgage loans, consumer legislation affecting real estate financing, real property valuation, closing real estate sales transactions, and finance mathematics.

## RLS 104 Fundamentals of Real Estate:

Real Estate Broker $\quad 3 \quad 0 \quad 0$
3
Prerequisite: RLS 101
Consists of advanced-level instruction with emphasis on real estate brokerage.
RESPIRATORY THERAPY
RTH $\quad \mathbf{1 0 1} \quad$ Respiratory Therapy I
Corequisites: BIO 107; PHY 108; MAT 101
A study of professional ethics, professional organizations, and the history of respiratory
therapy. Covers the physical properties of gas and piping systems and gas storage, safety
standards, and regulation of pressure and flow. Introduces medical terminology and
basic cardiopulmorary resuscitation by AHA Standards.
RTH $\quad \mathbf{1 0 2} \quad$ Respiratory Therapy II
Prerequisite: RTH 101
Corequisites: BIO 108; CHM 110; RTH 103
Covers the theory of and techniques for administration of oxygen and aerosol therapy.
Includes the properties and production of therapeutic vapor and aerosols, O 2 devices,
analyzers, blenders, artifical airways, and manual ventilation equipment. Students will
demonstrate and practice with this equipment during laboratory periods.
$\begin{array}{lllllll}\text { RTH } 103 \text { Clinical Practice I } & 0 & 0 & 9 & 3\end{array}$
Prerequisite: RTH 101
Corequisite: RTH 102
Introduces students to the clinical affiliate hospitals. Introduces the basic organization

## Clinical/Credit <br> Class Lab Shop Hours

and operation of the respiratory therapy services and the physical facilities of the clinical affiliates. Also provides an introduction to the basic aspects of patient care in the hospital environment with the opportunity to observe patient care and practice prepatient contact skills.

## RTH 104 Cardiopulmonary Anatomy and Physiology 3 0 0

Prerequisite: RTH 102
Corequisites: RTH 105, 106
An advanced study of anatomy and physiology of the respiratory and circulatory systems. Emphasis on the interrelationship of structure and function, including mechanics of respiration, ventilation, tissue metabolism, $\mathrm{O}_{2}$ transport, and $\mathrm{CO}_{2}$ elimination.

Prerequisite: RTH 102
Corequisites: RTH 104, 106
Presents the student with those medications commonly used in cardiopulmonary diseases and respiratory therapy. Presents an indepth approach, stressing those medications which effect the nervous, cardiovascular, respiratory, and excretory systems. Covers correct medication usage, administration, and legalities.

## $\begin{array}{lllllll}\text { RTH } 106 & \text { Clinical Practice II } & 0 & 4 & 12 & 6\end{array}$

Prerequisite: RTH 102
Corequisites: RTH 104, 105
Presents the first student responsibility for patient care. Includes student evaluation for competence in application of basic therapeutic modalities. Also includes in this evaluation process tasks covering patient reporting, medical record documentation, patient assessment, and equipment decontamination.
RTH 107 Acid Base Chemistry $\quad 3 \quad 0 \quad 0 \quad 3$

Prerequisite: RTH 106
Corequisites: RTH 108, 109, 110
A specialized course designed to provide indepth study of acid base regulation, blood gas values, ABG clinical interpretation, and fluid-electrolyte balance.

RTH 108 Continuous Mechanical

| Ventilation I | 3 | 2 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- |

Prerequisite: RTH 106
Corequisites: RTH 107, 109, 110
Introduces student to ventilators and monitoring devices. Stresses procedures and techniques, indications and contra-indications, and classification and function of these devices. Laboratory periods include student skills evaluation for assembly, calibration, and functional use of these devices.

RTH 109 Clinical Practice III $0 \quad 0 \quad 15 \quad 5$
Prerequisite: RTH 106
Corequisites: RTH 107, 108, 110
Introduces students to patients requiring mechanical ventilatory support and intensive respiratory care. Presents practice and evaluation of clinical skills required for implementing continuous ventilation, ventilator monitoring, weaning, patient airway maintenance, and arterial blood gas sample collection at the hospital clinical affiliates.

