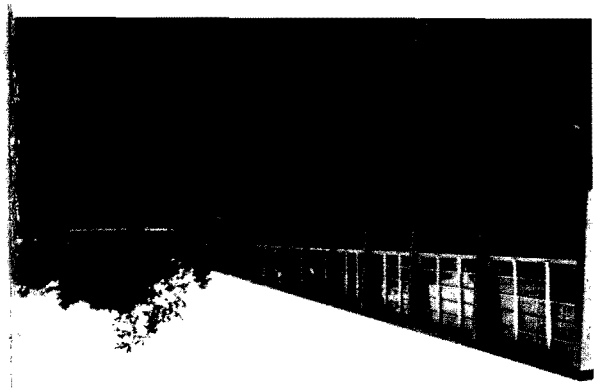
FAYETTEVILLE TECHNICAL INSTITUTE

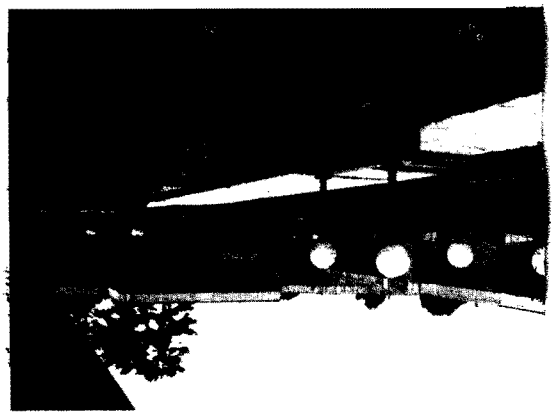
1980-83

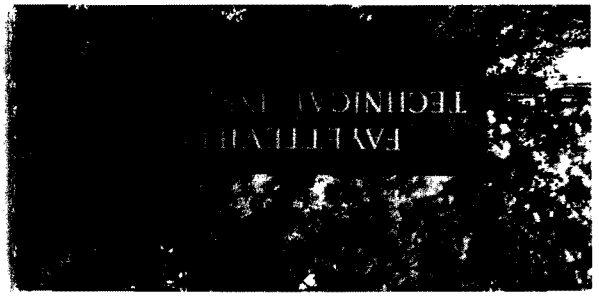
CATALOG

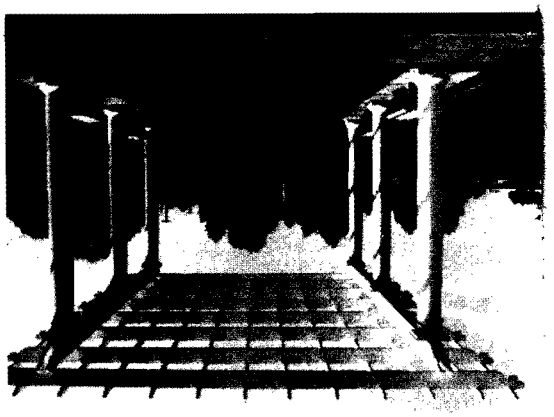
VOLUME VII

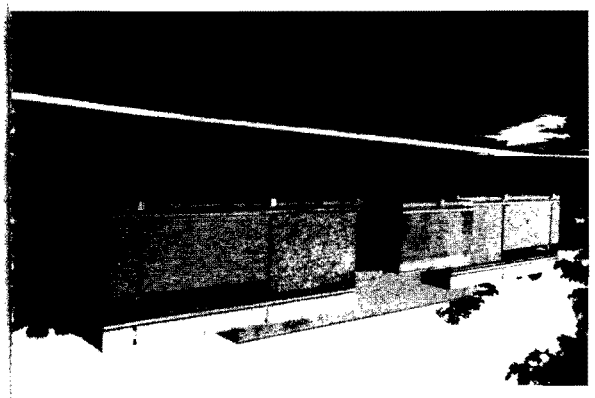
P.O. BOX 35236, FAYETTEVILLE, NORTH CAROLINA 28303
PHONE 323-1961

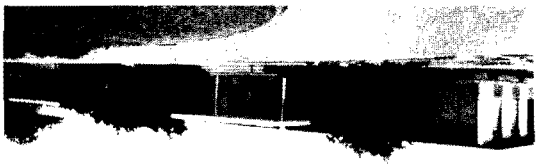












Greetings From The President

As we complete our second decade, it is fitting to reaffirm our commitment to present quality educational experiences for Fayetteville, Cumberland County, and the other areas served by FTI. Since our doors were first opened in 1961, the full-time curriculum student population has grown from 58 to 5,000. During this period of institutional growth, we have seen our physical facilities grow from a single building to a campus occupying 100 acres with thousands of feet of instructional area.

The sustained growth of FTI's curriculum offerings, students, faculty, and physical facilities has been made possible by the full cooperation and enthusiasm shared by the citizens of this area.

As we enter into our third decade of service, we pledge to accommodate the educational needs of our service area with a wide range of offerings: from skilled technology instruction to courses and programs satisfying the avocational wishes of the population we serve. We will continue to make a determined effort to meet the needs of this area and will continue to offer educational programs to accommodate the ever-changing and complex society in which we live and serve.

Howard E. Boudreau, President
Fayettville Technical Institute

TABLE OF CONTENTS

ACADEMIC CALENDAR 1980-81

Labor Day Holiday — September 1	
FALL QUARTER	
Registration for all students	September 2 & 3
Orientation for beginning and freshmen students	September 4
Classes begin	September 5
Last day to drop courses without penalty	September 11
Last day to request refund	September 15
End of 6 weeks	October 16
Register for Winter Quarter (No Classes)	2 days — to be announced
Last day of Fall Quarter	November 24
Schedule Correction and Late Registration for Winter Quarter	December 1
Thanksgiving Holidays — Nov. 27-30	
School resumes — December 1	
WINTER QUARTER	
Classes begin	December 2
Last day to drop courses without penalty	December 8
Last day to request refund	December 11
End of 6 weeks	January 26
Registration for Spring Quarter (No Classes)	2 days — to be announced
Last day of Winter Quarter	March 4
Schedule Correction and Late Registration for Spring Quarter	March 9
Christmas Holidays — Dec. 22-Jan. 4	
Last day of Classes — Dec. 19	
School resumes — January 5	
SPRING QUARTER	
Classes begin	March 10
Last day to drop courses without penalty	March 16
Last day to request refund	March 19
End of 6 weeks	April 21
Registration for Summer Quarter (No Classes)	1 day — to be announced
Last day of Spring Quarter	May 27
Graduation	May 29
Easter Holidays — April 18-20	
Last day of classes — April 17	
School resumes — April 21	

SUMMER QUARTER (1st Session)	
Registration for new students	May 29
Classes begin for Four-Quarter Students	May 29
Classes begin for Summer Quarter Students	June 1
Last day to drop classes without penalty	June 5
Last day of classes (First Session)	July 3
July 4th Holiday — July 6	
SUMMER QUARTER 2nd Session)	
Registration for new students	July 8
Classes begin for 2nd session	July 13
Last day to drop 2nd session	July 17
Last day of classes — Four Quarter Curricula	August 14
Last day of classes — 2nd session	August 14
Labor Day Holiday — September 7	

ACADEMIC CALENDAR 1981-82

FALL QUARTER	
Registration for all students	August 31 & Sept. 1
Orientation for beginning and freshmen students	September 2
Classes begin	September 3
Last day to drop courses without penalty	September 10
Last day to request refund	September 12
End of 6 weeks	October 15
Registration for Winter Quarter (No Classes)	2 days — to be announced
Last day of Fall Quarter	November 23
Schedule Correction and Late Registration for Winter Quarter	November 30
Thanksgiving Holidays — Nov. 26-29	
School resumes — November 30	
WINTER QUARTER	
Classes begin	December 1
Last day to drop courses without penalty	December 7
Last day to request refund	December 10
End of 6 weeks	January 21
Registration for Spring Quarter (No Classes)	2 days — to be announced
Last day of Winter Quarter	March 1
Schedule Correction and Late Registration for Spring Quarter	March 4
Christmas Holidays — December 23-Jan. 3	
Last day of classes — December 22	
School resumes — January 4	

SPRING QUARTER

Classes begin	March 5
Last day to drop courses without penalty	March 11
Last day to request refund	March 15
End of 6 weeks	April 16
Registration for Summer Quarter (No Classes)	1 day — to be announced
Last day of Spring Quarter	May 24
Graduation	May 27

SUMMER QUARTER (1st Session)

Registration for new students	May 28
Classes begin for Four-Quarter Students	May 26
Classes begin for Summer Quarter Students	May 31
Last day to drop classes without penalty	June 4
Last day of classes (First Session)	July 2
July 4th Holiday — July 5	

SUMMER QUARTER (2nd Session)

Registration for new students	July 9
Classes begin for 2nd session	July 12
Last day to drop 2nd session	July 16
Last day of classes — Four-Quarter Curricula	August 11
Last day of classes — 2nd session	August 13
Labor Day Holiday — September 6	

ACADEMIC CALENDAR 1982-83

FALL QUARTER

Registration for all students	August 30 & 31
Orientation for beginning and freshmen students	September 1
Classes begin	September 2
Last day to drop courses without penalty	September 9
Last day to request refund	September 11
End of 6 weeks	October 14
Registration for Winter Quarter (No Classes)	2 days — to be announced
Last day of Fall Quarter	November 22
Schedule Correction and Late Registration for Winter Quarter	November 29
Thanksgiving Holidays Nov. 25-28	
School resumes — November 29	

WINTER QUARTER

Classes begin	November 30
Last day to drop courses without penalty	December 6
Last day to request refund	December 9
End of 6 weeks	January 21

Registration for Spring Quarter (No Classes)	2 days — to be announced
Last day of Winter Quarter	March 1
Schedule Correction and Late Registration for Spring Quarter	March 4
Christmas Holidays — Dec. 22-Jan. 3	
Last day of classes — December 21	
School resumes — January 4	
SPRING QUARTER	
Classes begin	March 7
Last day to drop courses without penalty	March 9
Last day to request refund	March 16
End of 6 weeks	April 18
Registration for Summer Quarter (No Classes)	1 day — to be announced
Last day of Spring Quarter	May 24
Graduation	May 26
Easter Holiday — April 4	
Last day of classes — April 1	
School resumes — April 5	
SUMMER QUARTER (1st session)	
Registration for new students	May 27
Classes begin for Four-Quarter Students	May 26
Classes begin for Summer Quarter Students	May 30
Last day to drop classes without penalty	June 3
Last day of classes (1st session)	July 1
July 4th Holiday — July 4	
SUMMER QUARTER 2nd Session)	
Registration for new students	July 7
Classes begin for 2nd session	July 11
Last day to drop 2nd session	July 15
Last day of classes — Four Quarter Curricula	August 11
Last day of classes — 2nd session	August 12

FAYETTEVILLE TECHNICAL INSTITUTE

BOARD OF TRUSTEES

Harry F. Shaw, Chairman
Thomas Council, Vice-Chairman
Howard L. Hall, Secretary

APPOINTMENTS

Name	Expiration Date	Appointed By
Roscoe L. Blue	June 30, 1981	Board of County Commissioners
Steve R. Satisky	June 30, 1983	Board of County Commissioners
William C. Beard, Jr.	June 30, 1985	Board of County Commissioners
Jimmy Harvey	June 30, 1987	Board of County Commissioners
Lura S. Talley	June 30, 1981	City and County School Boards
Howard L. Hall	June 30, 1983	City and County School Boards
Thomas Council	June 30, 1985	City and County School Boards
Thornton W. Rose	June 30, 1987	City and County School Boards
David G. Wilson	June 30, 1981	Governor
Bruce R. Pulliam	June 30, 1983	Governor
Harry F. Shaw	June 30, 1985	Governor
Mary Ann McCoy	June 30, 1987	Governor

ATTORNEY

L. Stacy Weaver, Jr.

ADMINISTRATIVE STAFF & FACULTY

Howard E. Boudreau ..... B.S., M.Ed., Colorado State University
President

Marcellus W. Bounds ..... B.S., United States Military Academy, West Point
Administrative Assistant to the President: Security and Plant

William E. Sease ..... B.S., M.Ed., Virginia Polytechnic Institute
Vice President for Academic Affairs — Doctoral Study, North Carolina State University

William P. Standley ..... CWO (AGC) Ret., San Francisco State University
Dean of Fiscal Affairs

Thaddeus Sexton, Jr. ..... B.S., M.Ed., North Carolina State University
Dean of Adult and Continuing Education

William O. Cameron ..... B.S., M.Ed., North Carolina State University
Dean of Instruction — Doctoral Study — North Carolina State University

Niles E. Compton, Sr. ..... B.S., M.Ed., University of Florida
Dean of Student Affairs

John E. McDaniels ..... B.A., M.A., Central Michigan University
Personnel Officer

Arthur T. Cavano ..... A.B., M.A., Ph.D., University of North Carolina-Chapel Hill
Associate Dean of Instruction: General Education