RTH 110 Pathology 4 |  | 0 | 0 | 4 |
| :--- | :--- | :--- | :--- | :--- |

Prerequisite: RTH 106
Corequisites: RTH 107, 108, 109
A study of the etiology and pathogenesis of cardiovascular and respiratory diseases. Presents clinical signs and symptoms along with diagnosis and complications.

| RTH | 111 | Diagnostic and <br> Therapeutic Procedures | 2 | 2 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisites: RTH 102, 103
Corequisites: RTH 104, 105, 106
Introduces the student to clinical pulmonary assessment and diagnostic procedures. Also presents therapeutic treatment modalities and procedures.
$\begin{array}{lllllll}\text { RTH } 203 & \text { Perinatology and Pediatrics } & 2 & 2 & 0 & 3\end{array}$
Prerequisite: RTH 110
Corequisites: BIO 206; RTH 201, 202
Introduces student to pediatric and neonatal respiratory therapy skills, techniques and procedures, and equipment. Emhasis on embryologic development and the treatment required by premature infants.

## RTH 204 Pediatric Pathophysiology 300030

Prerequisite: RTH 203
Corequisites: RTH 205, 206
A study of genetic, iatrogenic, and disease induced pathology as seen in both the neonatal and pediatric patients. Covers treatment and prognosis.
$\begin{array}{lllllll}\text { RTH } 205 & \text { Cardiopulmonary Function } & 3 & 2 & 0 & 4\end{array}$
Prerequisite: RTH 202
Corequisites: RTH 204, 206
Presents student with a study of techniques and procedures for pulmonary and cardiovascular function testing. Laboratory periods require students to examine and demonstrate the clinical equipment used for these diagnostic procedures.
$\begin{array}{lllllll}\text { RTH } 206 & 0 & 0 & 0 & 15 & 5\end{array}$
Prerequisite: RTH 202
Corequisites: RTH 204, 205
Introduces the practice and application of pulmonary and cardiovascular function testing in the clinical affiliate specialty laboratory. Also continues and refines those neonatal/pediatric respiratory therapy skills presented in RTH 202.

| RTH | 201 | Continuous Mechanical <br> Ventilation II | 2 | 2 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: RTH 108
Corequisites: BIO 206; RTH 202, 203
A continuation of procedures and theory relating to mechanical ventilation emphasizing interpretation and application of physiological monitoring, weaning, and arterial blood gas.
$\begin{array}{lllllll}\text { RTH } 202 & \text { Clinical Practice IV } & 0 & 0 & 18 & 6\end{array}$
Prerequisite: RTH 109
Corequisites: BIO 206; RTH 201, 203
Refines the student's mastery of those skills and techniques critical to acute patient care
as introduced in RTH 109. Also involves the student with pediatric and neonatal therapy including rotations through general and intensive care units.

| RTH 207 | Clinical Practice VI | 0 | 0 | 24 | 8 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisite: RTH 206
Corequisite: RTH 208
A clinical rotation course designed to augment transition from the student role to the role of a therapist practicing in the work environment. Although the students remain under clinic supervision, they will be expected to function in an independent manner while carrying a case load equivalent to that of the working environment. Additionally, as is possible, offers specialty rotations in clinical areas including: physical therapy, outpatient clinics, management and supervision, and education.
$\begin{array}{lllllll}\text { RTH } 208 & \text { Respiratory Therapy Seminar } & 3 & 0 & 0 & 3\end{array}$
Prerequisite: RTH 206
Corequisite: RTH 207
Introduces styles of respiratory therapy management and departmental structure. Additionally, reviews the legal aspects associated with patient care and instructor level education in cardiopulmonary resuscitation. The student will be expected to do special research on respiratory therapy related topics which are presented in written format.

## Clinical/Credit Class Lab Shop Hours <br> SOCIOLOGY <br> $\begin{array}{lllllll}\text { SOC } & 100 & \text { Job Search and Career Planning } & 3 & 0 & 0 & 3\end{array}$

Explores career areas indicating required academic preparation and related job information. Includes interpretation and analysis of self-assessment, values clarification, skills identification and transferability, principles of decision-making and application. Research career fields requiring use of career information center and interviews with persons in career fields which interest the student.
$\begin{array}{lllllll}\text { SOC } & 101 & \text { Introduction to Sociology } & 5 & 0 & 0 & 5\end{array}$
Presents the scientific study of human behavior in relation with others, the general principles affecting the organization of such relationships, and the effects of social life on human personality and behavior. Emphasis is placed on the principles of sociology relating to societies in general and particularly American society, cultures, social institutions, groups, and organizations, the class system, social change, and social processes.
$\begin{array}{lllllll}\text { SOC } & 102 & \text { Principles of Sociology } & \mathbf{3} & \mathbf{0} & \mathbf{0} & 3\end{array}$
Study of the principles of sociology; attempts to provide an understanding of culture, collective behavior, community life, social institutions, and social change. Presents the scientific study of human behavior in relation with others, the general principles affecting the organization of such relationships, and the effects of social life on human personality and behavior.

SOC 103 Social Problems
300
3
A study of the social problems prevalent in contemporary society with emphasis on the nature of, origins of, and solutions to these problems.

|  |  |  | $c$ | Clinical/Credit |  |  |
| :--- | :--- | :--- | :--- | :---: | :---: | :---: |
| SOC | 150 | Sociology 1 | Class | Lab | Shop | Hours |

Prerequisite: Specified score on reading placement test or ENG 094
Nature, concepts, and principles of sociology. Presents the scientific study of human behavior in relation to others, the general principles affecting the organization of such relationships, and the effects of social life on human personality and behavior. Special attention paid to modern industrial societies in general and American society in particular. Includes society, culture, socialization, groups, institutions and organizations, the class system, social change, and social processes.

| SOC | 160 | Courtship and Marriage | 5 | 0 | 0 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

A course which introduces students to critical thinking and empirical knowledge relative to affectional involvement, the family, and the roles and relationships associated with each.

## $\begin{array}{lllllll}\text { SOC } & 170 & \text { Modern Social Problems } & 5 & 0 & 0 & 5\end{array}$

Prerequisite: SOC 150 or permission of instructor
An in-depth study of current social problems in American society. Emphasis to be placed not only on the nature, extent, causes, and consequences of these problems but also the proposed solutions or means of limiting these problems.

SOC 221 Family | 3 | 0 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- |

Explore the interaction that takes place within and between the child, family, and society as they contribute to socialization.

|  |  |  | Clinical/Credit |  |  |
| :--- | :--- | :---: | :---: | :---: | :---: |
| SPEECH |  | Class | Lab | Shop | Hours |
| SPH | 150 | Voice and Diction | 3 | 0 | 0 |

Improvement of articulation and pronunciation through drills, readings, and the delivery of simple speeches.
SPH 160 Public Speaking $\quad 3 \quad 0 \quad 0 \quad 3$

Composition, preparation, and presentation of speeches for all occasions.

## Clinical/Credit <br> Class Lab Shop Hours

## SOCIAL SCIENCE

SSC 101 Introduction to Social Sciences 3 0 $0 \quad 3$

Integrated course in the social sciences, drawing from the fields of sociology, psychology, economics, and political science, introducing the student to the methods of social science and to the basic concepts used by social scientists to explain the functioning of the human world.

# Clinical/Credit <br> Class Lab Shop Hours 

Solving 3 0 0

This course is designed to help overcome the effect of an educational system that generally discourages creativity and creative problem solving. It is based on the premise that all individuals are inherently creative and that the development of innate creative abilities is vital for fulfillment and success in any endeavor. The participants are encouraged to develop their abilities through a variety of individual and group experiences and class discussions.
Class Lab Shop Hours

## SURGICAL

## SUR 1102 Orientation to Surgical Technology

4000
4
Presents the purpose of the program. Stresses operating room organization and relationships with other hospital departments. Includes transportation, positioning, ethical, and legal responsibilities. Introduces skills in patient care, vital signs, and catheterization. Prepares students for experience in emergency, recovery, and delivery room.

## SUR 1103 Medical Surgical Terminology $\quad 3 \quad 0 \quad 0 \quad 3$

Introduces the structure of medical terms and words. Emphasizes commonly used prefixes, suffixes, root words, and combining forms. Relates terminology to body structure, disease, and surgical intervention.

## SUR 1114 Principles and Practices of $\begin{array}{lllll}\text { Operating Room Techniques } & 4 & 10 & 0 & 9\end{array}$

Introduction to the method of the preoperative surgical hand scrub, historical development of the surgical scrub, gowning, and gloving; aseptic techniques and the development of a "sterile consciousness"; types of drapes, proper handling of drapes, and the importance of proper draping. Various types, sizes, and uses of sutures; and different types, parts, and uses of needles used for suturing tissue. Types and uses of drains; types of basic instruments; and the classifications, uses, and manufacture, and care of instruments. Study of specific responsibilities of the circulating and scrubbed personnel in routine and special procedures. Provides experience in both laboratory and hospital settings.