Linwood W. Powell ..... B.S., M.Ed., Ed.D., Nova University
Associate Dean of Instruction: Occupational Education

Betty J. Williamson ..... B.S., M.A., East Carolina University
Associate Dean of Instruction: Learning Resources Center

Herbert B. Ayers, Jr. ..... B.S., M.Ed., Ed.D., University of Florida
Associate Dean of Student Affairs

Raymond E. Parker ..... B.S., University of North Carolina-Chapel Hill
Associate Dean of Fiscal Affairs

Robert L. Carter ..... B.S., M.B.A., University of North Carolina-Chapel Hill, Certified Public Accountant
Assistant to the Dean of Instruction

Charles O. Plummer ..... B.B.A., M.A., Webster College
Director of Instruction (Night School) and Director of Off-Campus Curricula Programs

William L. Bryant ..... B.S., M.A., North Carolina State University
Coordinator, Evening Curriculum Program

John T. Fernald ..... A.B., M.Ed., Ed.D., Nova University
Director of Admissions

Helen C. Winstead ..... B.S., M.Ed., Ed.D., Nova University
Director of Counseling Services

Ernest G. Fulghum ..... B.A., M.Ed., East Carolina University
Director of Student Services-Off-Campus

Alvin R. Pierce ..... B.S., M.S., North Carolina A & T University
Director of Student Activities

Ronald L. Miriello ..... B.S., M.A., Appalachian State University
Director of Veterans' Services

Eli Anderson ..... B.S., M.Ed., North Carolina College
Director of General Adult Education

Charles E. Koonce ..... B.S., M.Ed., North Carolina State University
Director of Occupational Extension Education

Charles G. Smith ..... B.S., M.Ed., North Carolina State University
Director of Extension Education

Emory H. Thigpen ..... Burlington Technical Education Center, Central Piedmont Community College
Director of Computer Center

Adult Continuing Education

Terry R. Holloway
Coordinator — Emergency Services Education

Frances H. Snow ..... B.S., M.S., East Carolina University
Coordinator — Arts & Crafts, Home Economics, & Gerontology

Robert A. Massey, Jr. ..... B.S., M.A., Catholic University of America
Coordinator, High School Diploma Program

Derrell H. Hudgins ..... B.A., Norfolk State College
HRD Recruiter/Job Attitude Training

Barbara J. Massey ..... B.S., Fayetteville State University
HRD Recruiter/Academic

Visiting Artist

Stephen Hunter ..... B.M., M.M., University of North Carolina-Greensboro,
Pianist Doctoral Study — North Texas State University

Student Affairs

Sheila Locklear ..... Fayetteville Technical Institute
Registrar

Barbara L. Boyd ..... B.S., M.A., North Carolina State University
Counselor

Valeria A. Collins ..... B.S., M.S., Troy State University
Counselor

Niles E. Compton, Jr. ..... A.A.S., Fayeteville Technical Institute
Veterans Recruiter/Counselor

John M. Duncan ..... B.A., M. Div., M. Ed., University of North
Counselor Carolina-Greensboro

Richard K. Folsom ..... B.A., M.Ed., East Carolina University
Recruiter/Job Placement Coordinator

Tommie R. Graves ..... B.A., M.A., East Carolina University
Counselor

Kenneth F. Hoehn ..... A.A.S., B.A., Shaw University
Testing Coordinator

Winfred King ..... A.A.S., Fayetteville Technical Institute
Financial Aid Coordinator

Frank R. Pomponi ..... B.A., Fayetteville State University
Veterans Recruiter/Counselor

George E. Pope ..... B.S., M.A., Appalachian State University
Counselor

Leonard Shaw ..... A.A.S., B.S., Fayetteville State University
Recruiter

Eddie S. Smith ..... B.S., M.A., Ed.S., University of
Counselor North Carolina-Greensboro

Catherine B. Tilghman ..... B.A., M.A., Wake Forest University
Counselor

M. Ben Watson ..... B.A., M.A., Appalachian State University
Counselor

John W. Wheelous ..... B.S., M.A., Appalachian State University
Counselor

Kathryn E. Woltz ..... B.A., M.A., Appalachian State University
Counselor

Learning Resources Center

Susan S. Rose ..... B.A., M.L.S., University of North Carolina-Chapel Hill
Librarian

Barbara S. Cochran ..... B.A., M.L.S., Villanova University
Assistant Librarian

Dominic Nghiep Cong Bui ..... B.A., M.L.S., East Carolina University
Assistant Librarian

Joanne B. Ryan ..... B.S., Southwest Missouri State College
Library Technical Assistant

William D. Singleton... Caldwell Technical Institute and Community College
Library Assistant

Dorothy Walker ..... Fayetteville Technical Institute
Library Technician

Larry E. Wolfe ..... A. A.S., Central Piedmont Community College
Media Services Director

Nanette Nelson ..... B.A., M.A., University of Florida
Materials Production Supervisor

Jonathan Pearlman ..... B.A., University of Florida
Production Technician

Kymet N. Smith ..... Fayetteville Technical Institute
Audio Visual Technician

Betty Wiggins ..... East Carolina University
Audio Visual Technician

Willard Justice ..... Fayetteville Technical Institute
Audio Visual Technician

Patricia H. Nunalee ..... B.S., East Carolina University, graduate study,
Learning Lab Coordinator North Carolina State University, Appalachian State University

Patricia L. Carter ..... B.S., Campbell College
Learning Lab Assistant

Flora G. Dunham ..... B.S., Indiana University
Learning Lab Assistant

Jan L. Folsom ..... B.S., East Carolina University
Learning Lab Assistant

Carolyn Freeman ..... B.S., Flora McDonald College, graduate study,
Learning Lab Assistant Columbia University

Willisteen D. Hall ..... B.A., Methodist College
Learning Lab Assistant

Annette Hornsby..... B.S., Methodist College
Learning Lab Assistant

Nell P. Mayville..... R.N., Highsmith Hospital School of Nursing
Learning Lab Assistant

Betty L. Ward..... Fayetteville Technical Institute
Learning Lab Assistant

Computer Center

Terry Plummer..... A.A.S., Fayetteville Technical Institute
Program Manager

Paul Cash..... A.A.S., Fayetteville Technical Institute
Programmer

Donnie Mize..... Raleigh School of Data Processing
Lead Computer Operator

Audrey B. Gray..... Carolina School of Business Administration
Keypunch Operator

Dovelynn L. Valenzuela .... Heald Business College, Fayetteville Technical Institute
Keypunch Operator

FACULTY

Business Education Division

Ester Arne..... B.S., M.B.A., New York University
Business Administration

Gloria D. Barber..... B.S., M.B.A., Winthrop College
Business Administration

Johnny L. Blackwell..... B.S., M.B.A., Bradley University
Business Administration

Brenda Britt..... A.S., B.A., M.S., University of North Carolina-Greensboro
Business Administration

Helen Cheng.....B.S., Shih Chien Home Economics College, China Data Processing Institute
Electronic Data Processing

Walter R. Coker..... B.S., M.B.A., Syracuse University
Business Administration

Walter McD. Croom..... B.S., M.Ed., Ed.D., North Carolina State University
Chairperson, Agricultural Business Technology

Howell A. Dennis..... B.S., M.S., University of Pittsburgh Professional Engineer
Chairperson, Electronic Data Processing

Richard E. Esslinger..... B.S., M.B.A., University of Utah
Chairperson, Industrial Management

Thomas J. Hall ..... B.S., M.B.A., University of North Carolina-Chapel Hill
Chairperson, Life Insurance Technology — Chartered Left Underwriter

William T. Hall, Sr. ..... B.S., M.B.A., East Carolina University
Accounting

Karen Hite ..... B.S., M.B.A., University of North Carolina-Chapel Hill
Business Administration

Linwood T. Holt ..... B.S.C., Benjamin Franklin University
Accounting — Certified Public Accountant

Armah Jahtaniah ..... B.A., M.B.A., Adelphi University
Banking & Finance

Richard C. Jarvies ..... B.S., Fordham University
Chairperson, Accounting — Certified Public Accountant

Dickey V. Jones ..... B.S., M.Ed., University of North Carolina-Chapel Hill
Secretarial Science

L. Dwain Joyce ..... B.S., M.Ed., University of North Carolina-Chapel Hill
Secretarial Science

Linda-Rose Lee ..... B.A., M.A., Appalachian State University
Chairperson, Secretarial Science

Steve E. Medlin ..... B.S., M.B.A., East Carolina University
Business Administration

Carolyn W. Nails ..... B.S., M.S., North Carolina Central University
Secretarial Science

Charles M. Oldham ..... B.S., M.B.A., East Carolina University
Chairperson, Marketing & Retailing

Jean F. Raines ..... B.B.A., M.S., Georgia Institute of Technology
Accounting

Robert J. Ralph ..... B.S., M.S., University of Akron
Electronic Data Processing

Robert R. Sherman ..... B.S., M.S., Michigan State University
Horticulture Business Technology

Jimmy B. Simpson ..... B.S., M.B.A., University of Utah
Chairperson, Business Administration

James A. Sinclair .. B.A., M.B.A., University of North Carolina-Chapel Hill
Chairperson, Banking & Finance

John F. Streit, Jr. ..... B.G.E., M.S., University of Utah
Chairperson, Real Estate

Margene Sunderland ..... B.A., M.S., Central Michigan University
Business Administration

Robert H. Sutton ..... A.B., Elon College
Electronic Data Processing — Graduate Study, North Carolina State University

Houston B. Warren ..... B.S., M.A., East Carolina University
Agriculture Business

Doris F. Wilson ..... B.S., M.Ed., Tennessee State University
Secretarial Science

Hilda C. Wilson .... B.A., M.Ed., University of North Carolina-Greensboro
Secretarial Science

Engineering Technology Education Division

Granville C. Byrd, Jr. ..... B.S., M.S., Rochester Institute of Technology
Electronics Engineering

Bethel H. Davis ..... B.S., North Carolina State University
Civil Engineering — Registered Land Surveyor

Phillip M. Deese ..... North Carolina State University
Drafting

Gordon L. Dwiggins ..... B.S., M.S., University of North Carolina-Chapel Hill, Professional Engineer,
Chairperson, Environmental Engineering — Water Treatment Facility Operator

William E. Hancock ..... B.B.E., B.S., M.A., East Tennessee State College
Chairperson, Drafting — Certified Manufacturing Engineer

John S. Jamison, Jr..... B.S., M.S., University of Pittsburgh
Chairperson, Electronics Engineering

Alton B. King..... B.S., M.S., Ph.D., Utah State University
Chairperson, Civil Engineering

Eugene H. Shannon ..... B.S., M.S., University of North Carolina-Chapel Hill, Certified Wastewater
Environmental Engineering — Treatment Plant Operator & Water Treatment Facility Operator

General Education Division

Murphy A. Alexander ..... B.A., M.A., University of North Carolina-Chapel Hill
English

Geraldine I. Arnold..... B.A., M.Ed., North Carolina State University
Biology — Registered Nurse

Ann N. Ashford..... B.A., M.A.T., Duke University
Developmental English

Janice A. Blum ..... B.S., M.S., North Carolina State University
Biology

Clarence H. Cannady..... B.S., M.M., University of South Carolina
Mathematics

Thomas P. Coyne..... B.A., M.S., Ed.D., Nova University
Social Science

Walter C. Craver ..... B.S., M.A., Appalachian State University
Social Science

Betty G. Davis..... B.S., M.A., East Carolina University
English

Edwina A. Evans.... B.S., M.Ed., University of North Carolina-Chapel Hill
Social Science

Joseph H. Foerch, Jr. ..... B.A., M.Ed., North Carolina State University
Chairperson, Social Science

Sandra A. Gillikin ..... B.A., M.A., East Carolina University
English

Glenn T. Godwin ..... B.S., M.A., East Carolina University
Biology

Mamie L. Griffin..... B.A., M.S., North Carolina A & T University
Developmental English

Calton G. Hall..... B.S., M.A.E., East Carolina University
Physics

Sulo H. Heikkinen..... B.A., M.S., North Carolina State University
Social Science Doctoral Study — North Carolina State University

Wallace L. Jernigan..... A.B., M.A.T., University of North Carolina
Mathematics

Larry T. Jones..... B.S., M.A., East Carolina University
Mathematics

ViJay S. Joshi..... B.S., M.S., Ph.D., Gujaret University
Physics

Thomas R. Koballa..... B.A., M.Ed., North Carolina State University
Social Science

Joseph A. McCulloch ..... B.S., M.Ed., North Carolina State University
Mathematics

Michael D. McLaurin ..... B.S., M.A.T., Duke University
Chairperson, Mathematics

Wayne D. McNeely ..... B.S., M.A., Appalachian State University
English

Loretta Monk ..... B.S., M.M., Utah State University-Logan
Mathematics

Anne R. Moore ..... B.A., M.A., Ed.D., North Carolina State University
Social Science