## SUR 1115 Pharmacology for Operating

 Room 2000002Familiarizes students with the drugs and agents used in surgery and during surgical procedures. Also deals with the basic mathematics and measurements needed to handle drugs in a surgical situation.

|  |  |  |  | Clinical/Credit |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| SUR | 1116 | Class | Lab | Shop | Hours |  |
| Surgical Procedures and <br> Clinical Practice I | 8 | 0 | 15 | 13 |  |  |

Introduction to the various types of incisions used in performing surgery. Relationship between supplies and equipment in the preparation for surgery. Regional anatomy of the operative site. Introduction to surgical procedures including instruments; general surgery; and general abdominal, gynecological, obstetrical, thoracic, genitourinary, and orthopedic surgery. Provides hospital clinical experience applying all principles with rotations in set-up areas, work rooms and delivery and emergency rooms. Beginning scrub experience.

## SUR 1127 Surgical Procedures and

$\begin{array}{lllll}\text { Clinical Practice II } & 8 & 0 & 18\end{array}$
14
Relationship between supplies and equipment in the preparation for surgery. Regional anatomy of the operative site. Introduction to surgical procedures including eye, ear, nose, throat, plastic, neurosurgery, and cardiovascular. Pediatric and geriatric surgery; diagnostic procedures; radiaiton therapy; plaster casts; treatment of burns; and special instruments and equipment. Clinical rotation with more advanced scrubbing experience.

## SUR 1128 Surgical Specialties and

 Clinical Practice III 4 0 21Continuation of SUR 1127 with emphasis on advanced surgical procedures. Also includes case studies and seminars. Provides mostly clinical applications with operating room call experience.

SUR 1130 Review of Surgical Technology $\quad 3 \quad 0 \quad 0 \quad 3$
Complete review of all subject matter covered in the Surgical Technology program in preparation for taking the national certifying exam.

|  |  | Clinical/Cred |  |  |  |
| :--- | :--- | :---: | :---: | :---: | :---: |
| WELDING |  | Class | Lab | Shop | Hour |
| WLD | 120 | Oxyacetylene Welding | 2 | 0 | 3 |

Introduction to the history of oxyacetylene welding, the principles of welding and cutting, nomenclature of the equipment, and assembly of units. Welding procedures such as practice in puddling and carrying the puddle; running flat beads; butt welding in the flat, vertical, and overhead position; brazing; and hard and soft soldering. Safety procedures are stressed throughout the program of instruction in the use of tools and equipment. Students perform mechanical testing and inspection to determine quality of the welds.

WLD 121 Arc Welding | 2 | 0 | 6 | 4 |
| :--- | :--- | :--- | :--- | :--- |

Operation of AC transformers and DC motor generator arc welding units. Studies made of welding heats, polarities, and electrodes for use in joining various metal alloys by the arc welding process. After students are capable of running beads, they make butt and fillet welds in all positions, and test them in order to detect weaknesses in welding. Safety procedures are emphasized through the course in the use of tools and equipment.
Class Lab Clinical/Credit

WLD 122 Commercial and Industrial Practice

Prerequisites: WLD 120, 121
Designed to build skills through practice in simulated and actual industrial processes and techniques. Sketching and layout on paper of the size and shape description, listing the steps necessary to build the product, estimating time and material, and then actually following these directions to build the product. Emphasis is placed on maintenance, repairing work or broken parts by special welding applications, field welding, and nondestructive tests and inspection.

WLD 1102 Basic Gas Welding $\quad 0 \quad 0 \quad \mathbf{0} \quad 3 \quad 1$
Welding demonstrations by the instructor and practice by students in the welding shop. Safe and correct methods of assembling and operating the welding equipment. Practice will be given for suface welding, bronze welding, silver soldering, and flame cutting methods applicable to mechanical repair work.
WLD 1103 Basic Arc Welding $\quad 0 \quad 0 \quad 3 \quad 1$

Welding demonstrations by the instructor and practice by students in the use of the arc welding process to fabricate steel. Welded joints are discussed and welded in various positions. Care and maintenance of the arc welder are applied in this course.

## WLD 1104 Beginning Welding I $2 \quad 0 \quad 3 \quad 3$

Introduction to the history of oxacetylene and arc welding, the principles of welding and cutting, nomenclature of the equipment and assembly of unit. The operations of various AC transformers, AC and DC rectifiers, and DC motor generator arc welding units are introduced. Basic welding procedures are begun WLD 1104, 1105, and 1106 series is equivalent to the WLD 1141.

WLD 1105 Beginning Welding II
106
3
Prerequisite: WLD 1104
Continues the nomenclature and safe use of welding equipment and supplies. Welding procedures such as practice of puddling and carrying the puddle, running flatbeads, and butt welding in the flat, vertical, and overhead positions. WLD 1104, 1105 and 1106 series is equivalent to WLD 1141.

WLD 1106 Beginning Welding III $2 \begin{array}{lllll} & 0 & 6 & 4\end{array}$
Prerequisite: WLD 1105
Continues all the topics introduced in WLD 1104 and WLD 1105. Straight line cutting skills are developed. Safety is stressed. WLD 1104, 1105 and 1106 series is equivalent to WLD 1141.

WLD 1107 Intermediate Welding I $\quad 3 \quad 0 \quad 3 \quad 4$
A review of basic oxyacetylene cutting and welding, preparation of metals, types of joints, welding procedures and testing welds and the operation of AC transformer and DC motor generator arc welding machines. Studies are made of welding heats, polarities, and electrodes for use in joining various metal alloys by the arc welding processs. WLD 1107, 1108, and 1109 series is equivalent to WLD 1142.
Class Lab Shop Hours

| WLD 1108 | Intermediate Welding II | 1 | 0 | 6 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisites: WLD 1104, 1105, 1106, 1107
Continues the topics introduced in WLD 1107. Demonstrated competence in running beads permits student to do butt and fillet welds in all positions for testing in order that the student may detect weaknesses in welding. Safety procedures are stressed. WLD 1107, 1108, and 1109 series is equivalent to for WLD 1142.
WLD 1109 Intermediate Welding III 1

Continues topics of WLD 1107 and WLD 1108. Closely supervised practice enables student to acquire competence for progressing to next course. WLD 1107, 1108, and 1109 series is equivalent to and for WLD 1142.
$\begin{array}{llllll}\text { WLD } 1110 & \begin{array}{l}\text { Commercial and Industrial } \\ \text { Practice I }\end{array} & 1 & 0 & 6 & 3\end{array}$
Prerequisites: WLD 1104, 1105, 1106, 1107, 1108, 1109 or equivalents.
Designed to build skills through practice in simulated and actual industrial processes and techniques. Sketching and layout on paper of the size and shape description, listing the steps necessary to build the product and estimating time and material and then following these directions to build the product. WLD 1110 and 1111 series is equivalent to WLD 1122.

| WLD 1111 | Commercial and Industrial <br> Practice II | 2 | 0 | 3 | 3 |
| :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisites: WLD 1104, 1105, 1106, 1107, 1108, 1109, 1110 or equivalents.
Continues processes begun in WLD 1110. Emphasis placed on maintenance, repairing worn or broken parts by special welding applications, and field welding and nondestructive tests and inspection. Safety is stressed. WLD 1110 and WLD 1111 series is equivalent to WLD 1122.

WLD 1112 \begin{tabular}{l}
Mechaincal Testing and <br>
Inspection

$\quad 1$

\& 1 \& 0 \& 3 \& 2
\end{tabular}

Prerequisites: WLD 1141, 1142 or WLD 1120, 1121
Standard methods for mechanical testing of welds. Students are introduced to the various types of tests and testing procedures and perform the details of the test which give adequate information as to the quality of the weld. Types of tests covered are destructive and nondestructive.
$\begin{array}{llllll}\text { WLD } 1113 \text { Pipe Welding I } & 1 & 0 & 6 & 3\end{array}$
Prerequisites: WLD 1104, 1105, 1106, 1107, 1108, 1109
Designed to provide practice in the welding of pressure piping in the horizontal, vertical, and horizontal fixed position using shielded metal arc welding processes according to section VIII and IX of the A.S.M.E. code. Safety is stressed. WLD 1113 and WLD 1114 series is equivalent to WLD 1124.

## WLD 1114 Pipe Welding II

2064
Prerequisites: WLD 1104, 1105, 1106, 1107, 1108, 1109
Continues all the processes introduced in WLD 1113. WLD 1113 and WLD 1114 series is equivalent to WLD 1124.

WLD 1120 Oxacetylene Welding and $\begin{array}{llllll}\text { Cutting } & 3 & 0 & 12 & 7\end{array}$

Introduction to the history of oxyacetylene welding, the principles of welding and cutting, nomenclature of the equipment, and 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; and hard and soft soldering. Safety procedures are stressed throughout the program of instruction in the use of tools and equipment. Students perform mechanical testing and inspection to determine quality of the welds.
$\begin{array}{llllll}\text { WLD } & 1121 & \text { Arc Welding } & 3 & 0 & 12\end{array}$
Operation of AC transformers and DC motor generator arc welding units. Studies made of welding heats, polarities, and electrodes for use in joining various metal alloys by the arc welding process. After students are capable of running beads, they make butt and fillet welds in all positions, and test them in order to detect weaknesses in welding. Safety procedures are emphasized through the course in the use of tools and equipment.