Robin L. Morrison ..... B.S., M.A., East Carolina University
Physics/Chemistry

Eleanor H. Ninestein ..... B.A., M.A., Duke University
Mathematics

Charles M. Norris..... B.S., M.A.C.T., University of North Carolina-
Social Science Chapel Hill

Larry B. Norris ..... B.A., M.A., Ed.D., North Carolina State University
Chairperson, English

Pamolu E. Oldham ..... B.A., M.F.A., Columbia University
English

Ronald D. Orban ..... B.A., M.S., Stephen F. Austin State University
Mathematics

Sylvia T. Pierce .. A.A., A.B., M.A., University of North Carolina-Charlotte
Developmental English

Marsha M. Ralph..... B.A., M.Ed., Campbell University
Mathematics

Janet L. Rufty..... A.B., M.A., Appalachian State University
English

Margaret B. Russ ..... B.A., M.A., North Carolina State University
English

Frederick C. Salter..... B.S., M.A., East Carolina University
English

Lonnie G. Smith..... B.S., M.A., Appalachian State University
Developmental English

T. Patrick Stephenson..... B.A., M.A., East Carolina University
Chairperson, Biology

Susan P. Varner ..... B.S., M.A., University of North Carolina-Greensboro
Mathematics

Jesse B. Waters..... A.B., M.S., College of William & Mary
Physics

Robert E. West ..... B.S., Pembroke State University
Mathematics Graduate Study — University of North Carolina-Greensboro

Floyd D. Whitehead ..... B.S., M.Ed., Tufts University
Social Science Doctoral Study — Duke University

Daphne M. Williams ..... B.S., M.A., Appalachian State University
Developmental English

Christine W. Womble ..... B.S., Fayetteville State University
Developmental Studies Graduate Study — East Carolina University

Eugene Wood ..... B.S., M.S., North Carolina A & T University
Chairperson, Developmental Studies

Health Occupations Education Division

Elise Beall..... B.S., University of North Carolina-Chapel Hill
Dental Assisting

Sandra Beck ..... A.A.S., B.S., M.S., Boston University
Dental Hygienist Goldman School of Graduate Dentistry
Registered Dental Hygienist

Carol M. Bushong..... A.A.S., B.S., University of North Carolina-
Dental Hygiené Chapel Hill, Registered Dental Hygienist

Evelyn Ellzey ..... B.S., Atlantic Christian College
Associate Degree Nursing — Registered Nurse

Fern B. Fuller ..... B.S.N., University of South Carolina
Chairperson, Respiratory Therapy — Registered Nurse

Mary Jane Gentry ..... B.S., University of Nebraska Medical School
Chairperson, Radiologic — Certified Radiologic Technologist

Eileen G. Hoehn ..... B.S., Pembroke State University
Dental Hygiene — Certified Dental Hygienist

Sue S. Huddleston ..... Certificate in Dental Assisting, University of
Chairperson, Dental Assisting — North Carolina-Chapel Hill
Certified Dental Assistant

Mary G. James ..... B.S.N., M.Ed., North Carolina State University
Associate Degree Nursing — Registered Nurse

Doris S. Johnson ..... B.S.N., M.S.N., Medical College of Georgia
Associate Degree Nursing — Registered Nurse

Charlotte Jordan ..... Highsmith Rainey Memorial Hospital
Chairperson, Nursing Assistant — Registered Nurse

Eileen F. Joyner ..... B.S., M.Ed., North Carolina State University
Associate Degree Nursing — Registered Nurse

Bonnie Layne ..... B.S., Fayetteville State University
Licensed Practical Nurse — Registered Nurse

Ada M. Leonard ..... B.S., M.Ed., North Carolina State University
Chairperson, Practical Nurse — Registered Nurse

Patricia M. Ludwig ..... B.S., University of Connecticut
Physical Therapy — Licensed Physical Therapist

Evelyn Lyons-Larsen ..... B.S., M.S., Boston College
Associate Degree Nursing — Registered Nurse

Eleanor L. McGinnis ..... A.A.S., B.S., East Carolina University
Associate Degree Nursing — Registered Nurse

Linda A. Mitchell ..... B.S.N., North East Missouri State University
Associate Degree Nursing — Registered Nurse

Mercedes O'Hale ..... B.S.N., M.S.N., University of Chicago
Chairperson, Associate Degree Nursing — Registered Nurse

Judith Pace ..... B.S.N., University of North Carolina-Chapel Hill
Associate Degree Nursing — Registered Nurse

Ethelyn O. Page ..... Highsmith Rainey Memorial Hospital School of
Chairperson, Surgical — Nursing, Undergraduate work — East Carolina
University
Registered Nurse

Mary Lou Suddath ..... B.A., M.S., Western Reserve University
Chairperson, Physical Therapy — Certified Physical Therapist

Robert J. Timbers ..... A.A.S., B.S., Southern Illinois University
Dental Hygiene

Lettie R. Vinson ..... A.A.S., Fayetteville Technical Institute
Radiologic — Certificate in Radiologic Technology, University of North Carolina-Chapel Hill
Registered Technologist

Kathy Weeks ..... B.S.N., M.S.N., University of North Carolina-Greensboro
Associate Degree Nursing — Registered Nurse

John W. Williford ..... A.B., B.S., D.D.S., M.S.D., Indiana University
Chairperson, Dental Hygiene

Connie B. Wolfe ..... B.S.N., M.Ed., North Carolina State University
Associate Degree Nursing — Registered Nurse

Public Service Education Division

Melinda K. Atwood ..... B.S., East Carolina University
Food Service

Jinx A. Averitte ..... B.S., M.Ed., Colorado State University
Recreation Associate

Fred J. Baker..... B.A., Jacksonville State University
Funeral Service Education — Certificate, Kentucky School of Mortuary Science
Licensed Funeral Director and Embalmer
Licensed Funeral Service Practitioner

Darl H. Champion ..... B.A., M.S., University of South Carolina
Law Enforcement/Criminal Justice

Carol D. Dickey ..... B.A., J.D., University of North Carolina-Chapel Hill
Paralegal

William L. Eanes, Jr. ..... B.S., M.A.E., East Carolina University
Recreation Associate

Franz J. Grebner ..... B.A., M.Ed., St. Thomas College
Chairperson, Law Enforcement/Criminal Justice

Melvin G. Hartley..... B.A., J.D., University of Tennessee
Chairperson, Paralegal

Stanley T. Hord ..... B.S., M.S., University of Tennessee
Chairperson, Food Service Management

John R. Lifsey..... B.S., Middle Tennessee State University
Chairperson, Funeral Service — Certificate, John A. Gupton College
Licensed Funeral Director/Embalmer
Licensed Funeral Service Practitioner

James A. New..... B.S., Campbell College
Law Enforcement/Criminal Justice

John W. Smith ..... B.S., M.Ed., University of North Carolina-Chapel Hill
Chairperson, Recreation Associate

Vocational Education Division

Charles A. Bell ..... North Carolina State University
Chairperson, Architectural Drafting — East Carolina University

Edwin E. Core ..... Master Plumber
Plumbing

Steven C. Core ..... Diploma, Fayetteville Technical Institute
Automotive Mechanics — Certified by the National Institute for Automotive Service Excellence

Herman W. Dunn ..... A.A.S., Fayetteville Technical Institute
Air Conditioning & Refrigeration — Licensed N.C. Air Conditioning & Refrigeraton and Heating Contractor

DeWayne E. Fields ..... B.S., University of Toledo
Carpentry

Merland F. Francis..... Diploma, Fayetteville Technical Institute
Welding

Hubert Hall ..... Master Carpentry
Carpentry — Diploma, Fayetteville Technical Institute

Denise H. Herring..... B.A., Scripps College
Commercial Art

Thomas P. Holden ..... A.A.S., B.B.A., Campbell University
Chairperson, Recreation Vehicle and Equipment Repair

Sara S. Hood ..... A.A., Peace College
Architectural Drafting — Diploma, Fayetteville Technical Institute

George W. Jeffreys..... Licensed Electrical Contractor
Chairperson, Electrical Installation and Maintenance — Licensed Plumbing & Heating Contractor

Forest E. Jernigan ..... A.B., Atlantic Christian College
Chairperson, Plumbing

Frank M. McDonald ..... Master Mechanic — Certified by the National
Chairperson, Automotive Mechanics — Institute for Automotive Service Excellence

Edmund E. Nute..... A.A.S., Fayetteville Technical Institute
Automotive Mechanics — Certified by the National Institute for Automotive Service Excellence

Bobby W. Perkins ..... Diploma, Fayetteville Technical Institute
Automotive Mechanics — Certified by the National Institute for Automotive Service Excellence

Bernard L. Pittman..... Master Brickmason
Chairperson, Masonry

James B. Pittman ..... A.A.S., Fayetteville Technical Institute
Chairperson, Machine Shop — Certified Manufacturing Engineer

Hollis D. Richardson ..... Master Electrician
Electrical Installation and Maintenance

Paul B. Sharpe, Jr..... Diploma, Danville Technical Institute
Chairperson, Air Conditioning and Refrigeration — A.A.S., Fayetteville Technical Institute
Licensed Air Conditioning & Heating Contractor
Licensed Refrigeration Contractor

Donald G. Steen ..... Master Brickmason
Masonry

Lorimer P. Thomas..... Master Machinist
Chairperson, Tool & Die — Undergraduate Study — North Carolina State University

Ronald G. Wilson ...B.Ed., B.A., University of North Carolina-Chapel Hill
Architectural Drafting

OFFICE AND GENERAL STAFF

Cathy Barefoot ..... Secretary-Student Affairs
Linda Bass ..... Property Clerk
Sarah Bradshaw..... Secretary to the Associate Dean of Instruction: Learning Resources Center
Glenda Brooks ..... Library Clerk
Brenda Byrd ..... Secretary to the Dean of Fiscal Affairs
Gerri Campbell..... Accounting Clerk/Accounts Payable
Donna Canning ..... Faculty Secretary
Marsha Cantrell ..... Faculty Secretary
Jacqueline Capps..... Secretary-Associate Degree Nursing
Karen Carlton..... Secretary-Financial Aid
Belva Jean Cherry ..... Secretary-Student Affairs
Mitzi Collins ..... Faculty Secretary
June Cooke..... Secretary to the Director of Ocupational Extension Education

Wanda Dail..... Secretary to the Associate Dean of Instruction: Occupational Education

Celeste DePriest ..... Secretary/Control Clerk-Computer Center
Jean Dobrin ..... Secretary-Adult Education
Peggie Drake..... Secretary to the Administrative Assistant to the President
Sharon Eason..... Secretary to the Director of Extension Education
Kathy England..... Secretary to the President
Nancy Fields..... Faculty Secretary
Mary Sue Hall..... Secretary to the Dean of Adult Continuing Education
Melinda Hall ..... Faculty Secretary
Ruth Hankins..... Secretary to the Dean of Student Affairs
Linda Hawley ..... Secretary to the Associate Dean of Instruction: General Education
Anna Horne..... Registration Clerk-Adult Education
Audrey Huttner ..... Purchasing Accounting Clerk
Linda Jackson..... Accounting Clerk/Student Accounts
Gloria Johnson..... Accounting Clerk
Linda Jones..... Accounting Clerk/Student Accounts
Mary Jones ..... Secretary to the Director of General Adult Education
Sandra Klinger..... Purchasing Accounting Clerk
Glynda Lawrence ..... Registration/Records Clerk-Adult Education
Doreen Leger..... Secretary to the Vice President for Academic Affairs
Sue Maynard..... Secretary-Registrar's Office
Mary Ann McBennett ..... Secretary-Student Affairs
Virginia McBride ..... Faculty Secretary
Cathy McLaurin ..... Switchboard Operator
Ella McMillan ..... Secretary to the Coordinator, Extension Programs/ Fort Bragg
Sandra McMillan ..... Secretary-Veterans' Affairs
Katherine McQueen..... Faculty Secretary
Betty Melvin ..... Cashier

Janet Melvin ..... Chief Accounting Clerk/Financial Aid
Dorothy Miller ..... Secretary to the Director of Instruction (Night School)
Linda Miller ..... Mail Clerk/Relief Switchboard Operator
Mary Mitchell ..... Clerical-Veterans' Affairs
Faye Patrick ..... Receptionist-Student Affairs
Jane Patrick ..... Switchboard Operator-Student Affairs
Jane Pfeffer ..... Faculty Secretary
Debbie Ratley ..... Secretary to the Registrar
Jill Russell ..... Secretary to the Coordinator, Occupational Extension Education: Fort Bragg
Judy Sanders ..... Secretary to the Personnel Officer
Debra Ann Smith ..... Faculty Secretary
Betty Shackelford ..... Secretary to the Dean of Instruction
Carolyn Shaw ..... Bookkeeper
Kayleen Simmons ..... Secretary-Student Affairs
Annette Smith ..... Supervisor, Machine Operator
Phyllis Smotherson ..... Secretary to the Coordinator, High School Diploma Program: Fort Bragg
Peggy Snow ..... Accounting Clerk
Wanda Strassenburg ..... Secretary to the Associate Dean of Student Affairs
Mildred Twisdale ..... Secretary-Student Affairs
Suzanne Whetsell ..... Accounting Machine Operator
Brenda Williams ..... Clerical-Student Affairs
Ruby Williams ..... Faculty Secretary

Auxiliary Services

Tommy H. Byrd ..... Printing Department Supervisor
Donald R. Hutchinson ..... Printer/Duplicator Operator
Tony Adcox ..... Printer/Duplicator Operator
Tammie Knight ..... Layout Department
Jimmy H. Taylor ..... Equipment Coordinator
Miles T. Owen ..... Warehouseman
Floyd M. Bryant ..... Mail Clerk
Luther Brewer ..... Security Supervisor
Don Estes ..... Food Service Director
Dan Rogers ..... Bookstore Manager
Al Ford ..... Custodial Supervisor
Orville O. Gravley ..... Maintenance Supervisor
Richard I. Payne ..... Maintenance Technician
Sanford Cain ..... Facilities Engineer

HISTORY

Fayetteville Technical Institute originated in 1961 as the Fayetteville Area Industrial Education Center under the auspices of the City Board of Education. In 1963, the North Carolina General Assembly created the Department of Community Colleges for the expressed purpose of providing for the establishment, organization, and administration of a system of educational institutions throughout the State offering courses of instruction in one or more of the general areas of two-year college parallel, technical, vocational, and adult education programs. The authority for this newly created department was vested in the North Carolina State Board of Education. The Center became a part of this system at that time.

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

The original Building, now LaFayette Hall, consisted of approximately 38,000 square feet of classroom and laboratory areas, and the campus consisted of 10 acres. In 1965, the Board of Trustees acquired an additional 43 acres adjoining this property. It was at this time that a master plan was developed for the utilization of the 53-acre campus.

Several renovations and two major constructions on our campus increased the physical facilities from 38,000 square feet to a net assignable footage of 192,873 square feet.

In June, 1976, the Institute obtained title to thirty-eight acres of land and a 90,000 square-foot building immediately adjacent to the present campus. This land, deeded to FTI by the Fayetteville City School System, and the building (formerly a Junior High school in that system) became available for occupancy in the 1977-78 school year when the city schools completed construction of a new Middle School complex.

PURPOSE

The purpose of Fayetteville Technical Institute is to provide a specialized occupational education and general education to fulfill the needs of society and to provide for the fullest possible development of the potential of students so that they may attain effective citizenship.

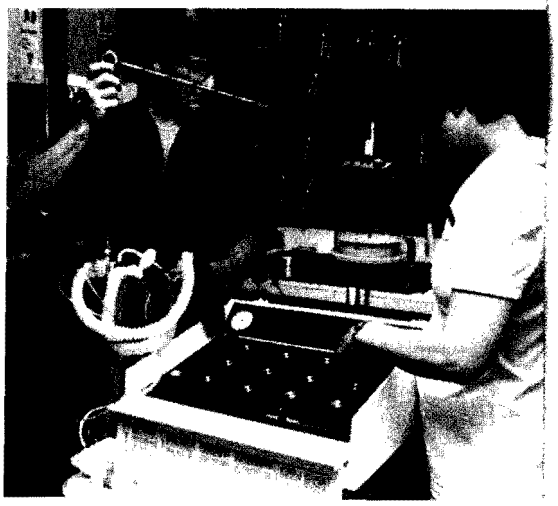
To accomplish this purpose, offerings and programs are designed to meet the various interests and aptitudes of all prospective students. Curricula programs are designed to produce highly skilled personnel to meet the needs of the expanding advances in general education, industry, business, health, and public service occupations. These programs also provide the base upon which to build further formal or informal education and strengthen the general educational base of our society.

NONDISCRIMINATION STATEMENT

Fayetteville Technical Institute is dedicated to equality of opportunity within its community. Accordingly, Fayetteville Technical Institute does not practice nor condone discrimination, in any form, against students, employees, or applicants on the grounds of race, color, national origin, religion, sex, age, or handicap. Fayetteville Technical Institute commits itself to positive action to secure equal opportunity regardless of those characteristics.

Fayetteville Technical Institute supports the protection available to members of its community under all applicable Federal laws, including Titles VI and VII of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Sections 799A and 845 of the Public Health Service Act, the Equal Pay and Age Discrimination Acts, the Rehabilitation Act of 1973, and Executive Order 11246.

For information concerning these provisions, contact:
John E. McDaniels
Affirmative Action Officer/Personnel Officer
P.O. Box 35236
Fayetteville Technical Institute
Fayetteville, N.C. 28303



CURRICULUM GROUPINGS

To accomplish the Institute's purpose, the major areas of general and specialized education are presented within instructional Divisions which group related courses according to discipline, instructional orientation, and focus. The major divisions are: (1) Business Occupation Education, (2) Engineering Technology Education, (3) General Education, (4) Health Occupational Education, (5) Public Service Occupational Education, and (6) Vocational Occupational Education

A. **Business Education** — Specialized training for entry into positions such as (a) management and sales, (b) accounting, and (c) secretarial science in the technical and executive fields. Elements of training common to all business occupations such as communicative skills, economics, and business law are included plus specialized business subjects such as accounting, business management, business finance, and data processing.

   The curricula and instructional concentration in this Division are in the following instructional departments:

   Accounting
   Agricultural Business
   Agricultural Science and Mechanization
   Agricultural Science Technology
   Banking and Finance
   Business Administration
   Electronic Data Processing
   General Office Technology
   Horticulture Business Technology
   Industrial Management
   Marketing and Retailing
   Real Estate
   Secretarial Science

B. **Engineering Technology Education** — Highly specialized training for effective entrance into specialized areas of business and industry. Elements of training common to all technical occupations are included such as basic science, mathematics, oral and written communications, engineering and industrial drafting, and other appropriate technical skills. The curricula and instructional concentration in this Division are in the following instructional departments:

   Civil Engineering Technology
   Electronics Engineering Technology
   Environmental Engineering Technology

C. **General Education** — Instruction which is general to two or more Divisions such as English, mathematics, natural science, and the social sciences and the humanities.

The Associate Degree in General Education is essentially a two-year residental program in which students may complete all work toward an Associate Degree. Courses include those learning experiences traditionally considered to be the arts and science subjects necessary to transform the post-secondary student into a thinking, self-directed citizen. Courses offered are the same high quality as those offered in four-year colleges.

Developmental Studies Program — An integrated, student-centered program of instruction designed to increase the likelihood of success for students who enter this Institute with academic deficiencies. The goal of this program is to develop the academic ability of entering students to the extent that they have a high likelihood of success in one of the several curricular areas that are selected for continuing study.

The curricula and instructional concentrations in this Division are in the following instructional departments:

Associate Degree in General Education
Biology
Developmental Studies
English and Literature
Mathematics
Physical Science (Chemistry and Physics)
Social and Behavioral Sciences and Humanities.

D. **Health Occupations Education** — Specialized education and training for both technical and vocational occupations. The various curricula provide the special technical knowledge and skills plus elements of training common to all health-related occupations for which State licensing is required. Dexterous manipulative skills and a strong basic background in the social and physical sciences, mathematics, and communicative skills are emphasized in the training for those health occupations where such skills are paramount.

The curricula and instructional concentration in this Division are in the following instructional departments:

Associate Degree Nursing
Dental Assistant
Dental Hygienist
Dental Laboratory Technology
Nurses' Assistant
Pharmacy Technology

Physical Therapy Assistant
Practical Nurse Education
Radiologic Technologist
Respiratory Therapy
Surgical Technology

E. **Public Service Education** — Highly specialized training leading to the professional pursuits of occupations which include direct and prolonged contact with the public. Elements of training common to all public service occupations include: communicative skills, psychology, sociology, and specialized legal considerations. The capacity to function in stressful, emotional situations and the willingness to work at irregular, unpredictable times are prerequisite to success in public service occupations.

The curricula and instructional concentration in this Division are in the following instructional departments:

Cosmetology
Food Preparation Specialist
Food Service Management
Funeral Service Education
Law Enforcement-Criminal Justice
Paralegal Technology
Postal Service Technology
Recreation Associate

F. **Vocational Education** — Specialized training to provide depth in manipulative skills and diagnostic abilities in a selected range of activities and to develop a strong basic background in such related areas as mathematics, social and physical sciences, and communicative skills.

The curicular and instructional concentration in this Division are in the following instructional departments:

Air-Conditioning and Refrigeration
Architectural Drafting and Design
Automotive Mechanics
Carpentry
Commercial Art
Drafting
Electrical Installation and Maintenance
Machinist
Masonry
Plumbing
Recreation Vehicle and Equipment Repair
Tool and Die Making
Waste Water Treatment
Welding

ACCREDITATION

American Bar Association

Fayetteville Technical Institute has full accreditation of the Paralegal Technology curriculum by the American Bar Association.

The American Board of Funeral Service Education

Fayetteville Technical Institute's Department of Funeral Service Education is approved by the North Carolina State Board of Embalmers and Funeral Directors. The American Board of Funeral Service Education accredited the Funeral Service Education curriculum.

American Physical Therapy Association

Fayetteville Technical Institute has full accreditation with the American Physical Therapy Association, the national organization which accredits quality physical therapy assistant programs.

Council on Dental Education

The American Dental Association is directly concerned with dental and dental auxiliary education. Through this Council, the Association accredits all auxiliary dental programs to insure quality education training for auxiliary personnel who will provide dental health care to people. Fayetteville Technical Institute has been granted full accreditation.

Department of Community Colleges

Fayetteville Technical Institute is chartered by the North Carolina State Department of Community Colleges under the State Board of Education, as specified in Chapter 115 D of the General Statutes of North Carolina.

The Department of Community Colleges and the State Board of Education has granted the Institute's Board of Trustees the authority to award the Associate of Applied Science Degree for the completion of the two-year engineering technology curricula and the two-year business curricula, the General Education Associate Degree, and to award the Diploma for all vocational curricula.

Engineers' Council for Professional Development

The following curricula offered by Fayetteville Technical Institute are accredited by the Engineers' Council for Professional

Development:

1. Civil Engineering Technology
2. Electronic Engineering Technology
3. Environmental Engineering Technology

The Engineering Technology committee, a standing committee of the Engineers' Council for Professional Development, operates the accrediting program for engineering technology curricula. The purpose of the accrediting committee is to identify those curricula which qualify for recognition as engineering technology curricula and to identify the institutions which offer them.

Institutions which offer accredited engineering technology curricula must demonstrably maintain high standards of ethics in their educational programs and in published materials and other public announcements. Engineering technology curricula are evaluated on the basis of both qualitative and quantitative criteria which include requirements for maintaining acceptable depth and scope usually found in college level training.

Joint Review Committee on Education in Radiologic Technology

Fayetteville Technical Institute's Radiologic Technology program has been granted Preliminary Accreditation by the Council on Medical Education of the American Medical Association. This action is preliminary to full accreditation.

Joint Review Committee for Respiratory Therapy

The Joint Review Committee for Respiratory Therapy has granted candidate status. Fayetteville Technical Institute is in the process of being studied by the Joint Review Committee for Respiratory Therapy. This process should evolve into full accreditation by that group.

National League for Nursing

The Associate Degree Nursing Program of Fayetteville Technical Institute is fully accredited by the National League for Nursing. This type of approval is national in scope and voluntary rather than required by law. The standards set by the accrediting body are uniform throughout the United States. The recognized agency for the accreditation of programs in nursing is the National League for Nursing. The achievement of NLN accreditation by a program signifies that it has met the National standards of excellence for programs in nursing of its type.

North Carolina State Board of Education

Fayetteville Technical Institute is fully accredited by the North

Carolina State Board of Education in accordance with accreditation procedures set forth by the Board.

North Carolina State Board of Nursing

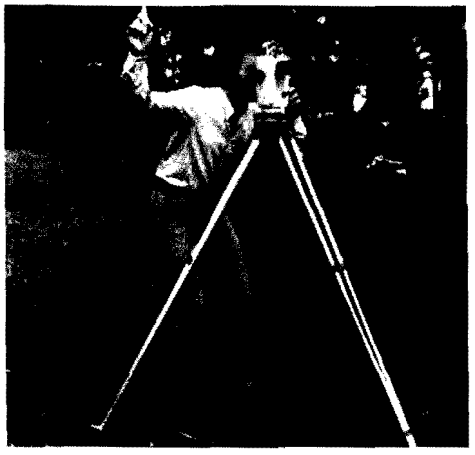
Fayetteville Technical Institute is accredited to offer a two-year associate degree in nursing that qualifies its graduates to sit and to write the North Carolina Board of Nursing examination to become a registered nurse.

Southern Association of Colleges and Schools

Fayetteville Technical Institute is fully accredited by the Commission on Colleges of the Southern Association of Colleges and Schools. The Southern Association of Colleges and Schools is a regional accrediting agency for the purpose of identifying and accrediting institutions which meet their standards for quality and scope of higher education.