## WLD 1122 Commercial and Industrial Practices

$30 \quad 9$
6
Prerequisites: WLD 1141, 1142 or WLD 1120, 1121
Designed to build skills through practices in simulated industrial processes and techniques; and sketching and laying out on paper the size and shape, description, listing the steps necessary to build the product, and then actually following these directions to build the product. Emphasis is placed on maintenance, repairing worn or broken parts by special welding applications, field welding, and nondestructive tests and inspection.

WLD 1123 Inert Gas Welding $1 \begin{array}{lllll}1 & 0 & 3 & 2\end{array}$
Prerequisites: WLD 1141, 1142 or WLD 1120, 1121
Introduction to and practical operations in inert-gas-shield arc welding. Study made of equipment, operation, safety, and practice in the various positions. Thorough study of such topics as principles of operation, shielding gases, filler rods, process variations and applications, and manual and automatic welding.

## WLD 1124 Pipe Welding

3012
7
Prerequisite: WLD 1121 or WLD 1142
Designed to provide practice in the welding of pressure piping in the horizontal, vertical, and horizontal fixed position using shielded metal arc welding processes according to Sections VIII and IX of the ASME code.

| WLD | 1125 | Certification Practices | 3 | 0 | 6 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisites: WLD 1120, 1121 or WLD 1123, 1124, 1141, 1142
Practice in welding the various materials to meet certification standards. Students use various tests including the guided bend and the tensile strength tests to check the quality of work. Emphasis placed on attaining skill in producing quality welds.


Various processes used for joining materials by welding discussed. Lecture, demonstrations, and practice cover the oxyacetylene and arc welding processes, filler metals used, gases, currents, and weldability of metals. Instruction is given in the setup and safe operation of oxyacetylene and arc welding apparatus. Students prepare joints both by hand and by machine cutting with the oxyacetylene torch.

## WLD 1138 Certification Practices I $\quad 2 \quad 0 \quad 3 \quad 3$

Prerequisites: WLD 1111, 1112, 1113, 1114, 1123
Course involves practices in welding the various materials to meet certification standards. Student uses various tests including the guided bend and the tensile strength tests to check the quality of his work. Emphasis is placed on attaining skills in producing quality welds. WLD 1138, 1139 series is equivalent to WLD 1125.

| WLD | 1139 | Certification Practices II | 1 | 0 | 3 | 2 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prerequisites: WLD 1111, 1112, 1113, 1114, 1123, 1138
Continues the practices introduced in WLD 1138. Emphasis is placed on attaining skills in producing quality welds. WLD 1138 and 1139 are equivalent to WLD 1125.

## WLD 1141 Beginning Welding $\quad 5 \quad 0 \quad 15 \quad 10$

introduction to the history of oxyacetylene and arc welding, the principles of welding and cutting, nomenclature of the equipment, and assembly of unit. Operation of various AC transformers, AC and DC rectifiers, and DC motor generator arc welding units. Welding procedures such as practice of puddling and carrying the puddle; running flat beads; butt welding in the flat, vertical, and overhead positions; and the cutting of straight lines with the torch. Safety procedures are stressed throughout the program of instruction.

| WLD | 1142 | Intermediate Welding | 5 | 0 | 15 | 10 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Review of basic oxyacetylene cutting and welding; preparation of metals, types of joints, welding procedures, and testing of welds. Operation of AC transformers and DC motor generator arc welding machines. Studies are made of welding heats, polarities, and test them to detect weaknesses in welding. Safety procedures are emphasized throughout the course.




NONPROFIT ORGANIZATION
U.S. POSTAGE PAID
Greenville, N.C.
Permit No. 299

## P.O. Drawer 7007

Highway 11 South
Greenville, North Carolina 27835-7007


[^0]:    ALL EXAMINATIONS MUST BE COMPLETED DURING THE FIRST 8 WEEKS OF EACH QUARTER. A STUDENT MAY NOT TAKE AN EXAMINATION FOR ADVANCED PLACEMENT MORE THAN ONCE FOR ANY ONE COURSE. All grades other than " $F$ " will be recorded on the student's permanent record.