United States Department of Education

Fayetteville Technical Institute is recognized by the U.S. Department of Education as being an institution of higher learning and qualified to receive Federal assistance in all of its higher education programs.



PROFESSIONAL ORGANIZATIONS

The Institute has membership in several educational associations which carry on a variety of programs and services that provide the Institute with information services, research, consultants, and workshops on many of the varied problems and issues in which we are engaged in technical and trade education on a National and State level.

1. American Association of Community and Junior Colleges
2. American Association of Dental Schools
3. American Bar Association
4. American Board of Funeral Service Education
5. American Council on Education
6. American Nurses Association
7. American Society for Engineering Education
8. American Society of Hospital Pharmacists
9. American Technical Education Association
10. American Vocational Association
11. Association of Business Officers of United States and Canada
12. Association of Community College PIO
13. Association of Community College Trustees
14. Association of Physical Plant Administrators of Universities
15. Joint Review Commission on Education
16. National Association of Adult Education
17. National Education Association
18. National League for Nursing
19. North Carolina Association of Adult Educators
20. North Carolina Trustees Association of Community Colleges
21. North Carolina Education Association
22. North Carolina Placement Association
23. North Carolina Association of Junior Colleges
24. North Carolina Vocational Association
25. Southeastern NCR Computer Users Group
26. Southern Association of Colleges and Schools
27. Southern Association of Community and Junior Colleges
28. University Mortuary Science Education Association
29. American Physical Therapy Association

GENERAL INFORMATION

ADMISSIONS REQUIREMENTS

Statement of Policy

Fayetteville Technical Institute, as a technical, state-supported institution, adheres to an "Open-Door" admissions policy. High school graduates, persons achieving a North Carolina equivalency certificate (GED), and adults who show potential for post high school education may be admitted to courses which are appropriate to their educational potential. Successful implementation of an "Open-Door" admissions policy requires an emphasis on admissions counseling services. These services are provided to ascertain reasonable potential for success in the particular program to be pursued by the student. As part of the admissions counseling process, Fayetteville Technical Institute utilizes an initial aptitude and achievement test battery, a personal interview and an evaluation of the applicant's prior school record. When the admissions counseling process indicates that an applicant lacks sufficient academic background to pursue credit courses, he will be directed to the Developmental Studies program prior to entry into a diploma or degree curriculum. If the applicant lacks a high school diploma, he will be given the opportunity to pursue courses to achieve an Adult High School Diploma or a North Carolina equivalency certificate (GED) prior to entering a regular curriculum. Admissions to curricula are open to applicants without regard to race, creed, national origin or sex.

Residency Status

Each applicant must complete a residency form as required by state law. This form is used to determine in-state or out-of-state tuition charges.

Your current residential classification, for purposes of applicable tuition rates, is required to be changed if, since original establishment of your current classification, your state of legal residency has changed.

1. If you currently are classified as a nonresident for tuition purposes, it is your right to petition for a change in classification to that of resident if you claim that you are now and, for at least the twelve-month period immediately preceding the date of such petition, were a legal resident of the State of North Carolina. The fact that you have resided in the state for twelve months does not in itself constitute in-state residency. You must be able to show proof that you have indeed taken steps to become a legal resident.

Examples are: filing income tax in North Carolina, registering for voting, listing personal property taxes, automobile registraton, etc.

2. If you currently are classified as a resident for tuition purposes, it is your obligation to petition for a change in classification to that of a nonresident if you have reasonable basis for believing that change in facts requires such a change in classification. Failure to fulfill this obligation may result in appropriate disciplinary action including, but not necessarily limited to, cancellation of enrollment. If it is determined that in fact you have become a nonresident, the effective date of change in applicable tuition rates shall be the next quarter following the date of change in facts which required the change in classification, unless you are deemed eligible to further enjoy the in-state tuition rate under the statutory twelve-month grace period.

Copies of the applicable North Carolina law and institutional regulations which govern such classification determinations are available in the Student Affairs Office for inspection upon request. You are responsible for being familiar with the contents of these two sources of regulations.

3. This school is authorized under federal law to enroll nonimmigrant alien students.

Entrance Requirements:

1. Applicants must have completed high school or must have attained the North Carolina Equivalency (GED) scores.
2. Applicants for Engineering Technology curricula, Radiologic Technology, Pharmacy Technology, & General Education must have a minimum of two units of algebra in their background; one unit of chemistry is required for Environmental Engineering Technology, Radiologic Technology, Pharmacy Technology, and Respiratory Therapy applicants.
3. Applicants for Associate Degree Nursing, Dental Hygiene, and Physical Therapy Technology must have a minimum of one unit of algebra, one unit of biology, and one unit of chemistry in their academic backgrounds.
4. Applicants for Funeral Service Education must have a minimum of one unit of algebra and one unit of biology in their academic backgrounds.
5. Applicants for Electronic Data Processing, Accounting, Commercial Art and Architectural Drafting must have a minimum of one unit of algebra in their academic backgrounds.

6. Applicants for all other curricula need no specific requirements beyond the normal high school courses required for a high school diploma; however, it may be advisable that applicants take refresher courses in the sciences, math and have acquired good reading habits.
7. For exploration purposes, a student may take a maximum of work equivalent to one full quarter prior to meeting all general entrance requirements, except as listed in number 8, below. Students enrolled under this plan will be placed on limited approval until all required admissions documents are on file in the Registrar's Office. Progress, as measured by grades and submission of all required entrance documents, in the quarter's work will determine a student's eligibility to continue in subsequent quarters. Students who fail to maintain passing grades will be required to take evaluative testing for placement in remedial or alternate programs of study. Failure to supply all pertinent entrance documents (transcripts, etc.) will prohibit further enrollment in the institution.
8. Applicants applying for VA benefits must meet all entry requirements before they can be certified by this institution to the Veterans Administration Regional Office.
9. Applicants must complete: (a) an official application form, (b) a residency status form, (c) a health form, (d) take the entrance test battery, (e) provide admissions office with high school transcript and/or other post-secondary transcripts, and (f) attend a personal interview.

Steps in Admission Procedures:

Application

All applicants must submit a completed formal application. Applications may be secured by writing the Director of Admissions at the institution's address.

Transcripts

Each applicant must request that his or her high school forward to the Director of Admissions a transcript of all courses taken. The applicant should request that available standardized test scores be included on the transcript. Transfer students must request official transcripts of all work attempted from each post-secondary institution previously attended in addition to their high school record. The high school transcript requirement may be waived if other official post-secondary transcripts indicates high school graduation. Proof of prerequisite high school courses is incumbent upon the applicant.

Entrance Test Battery

The institution's Entrance Test Battery requirement will be administered as follows:

a. High school graduates who have taken the regular high school academic program and who rank in the top 30 percent of their graduating class will be accepted into the Associate and/or the Associate of Applied Science Degree curricula at Fayetteville Technical Institute. This does not preclude the fact some curricula require certain academic and physical prerequisites which must be met. The selection of a curriculum by the student will be that in which the student demonstrates a keen interest as determined in the admissions interviews. These applicants will be accepted without being required to take the current entrance test battery.

b. High school graduates who rank in the top 50 percent of their graduating class and who elect to take a vocational curriculum will be accepted into the curriculum. This does not preclude the fact that some curricula require certain academic and physical prerequisites which must be met. The determination of the curriculum will be that in which the student demonstrates a keen interest as determined in the admissions interviews. These applicants will be accepted without having to take the current entrance test battery.

c. All other applicants, including recent high school graduates who apply for an Associate or an Associate of Applied Science Degree curriculum and who are under the top 30 percent of their graduating class, will be required to take the entrance test battery.

d. All other applicants, including recent high school graduates who apply for a vocational curriculum and who are under the top 50 percent of their graduating class, will be required to take the entrance test battery.

e. The class ranking used to make determinations will be the student's position in grade rank from the top of the class in relation to the total number of students in that grade computed at the completion of the junior year.

f. SAT-CEEB or ACT scores should be made available to the admissions office for consideration.

g. The entrance test battery requirement will be waived for all applicants who have earned a degree at the associate level or above.

h. All out-of-state applicants will be required to take the entrance test battery except that such requirement may be waived under the conditions of paragraph (g) above, and (i) below.

i. Students who are taking Developmental Studies courses under *limited approval* and who make grades of "C" or better may continue in Developmental Studies or take curricular courses without meeting the entrance test battery requirement.

Students taking Developmental Studies courses must meet prerequisite requirements for the curriculum which they plan to enter. Prerequisite requirements may include evaluative testing.

Students who are taking curricular courses for exploratory purposes on *limited approval* and who make passing grades on those courses may continue without having to meet the entrance test battery requirement.

Admissions Interview

Each applicant will be scheduled for an individual interview to discuss his/her educational plans with trained personnel. High school records and the results of the Entrance Test Battery will be used in conjunction with the student's personal aspirations to help plan a workable educational goal.

Health Status

Each applicant is required to submit a medical record; the information provided will be used in health care. FTI does not discriminate on the basis of handicap in the recruitment and admisions of students and the operation of any of its programs and activities. Health area students must submit physical and dental exams.

Admission with Advanced Standing

Students may be admitted with advanced standing by transfer from other accredited technical institutes, colleges, or universities. All credits to be transferred must be equated with the curricula offerings at Fayetteville Technical Institute and be of "C" grade quality or better. No quality points are assigned for transfer grades. The results of CLEP examinations also will be considered for transfer credit.

To prevent duplication of work previously taken, an official transcript of the student's previous college work must be submitted prior to approval.

Admission with advanced standing in all major subject areas must be approved by the Department Chairperson of the major subject area, and in some instances, students may be required to

take proficiency examinations to indicate their depth of knowledge in those subject for which they are requesting credit.

Fayetteville Technical Institute is a Serviceman's Opportunity College (SOC). Under this concept, credit may be received for service school completion, for college level examination programs (CLEP), and credit earned from courses taken through correspondence from a nationally accredited college or university. Courses completed through CLEP examinations must have a minimum score at the 25th percentile, and all courses accepted through service schools, correspondence, or non-traditional areas will be equated with the curriculum in which the student is enrolled. The SOC policies listed above are also applicable to bona fide dependents of military members and to veterans who start their programs prior to separation from the service.

EXPENSES AND FEES

Regular Fees (In-State):

All students will be charged a small activity fee each quarter.

Tuition — $39 per quarter ..... $117.00 (3 quarters)
$156.00 (4 quarters)

Under 11 credit hours $3.25 per credit hour

Books (estimated) $65 — $100 per quarter.

Payment of tuition and other fees or costs may be made by cash, personal check (in-State bank only), Bankamericard/Visa, or Master Charge.Personal checks will be accepted for the amount of tuition or fees only. *Personal checks drawn on out-of-State banks, second party checks, and checks in excess of actual costs will not, repeat, will not, be accepted for payment of fees.*

Other Fees:

1. Certain curricula require additional costs to cover items which may include uniforms, instruments, tools, malpractice insurance, and dues to student association groups.
2. On campus parking is described in the Parking Regulations Bulletin. Parking stickers are issued on payment of fees at registration. Students are held responsible for all parking regulations as stated in the Parking Regulations Bulletin.

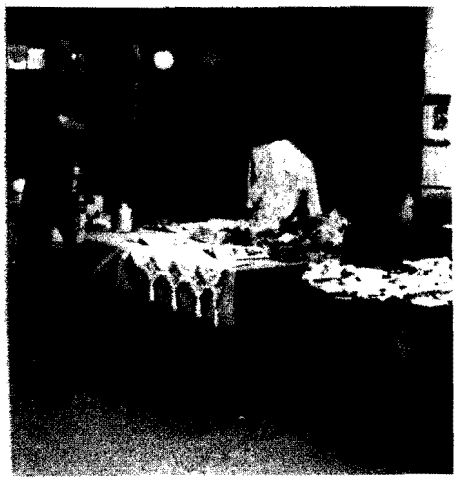
Late Registration Fee:

A late registration fee of $5 will be charged those students who register after the dates listed in the school calendar for student registration. The student is responsible for class work from the first day of classes as listed in the school calendar.

Out-of-State Student Fees

Any student whose legal residence is outside of the State of North Carolina will be charged tuition rates as set forth by the North Carolina State Legislature for out-of-state students and in effect at time of registration.

Out-of-State student rates for the 1979-80 academic year are $198.50 per quarter or $16.50 per quarter hour under 12 quarter hours. The Office of Student Affairs will determine, in accordance with applicable directives, those students required to pay out-of-State tuition fees.



ACADEMIC STANDING

Credits

A. All curricula students receive quarter hour credit for courses which they successfully complete.

B. The Board of Trustees of Fayetteville Technical Institute has been authorized by the North Carolina State Board of Education to award the Associate of Applied Science Degree, Associate Degree in General Education, and the Diploma upon successful completion of curriculum requirements.

C. Fayetteville Technical Institute has structured its curricula, of both one and two years duration, on a post-secondary level and grants credit on a quarter-hour basis. Instruction in all curricula is post-secondary and requires students to be capable of study beyond the high school equivalency level for success. The curricula are designed on a quarter hour basis to include general education areas which require extra out-of-class preparation each quarter. Each class, lab and shop session is of 50 minutes duration, and requires a minimum of outside preparation of two hours for each classroom session, one hour for each lab session, and additional outside preparation for shop sessions. Quarter hour credit is granted on a basis of one credit to three sessions of shop, one credit to two sessions of lab, and one credit to each classroom session of weekly attendance.

D. It is policy of this institution to permit students to enroll in additional subjects since the instructional hours shown in the curricula are minimum. A student may enroll on request for additional instructional hours deemed by the instructor to be consistent with the program and appropriate to the student as approved by his advisor.

E. Students with academic deficiencies, who require remedial work as background material, may enroll in Developmental Studies. These Developmental Studies courses carry credit hours for institutional accounting purposes *only*, and are *not counted* as credit hours toward graduation in any of the curricula.

F. A student must obtain approval from the faculty advisor to take credit hours excessive to the normal curriculum load as stated in the curriculum outline. Students falling below a 2.50 quality point average *will not* be permitted to attempt credit hours beyond the stated curriculum quarter load.

Grading Procedures

Each grade is assigned a "grade point equivalent" in quality points for each quarter credit hour scheduled. The scholastic

point average is determined by dividing the total of quality points earned by the number of quarter hours scheduled.

93-100	A — Excellent	4 quality points for each quarter hour
85-92	B — Above Average	3 quality points for each quarter hour
77-84	C — Average	2 quality points for each quarter hour
70-76	D — Below Average	1 quality point for each quarter hour
Below 70	F — Failing	0 quality point for each quarter hour
	NC — No Credit	0 quality point for each quarter hour (not computed)

1. Inc. — Incomplete: Given at the discretion of the instructor when all course requirements have not been satisfied. Students must remove Incompletes by the mid-term of the following quarter or an automatic "F" grade is assessed.
2. WD — No Grade: A student may withdraw from a course anytime within the first fifteen (15) school days of each quarter with no grade penalty.
3. WP or WF: A student withdrawing after mid-term of any quarter will receive an automatic WF unless he is compelled for unavoidable reasons to withdraw from the institution, in which case, with the instructor's consent, he may withdraw passing (WP).
4. NC — No Credit: Fayetteville Technical Institute offers the student an alternative grading plan. The intent of this grading plan is to allow a student to explore fields of study outside his known areas of competency. A student who elects the "No Credit" plan will receive the "No Credit" notation on his records, which will indicate "0" grade points — no credits earned. Such courses will not be computed in grade point averages, and therefore, no credit or penalty is attached to the "No Credit" grade; however, all course requirements must be met by the student. Limitations on the number of courses taken for "No Credit" will be handled on an individual basis. A student may not repeat the same courses for a "No Credit" grade. Developmental Studies courses are remedial in nature and are ineligible for "No Credit" grades. A drop at any time from a "No Credit" class will result in a "WD." The request for a "No Credit" grade must be made at the first class session. Veterans will not be certified for "No Credit" courses.

All final course grades will be letter grades in accordance with the adopted grading system. Student grade reports are mailed at the end of each quarter. Grades will also reflect student's attitude toward scholastic work as measured by the instructor.

All students must have at least a 2.0 quality point average and have passed all curriculum subjects as listed in the course outline under which they entered to be eligible for graduation. They must also meet the grade level needed in major subjects required to take licensure examinatons.

Health occupations curricula require grading policies necessary to meet state requirements. Each health department area will issue to the student in written form the necessary information to cover such grading policies.

Academic Deficiency

A student whose quality point average for any given quarter's work falls below the minimum as stated in the following progress chart will be placed on Academic Probation. If subsequent quarter's work should also fail to meet the minimum requirement of probation, the student may be requested to drop certain courses, and/or take remedial work, or he may be placed on academic suspension. Certain curricula have minimum course grade requirements which will be specified either in the Student Handbook or a Division Bulletin.

Quality Point Average to Determine
Continuance in Program

Two-Year Curriculum

All Qtr. hrs. credit attempted	Quality Point Average (QPA) to continue in curriculum	Quality Point Average below which student is on Academic Probation
1-20	No required QPA to begin Fall Quarter	End Fall Quarter 1.25
21-40	To begin Winter Qtr. .25	End Winter Quarter 1.50
41-62	To begin Spring Qtr. 1.00	End Spring Quarter 1.85
Summer	To begin Summer Qtr. 1.50	End Summer Quarter 1.90
63-79	To begin Sophomore year 1.85	End Fall Quarter 1.95
80-99	To begin Winter Qtr. 1.90	End Winter Quarter 2.00
100-over	To begin Spring Qtr. 1.95 To Graduate 2.00	End Spring Quarter 2.00

One-Year Curriculum

1-15	No required QPA to begin Fall Quarter	End Fall Quarter 1.50
16-38	To begin Winter Qtr. .25	End Winter Quarter 1.70
39-51	To begin Spring Qtr. 1.00	End Spring Quarter 1.95
52+	To begin Summer Qtr. 1.70	End Summer Quarter 2.00
	To Graduate 2.00	

One quarter, two quarter, and three quarter programs will be assessed on the basis of a similar pattern. Failure in major subject courses may result in academic suspension regardless of QPA.

Developmental Studies

All Quarter hours credit attempted	Quality Point Average to continue in Developmental Program	Quality Point Average below which student is on Academic Probation
1-11	No requirement to begin Quarter	1.25
12-22	.25	1.50
23-24+	1.00	2.0

Attendance

Due to the nature and purpose of the institution and the necessity for sequential scheduling of course work, attendance is an incumbent factor upon the student.

Officially, class work at Fayetteville Technical Institute is designed for classroom attendance, and it is assumed by the Institute that you will be present. However, the responsibility for deciding whether or not to attend classes is entirely up to you. A decision to be absent from regularly scheduled classes does not excuse you from assignments, examinations, and work missed.

Make-up of missed assignments and examinations is totally at the discretion of the instructor. If you know you will be absent, you should consult with your instructor in advance to arrange for completion of work missed.

Veterans are responsible for providing attendance sheets at the end of each month to the Veterans' Service Office. Veterans whose attendance sheets are not received by the 5th of the month following will be terminated for VA certification.

The above policy does not release the veteran from those regulations required by Fayetteville Technical Institute in compliance with the Veterans' Administration regulations. Veterans are responsible, also, for other regulations as published in the current Veterans Handbook.

Course Drop-Add Policy

1. Students may not add a class after the first five *school* days of any quarter.
2. A student may drop a class as late as the 15th school day *without penalty*. The transcript will indicate a "WD".

3. A student who has to withdraw from the institution for unavoidable reasons within the first 10 *calendar* days may request a refund of 2/3 tuition rates.
4. A student who drops a class after the 15th school day and before the six-week period may receive a WP or WF at the discretion of the instructor.
5. A student who drops a class after the six-week period will receive an automatic WF, unless the student has to withdraw from all classes due to unavoidable reasons. In cases of total withdrawal for unavoidable reasons, the Dean of Student Affairs will grant permission to withdraw passing, if the student indeed is passing at that point. In such cases the transcript would indicate WP (no penalty).
6. All students who drop must follow the instructions listed in the current Student Handbook under "withdrawals."

Withdrawals

Students who decide to withdraw themselves from a class must submit a statement to the instructor of intent to withdraw. A "Registration Change Notice" must be completed by the student and initialed by the instructor, then presented to his/her faculty advisor and the Registrar before an official withdrawal can be recorded.

Students whose prior academic progress at this institution was unsatisfactory, including those students who are placed on academic suspension, may be re-admitted only by approval of the Admissions Committee.

The failure to withdraw properly will jeopardize the student's right to re-enroll at a later date. A student's record will not be released until his financial obligation to the institution has been satisfied.

Class Repeat Rules

A student who fails a required course will be required to repeat the course. Both grades made on the course will be counted in the total quality point average.

Students must have the permission of a faculty advisor and the Associate Dean of Student Affairs to repeat a course they have already passed. The first grade made on the course will be counted in the total quality point average. Veterans should be aware that they cannot receive VA benefits for duplication of courses passed.

Continued Enrollment

In order to re-register for a continuing quarter, a student must have satisfied all financial obligations with the Business Office. No student will be permitted to enroll for subsequent quarters when his/her name appears on the financial delinquent list published by the Business Office.

Refunds

Tuition refunds for students shall not be made unless the student is, in the opinion of the institution, compelled to withdraw for unavoidable reasons. In such cases, two-thirds (2/3) of the student's tuition may be refunded if the student withdraws within ten (10) calendar days beginning with the first day of classes as published in the school catalog. Tuition refunds will not be considered after that time nor will tuition refunds of $5.00 or less be considered, except if a course or curriculum fails to materialize.

Eligibility for refunds for Summer Sessions is reduced to five calendar days beginning with the first day of classes for each session. Requests for refunds must be made in writing stating the reason for withdrawing from the course. No requests for refunds will be approved after the periods indicated above.
ted above.

Re-admittance

When a student withdraws from the college for unavoidable reasons, he may be considered for re-entry at the beginning of the next quarter. A student who is dismissed from the college by administrative action may re-enter only upon approval by the administration. A student dismissed due to disciplinary action in two successive quarters jeopardizes his right to re-enroll in the institution. All students are given the right of due process as provided under current Federal and State laws governing the rights and privileges of students.

Requirements for Graduation

To be eligible for graduation, the student must:

1. Successfully complete the curriculum requirements in effect at the time the student entered the curriculum. Students who enter a curriculum after the Winter quarter are subject to the curriculum requirements in effect for the following Fall quarter. A student who withdraws from the institution and re-enters at a later quarter, including students who have completed at least one or more quarters, will be subject to

curriculum requirements in effect for the following Fall quarter. In cases where students re-enter at the beginning of Fall quarter, they are subject to the requirements of the curriculum at the Fall quarter re-entry.

2. Have sufficient quality points to average 2.0 in the total program.
3. Have passing grades in all required courses (certain curricula, especially in the health area, require that a student make at least a "C" grade on major subject areas for the student to be eligible to take state and national examinations for licensure), and
4. Must have taken care of ALL financial indebtedness to Fayetteville Technical Institute.
5. Applications for degrees or diplomas must be made in writing to the Dean of Student Affairs no later than the completion of the fourth quarter for a two-year curriculum, the second quarter of four-quarter curriculum, and the first quarter of a three-quarter curriculum.

Classification of Students

Full-time student: A student enrolled for 12 or more quarter hours.

Part-time student: A student enrolled for fewer than 12 quarter hours.

Freshman: A student who has fewer than 45 quarter hours credit.

Sophomore: A student who has 45 or more quarter hours credit and has satisfied freshman requirements.

Audit: Students are not permitted to audit courses (see provisions for students taking courses for "No Credit").

Student Handbook

Other student regulatory policies are stated in the Student Handbook, and *all* students are responsible for observing those regulations.

Honors

Any student who has earned a quality point average of 3.5 and has completed at least half of his diploma or degree requirements in residence at Fayetteville Technical Institute will be granted a diploma or degree with honors.

Awards

A scholastic award will be presented to three students who

have obtained the highest grade average in all curricula work taken at Fayetteville Technical Institute. To be eligible to receive this award, a student must have taken a minimum of two quarters of work in a four quarter curriculum, and a minimum of four quarters of work in a two year curriculum in residence at Fayetteville Technical Institute. The awards presented are as follows: (1) One-Year Diploma Curricula, (2) Two-Year Diploma Curricula, and (3) Two-Year Associate of Applied Science Degree Curricula.

Outstanding Student Award

The criteria used by the faculty in the selection of the Outstanding Student Award includes the following: The degree or extent the student

1. Has demonstrated definite leadership ability,
2. Respects the responsibilities of the faculty, administrators, and fellow students,
3. Exhibits an attitude of thoroughness in the completion of assigned tasks,
4. Manifests good sportsmanship and a respect for public property,
5. Exhibits a high degree of integrity and general loyalty to the college, and
6. Exhibits leadership roles in the application and consideration for general rules and regulations of the college.

Citizenship Award

The criteria used by the faculty in the selection of the Citizenship Award includes the following: The degree or extent the student

1. Demonstrates respect for the position of faculty, administrators, fellow students,
2. Demonstrates a willingness to follow the leadership of others and actively exhibits good sportsmanship in his participation in school activities,
3. Shows a willingness to work within the general rules and regulations of the college to the general public as a loyal citizen, and
4. Assumes additional responsibilities and completes the tasks assigned in a thorough and orderly manner.

Trox Poland Memorial Award

The criteria set forth for this award are:

1. Student must have minimum overall quality point average of 3.00.

2. Student must have been in continuous enrollment on a full-time basis at FTI during year of nomination.
3. Student will be selected during the Spring Quarter of his/her year of graduation at FTI.
4. Student will be judged on "attributes" and "contributions" while attending FTI.
5. Student should demonstrate a genuine concern for FTI and its role in the community. In addition, he/she should exhibit and promote good student morale.

Who's Who

Each year the faculty makes nominations of students who attain scholastic averages of 3.00 or better to be selected for "Who's Who Among Students in American Junior Colleges." Other criteria used in selection include leadership abilities, moral character, and commitment to educational goals. The students selected are recognized nationally through publications by the awarding body.

STUDENT AFFAIRS

The Office of Student Affairs is held responsible for the following functions: recruitment, testing, admissions, registration, student records, orientation, guidance, counseling services, veterans' affairs, financial aid, student housing, health services, student activities, graduate job placement, and alumni and follow-up studies. The purpose of Student Affairs is to provide the professional services needed to effectively administer the functions listed above and to assist the students in their adjustment to the learning experience as presented in the instructional programs offered at Fayetteville Technical Institute. The counseling services provided the necessary supportive role to the student to assist in the highest possible achievement of a realistic self-concept. Student Services are available to all students from pre-admission through graduation, including transfer or placement.

In order to fulfill the purpose of Student Affairs the following objectives are established:

1. To provide an organized recruitment plan for reaching prospective students in the area public schools, general population, and business and industry.
2. To disseminate factual materials and printed information which describes the institution, its purposes and its programs of instruction.
3. To invite to the campus formalized groups and individuals for the purpose of touring the facilities.
4. To have a planned program of evaluative tools which will produce data for the use in aiding the placement of students within the institution's programs.
5. To state entrance requirements in keeping with the institution's philosophy and purpose.
6. To list general and specific admission requirements for each instructional program.
7. To involve admissions personnel and the Student Services staff in the concerns of maintaining quality standards in selective processes and in academic programs.
8. To provide a structured registration procedure for the matriculation of students.
9. To maintain a system of student records which provides personal and academic information which will be kept as a part of the student's institutional record.
10. To provide back-up records which are kept at separate locations outside of the institution.
11. To have a planned orientation program for incoming students.

12. To provide a guidance program which includes the use of the total resources of the institution and community.
13. To maintain a staff of professional counselors who will provide areas of counseling services to students and others, and make referrals when necessary to appropriate community resources.
14. To provide planned group participation as a part of the counseling services.
15. To provide a structured veteran affairs and veterans' information staff who will assist the veteran in meeting requirements necessary for certification and for participation in the veterans educational assistance program.
16. To maintain an outreach program specifically designed to reach those veterans not normally included in the regular recruitment program.
17. To provide a Financial Aid Officer who will assist the student in assessing his financial needs and who will provide information on all available financial resources to meet those needs.
18. To maintain a plan for assisting students in locating off-campus housing, locating jobs consistent with their training background, and to provide a method through which their emergency health needs can be met.
19. To have a planned extra-curricular activities program which will provide the students with a variety of out-of-class experiences.
20. To implement a planned program of follow-up of graduates and non-graduates which will provide information that may be used in evaluative processes which may include implications for curriculum revision.

Counseling Services

These services are provided by trained personnel who are available daily during school hours. Every student is assigned a faculty advisor and a counselor. The faculty advisor serves to assist the student with specific course planning and registration. Under the topic Academic Standing you will find more details concerning the part your faculty advisor will serve in helping you with your academic program. Counselors serve as contact persons and students are encouraged to get acquainted with their counselor before problems arise.

Students may come to a counselor's office at any time to discuss personal problems which may arise affecting their progress in school. Students should feel free to use this service if needed. Appointments are set up at intervals throughout the year to dis-

cuss each individual student's educational course of study and progress. Students may see the Dean of Student Affairs or the Associate Dean of Student Affairs at any time, or make appointments on a scheduled basis through their counselor.

Special Testing

Interest, aptitude, achievement, ability and human relation tests are available for the students desiring personal and occupational counseling. For more information, students are encouraged to contact their counselor.

Financial Aid

A student needing financial assistance must submit an application to the Financial Aid Coordinator once he has been approved for enrollment. Based on the student's needs and resources available, the Financial Aid Coordinator will help meet those needs through the various loans and scholarship programs. A "package deal" composed of several types of available monies may be awarded in an attempt to meet the student's needs. Those financial assistance funds available are as follows:

1. Basic Educational Opportunity Grant.
2. Supplemental Educational Opportunity Grant.
3. National Direct Student Loan.
4. College Work-Study.
5. Federal funds for a Nurse's Loan and Nurse's Scholarship program specifically for Associate Degree Nursing students.
6. College Foundation (a federally-insured student loan program available to all in-State students).
7. Local loan funds: From time to time various companies and associations in the area donate money for loans and scholarships. Since this type of funding is not necessarily repeated annually, an applicant may secure a list of local scholarships from the Financial Aid Coordinator.
8. Emergency Loan Fund (short-term loans not to exceed $150 and repayable in 30/60 days).
9. American Board of Funeral Service Education Scholarship.
10. Fayetteville Technical Institute also has a short term book loan which helps during registration.

Requests for all financial aid should be made during the admission interview or as soon as possible after being approved to attend school. Applications should be not later than June 1. Those received after that date may not receive consideration for first quarter aid; however, applications will continue to be accepted

and awards will be met as funds become available. Any student who needs finacial aid should contact the Financial Aid Coordinator, whose office is located in the Student Affairs Office.

Health Services

Since Fayetteville Technical Institute is a commuter college, health services are handled through an arrangement with the local hospital. Students are referred to the Emergency Room when emergency treatment is needed. Each shop and lab is equipped with first-aid kits. The college does not have a paid medical staff on campus; however, it is in close proximity to a number of medical facilities. Each student is required to submit a medical form which is reviewed by the Admissions Staff.

Student Housing

The Financial Aid Coordinator assists the student in finding housing when it is necessary or desireable on the part of the student to live in Fayetteville. Financial arrangements for rooms or apartments are on an individual basis between the student and the landlord. The college assumes no responsibility in any financial arrangement between the student and the landlord.

Faculty Guidance Function

The faculty advisor function is an integral part of the total educational process of the institution. Each student is assigned to a faculty advisor according to the student's curriculum. This function provides each student with the opportunity to develop a relationship with a person who has experience and expertise in the field in which the student is training. Having a faculty advisor to whom the student is specifically assigned gives the student a definite source of help. No one is better qualified to furnish specific curriculum information to the student than the major subject area instructor. In addition, the advisor will be able to determine that a student should see his counselor before a serious problem arises.

Job Placement

The Placement Office offers assistance to all students who successfully complete a program of study at FTI. The services rendered are available to students continually. The Placement Office is instrumental in arranging and coordinating job interviews between students and employer representatives. The office maintains an active file of prospective employers which contains data regarding employment opportunities, salaries, fringe benefits, etc. Employers from all parts of North Carolina and other states visit Fayetteville Technical Institute to interview prospective

graduates. A student folder is kept of each graduate from the institution. The folder contains a student resume and other pertinent information which will aid the graduate in employment goals. This information can only be released by order of the student. Graduates are urged to take advantage of the Placement Office in order to explore every facet of the working world. Records are maintained of graduate employment. These records are utilized for follow-up with reference to geographical location, length of employment, type of employment, and salary scale.

A list of part-time jobs available for students currently enrolled is posted on the Student Bulletin Board.

Student Records

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

1. The Registrar is responsible for student records. The following documents will be maintained as a part of the student's institutional records and will be subject to all State and federal regulations governing the safety and confidentiality of those records: completed application, completed medical form, veterans' records, statement of residency, transcripts, any statement of waiver by the student concerning student records, and a list of persons, firms, or other institutions to which a copy of the institutional records have been sent.
2. A student may receive an unofficial copy of his transcript upon graduation. One official transcript may be sent to a school of his choice upon written request. A fee of $1 is charged for each transcript after the first one. No fee is charged for transcripts sent to employers. *Official* transcripts are mailed only to another educational institution or to an employer.
3. When a student has a name change or change of address, he is responsible for contacting the Registrar's office in person to fill out the necessary forms.

TO ALL PARENTS OF STUDENTS CURRENTLY ATTENDING FAYETTEVILLE TECHNICAL INSTITUTE AND ALL STUDENTS CURRENTLY ATTENDING WHO HAVE REACHED THE AGE OF 18:

The Family Educational Rights and Privacy Act (FERPA) is a federal law that governs the maintenance of students' records. Under the law, parents of students or students, if they are at least

18, have both the right to inspect records kept by the school about the student and the right to correct inaccuracies in the records. Access to the records by persons other than the parents or the student is limited and generally requires prior consent by the parents or the student. The Board of Trustees has adopted a written policy governing all the rights of parents and students under FERPA. Copies of this policy may be found in the Registrar's Office.

Fayetteville Technical Institute classifies the following as directory information: student's name, address, telephone listing, date and place of birth, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, and the most recent previous shool attended by the student. School officials may release this information to any person without the consent of the parents or the student. Any parent or eligible student who objects to the release of any or all of this information without his consent must notify in writing the Registrar by a date which is five (5) school days from the date that the student receives his Student Handbook. The objection must state what information the parent or student does not want to be classified as directory information. If no objection is received by the aforesaid date, the information will be classified as directory information until the beginning of the next school year.

Complaints about failures of Fayetteville Technical Institute to comply with the Family Educational Rights and Privacy Act may be made in writing to: FERPA Office, Department of Health, Education, and Welfare, 330 Independence Avenue, S.W., Washington, D.C. 20201.

Students' Right to Due Process

It is the student's responsibility to seek due process when appropriate. All students have rights to due process through the following channels: Counselor, Associate Dean of Student Affairs, Student Appeals Committee, Dean of Student Affairs, Vice President for Academic Affairs, President, and Board of Trustees. This due process is administered without regard to race, creed, national origin or sex.

Student Activities

The Student Government Association, student publications, intramural activities and student disciplinary codes are stated in the current issue of the Student Handbook.

GENERAL STUDENT REGULATIONS

The total educational program of the college is designed to assist the student to reach his highest level of potential in his personal development. Each curriculum is designed as a vital part of that development, and the successful completion of all course work will enhance the probability of good job placement. Each out-of-class activity is designed to provide the best opportunity for social development as a part of overall training.

In order to accomplish inter-social training, certain rules and regulations must be followed to allow for an orderly transition into the program of the college. These rules and regulations may generally be summarized by the following statements:

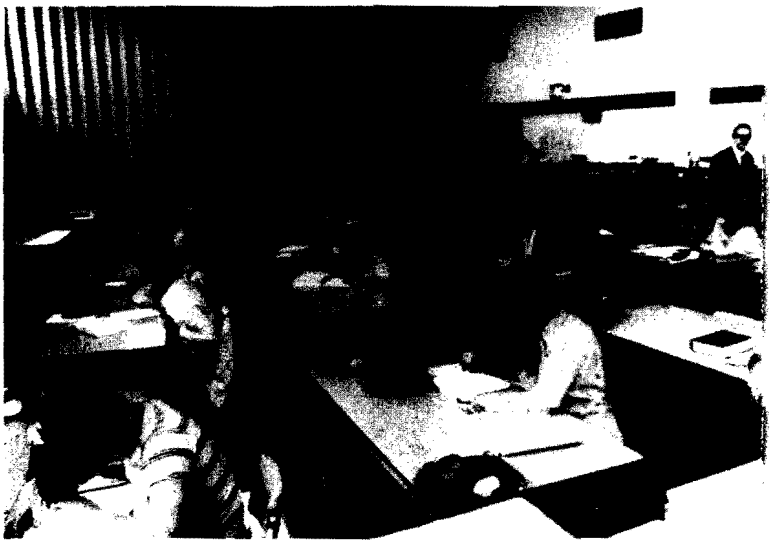
Students are expected to exhibit the qualities of courtesy and integrity that characterize the behavior of ladies and gentlemen. The college does not permit the use or the possession of alcoholic beverages or drugs on the campus or at social functions sponsored by the college.

Fayetteville Technical Institute students dress informally; however, in all cases, neatness of dress is encouraged and neatness in personal appearance is a strong characteristic of FTI students.

A few rules and regulations necessary for the smooth operation of the college are listed in the Student Handbook, which is revised periodically.

Dismissal

Fayetteville Technical Institute reserves the right to suspend or dismiss any student when it believes such action is in the best interest of the college and/or the student. In all cases, the right of due process is the student's prerogative.



LEARNING RESOURCES CENTER

The Learning Resources Center, located in the Paul H. Thompson Library, contains a collection of carefully selected printed and non-printed materials to support and enrich instruction. Components of the Learning Resources Center are the Library, the Learning Lab, and Media Services.

The library provides excellent facilities for study, research, browsing, self-improvement and enjoyment. The library houses over 29,000 volumes of books and subscribes to over 260 current magazines and newspapers. Back issues of periodicals are available in bound volumes, unbound issues and on microfilm. Audio-visual software, such as filmstrips, disc recordings, cassettes, 16-mm films, and slides are available to provide a wide range of information in various forms to students, faculty, and the community. Space and equipment are provided in the library for viewing and listening. Teaching of individualized or group library skills is a function of the library staff. Materials that are not available in the library are available through inter-library loans.

The learning lab makes available to the student body and the community an opportunity to learn new subjects, to strengthen weak areas of learning, or to study to qualify for specific test requirements. It serves as a remedial clinic for aspiring students and a programmed classroom for adults who desire new or specialized training.

Through the use of programmed materials and teaching machines, the learning lab enables a person to further his knowledge in many subjects. Various types of instructional materials are employed including filmstrips, records, and cassettes. Subjects available include English, social studies, mathematics, foreign languages, reading skills, science, and many others.

Media services provides a qualified staff and excellent facilities to support the instructional programs with materials production and equipment. Equipment that circulates is controlled through media services.

The Learning Resources Center has a seating capacity of over 300 with study arrangements to meet student needs. The Learning Resources Center strives to make available all types of media for enjoyment, enrichment and instructional purposes for the student body, the faculty, the staff of Fayetteville Technical Institute, and the community.

ADULT CONTINUING EDUCATION

General Information

Fayetteville Technical Institute provides educational opportunities for adults interested in upgrading their occupational skills, developing new skills, participating in self-enrichment classes, participating in Adult Basic Education, or completing their High School Diplomas. Adult Continuing Education courses may be of any length to accommodate the needs of the students and the course content.

Fayetteville Technical Institute, in order to provide better services to the residents of Cumberland County, has an agreement with the Fayetteville City Board of Education and the Cumberland County Board of Education to offer evening courses in the public schools throughout the county. These schools have been designated as Adult Continuing Education Centers and are an integral part of the total Continuing Education Program of FTI.

Purposes

The general purposes of the Department of Adult Continuing Education are:

To administer and supervise a broad range of Adult Continuing Education courses,

To provide educational opportunities for adults in locations convenient to the students in almost any area of interest at a cost easily affordable by all persons,

To maintain constant contact with local industry to determine the occupational needs of the county, and

To plan, coordinate, supervise, and conduct in-service training programs for instructors in Adult Continuing Education.

Admission

Any adult who is eighteen years of age or older is eligible to attend Adult Continuing Education offered by Fayetteville Technical Institute on campus or at any of the Adult Education Centers.

Fees

A nominal registration fee of $5 is charged for Adult Continuing Education classes. All fees must be paid before the first class session. Refunds will be made only if classes are cancelled. Books and supplies are available through the FTI Book Store, which will be opened in the evening for the convenience of students enrolled in Adult Continuing Education classes.

Certificates

Fayetteville Technical Institute issues a certificate to each student who attends a minimum of 80 per cent of the classroom hours and successfully completes the requirements of the course whether practical or by written examination. Adult High School Diplomas are awarded to those students who meet the requirements as set forth in the Adult High School Diploma Program and pass the North Carolina State Competency Test.

EDUCATIONAL PROGRAMS

Adult Basic Education

Adult Basic Education (ABE) is a program designed for students who require instruction in grades 0-8. Classes meet two nights weekly in the Adult Education Centers where there is a sufficient number of interested adults. Based on the availability of federal funds, registration fees for ABE will not be charged and materials will be provided. In the event federal funds are not available, the standard $5 registration fee is required.

Adult High School Diploma Program

The Adult High School Diploma Program provides adults eighteen years of age, and older, the opportunity to receive the Adult High School Diploma. A student may enter the program by presenting a transcript or proof of previous work. He/She is then tested for placement into the appropriate level of instruction.

The Adult High School Diploma will be awarded only when a student successfully completes all requirements as outlined in the Adult High School Diploma Program and the State Competency Test.

OCCUPATIONAL EXTENSION

Fayetteville Technical Institute sponsors courses in Occupational Extension education providing adults an opportunity to learn new occupational skills or upgrade current skills. Classes are offered in the Adult Continuing Education Centers and special courses are organized at any time a sufficient number of students show interest in a particular occupational area. Course offerings in Occupational Extension include business education, health, management development, apprenticeship training, automotive, building trades, law enforcement, and firemanship.

ARTS, CRAFTS, AND HOME ECONOMICS

In order to concur with Fayetteville Technical Institute's goal of meeting the needs of the community, an extensive program is

offered in arts, crafts, home economics and other special interest classes. This community-wide program includes instruction to prepare adults for better job opportunities, promotion in present employment, self-enrichment, improved family living and creative self-expression. Classes are offered in the Adult Continuing Education Centers and at special locations at any time or place when requested by a sufficient number of students.

Special Locations

Locations are utilized to reach adults in their communities from Beaver Dam to Hope Mills to Spring Lake and throughout Cumberland County.

Various classes are cooperatively offered with local agencies. Two of the most successful are those with the Fayetteville Museum of Art (Art Angles Program), and the Fayetteville Recreation and Parks Department.

Art Angles

Art Angles is a three-way plan utilizing the resources of the Fayetteville Museum of Art and the Fayetteville Recreation and Parks Department boosting public participation in applied arts, art appreciation and crafts instruction and philosophy. It is an ongoing series of classes that draws interest and enthusiasm from people in Cumberland County.

SPECIAL PROGRAMS

New and Expanding Industry

Fayetteville Technical Institute, in cooperation with the industrial community in Cumberland County, provides New and Expanding Industry training to meet the needs of the expanded industrial development in North Carolina. New Industry Training is normally accomplished by using on-the-job training, pre-employment training, or a combination of both.

This program is designed to train only that number of individuals which the participating industry can assure jobs.

THE ASSOCIATE DEGREE

History

The first Associate Degree conferred in the United States was granted in 1900, by the University of Chicago. At the time, President William Rainey Harper, the man most instrumental in its initiation, listed among his reasons for this action: (1) that many students would not be able to continue beyond the sophomore year because of personal or financial difficulties and (2) that two years of college would appeal to students whose interest would wane in a four-year program. These reasons are still of significance today, yet perhaps not so important as easing a man-power gap created by the mushrooming technology of the past half century.

The New Approach

Recognizing the critical nature of the problem and that the Associate Degree was one answer to the problem, the North Carolina State Board of Education authorized a number of two-year training programs which helped satisfy the needs of North Carolina.

Approval to offer these programs was granted by the North Carolina State Board of Education and the North Carolina Department of Community Colleges in 1963. Fayetteville Technical Institute is one of the many colleges and universities across the country which in the past decade and a half has prepared literally thousands of graduates for the labor market with the Associate in Applied Science degree (AAS). While this degree may be terminal, it carries full transfer credit to many other colleges for those who wish to continue their education.

Definition

An Associate Degree is usually granted after the successful culmination of a two-year college program which is either of a technical or general nature. Though a variety of the degree titles are used by granting institutions, Fayetteville Technical Institute awards the Associate in Applied Science degree (AAS) to graduates whose academic preparation includes the major areas of concentration and provides focused instruction in critical yet diverse areas of business, industry, technical fields, health areas, and public service education. General Education graduates are awarded the General Education Associate Degree (GEAD).

ACCOUNTING

Purpose of Curriculum

Accounting is one of the fastest growing employment fields in America today. These opportunities result from the tremendous business and industrial expansion in all parts of the country. Because of this emphasis, there is a growing need for trained people in the area of accounting to help managers keep track of a firm's operation. The Accounting curriculum is designed to fill this need by offering students the necessary accounting theories and skills for the entry into the accounting profession.

The Accounting curriculum is designed to give the student an understanding of the principles of organization and management in business operations, understanding of the fundamentals of accounting and analysis of financial statements, and understanding and skill in effective communications for business.

Job Description

The graduate of the accounting curriculum may qualify for positions in public accounting, business and industry, and government. Some job titles are accounting clerk, payroll clerk, auditor, cost accountant, and junior accountant.

ACCOUNTING CURRICULUM

	Quarter Hours Credit
Required Accounting Courses	
BUS 120, 121, 122, 221, 222, 223, 224 or 227, 225, 269	46
Other Required Business Courses	
BUS 102 or 103, 110, 115, 116, 123, 124, 229, 234, 247, 282	38
Required Economics Courses	
ECO 102, 104	6
Required Electronic Data Processing Courses	
EDP 103, 104, 109	11
Required English Courses	
ENG 101, 102, 204, 206	12
Required Math Courses	
MAT 106	5
Required Electives	
Two Social Science	6
Total Required Hours	**124**

AGRICULTURAL BUSINESS TECHNOLOGY

Purpose of Curriculum

Rapid technological changes in farming and related agricultural businesses have given rise to the need for more technically trained people. A variety of agricultural businesses and industries employ persons to assist in marketing, processing, and distributing of farm products and providing services to the farmer. Many responsible positions in agricultural businesses and industries require technical training not available in high schools or in four-year colleges.

The Agricultural Business curriculum is designed to help students acquire knowledge, understandings, and abilities in the broad field of agricultural businesses, including agricultural production. It combines knowledge of agriculture with business training to prepare the graduate for many of the varied employment opportunities in agriculture.

Job Description

As agricultural business and industry firms expand in size and number they are experiencing rapid changes in technologies of production, sales, and management, in an increasingly competitive environment. Future employees of such firms must be prepared to understand these changes and adapt themselves accordingly. Successful completion of this curriculum should enable a person to assume responsibilities in an agricultural firm and enable him/her to advance within such a business.

Upon graduation from this curriculum, an individual should qualify for various jobs in agricultural business and industry such as salesman or store manager in farm supply stores; agricultural field serviceman; salesman, demonstrator, or plant manager of feed and food companies; farm products inspector; salesperson, or office managers of farm products marketing firms; or manager of farm operations.

The trend towards larger farming operations with increased non-farm control of production means there will be greater employment opportunities for well-trained individuals who can efficiently and profitably supervise the production and marketing of agricultural products.

AGRICULTURAL BUSINESS TECHNOLOGY CURRICULUM

	Quarter Hours Credit
Required Agriculture Courses	
AGR 104, 125, 170, 185, 201, 204, 205, 218, 228, 256, 257, 296, 299	65
Required Business Courses	
BUS 110, 115, 119, 123, 185, 228, 272, 285	30
Required Chemistry Course	
CHM 101	4
Required English Courses	
ENG 101, 102, 103, 204	12
Required Math Course	
MAT 110	4
Required Electives	
Two Social Science electives from the following: PSY 101, 206 SOC 101, 102 SSC 205	6
Total Required Hours	**121**

AGRICULTURAL SCIENCE AND MECHANIZATION

Purpose of Curriculum

This curriculum provides a training program for developing the basic knowledge and skills needed for successful operation and management of a general farming program involving crops and livestock. There is a growing scarcity of young persons trained in basic agriculture science and mechanics. Larger farming operations require more mechanization and tremendous outlays of capital; thus, the need for trained farmers becomes increasingly critical. The objective of this curriculum is to provide the managerial and operative training needed for the successful farm operation.

Job Description

The graduate of the general Agricultural Science and Mechanization curriculum is trained to manage and operate a farm. In addition, he/she should be able to perform most of the repairs to buildings and equipment as well as perform the necessary electrical, construction and plumbing requirements pertaining to the farm operation.

*The satisfactory completion of 18 hours of general education in addition to the technical specialities will lead to an Associate of Applied Science Degree.

AGRICULTURAL SCIENCE AND MECHANIZATION CURRICULUM

	Quarter Hours Credit
Required Agriculture Courses	
AGR 101, 102, 106, 108, 109, 112, 114, 118, 121, 122, 124, 126, 127, 128, 131, 133, 136, 138, 141, 142, 154, 155, 186, 190, 200, 208, 213, 228, 238, 240, 243, 245, 272, 274, 296.....	96
Required Courses for Associate of Applied Science Degree	
ENG 101, 102, 103, 204.....	12
Social Science electives.....	6
Total Required for Associate Degree	**114**

AGRICULTURAL SCIENCE TECHNOLOGY

Purpose of Curriculum

There is a growing scarcity of young persons trained in basic agricultural science of production and management. The size of farms is increasing and the complexity of producing crops and livestock profitably is requiring an increased amount of scientific knowledge and technology. Large outlays of local, State, and Federal requirements for housing, equipment operation, and maintenance. The purpose of this curriculum is to enable the student to acquire the kinds of knowledge and skills necessary for sound economical operation of a farm or producing unit, as owner or manager.

Job Description

The graduate of the Agricultural Science Technology curriculum is trained to operate and manage a farm and should be able to schedule operations and draw up a long-range farm management plan. In addition, he/she should be able to perform repairs on buildings and equipment and plan for the electrical, construction, and plumbing requirements pertaining to the farm operation.

AGRICULTURAL SCIENCE TECHNOLOGY CURRICULUM

	Quarter Hours Credit
Required Agriculture Courses	
AGR 101, 102, 106, 108, 109, 112, 114, 118, 121, 122, 124, 126, 127, 128, 131, 133, 136, 138, 141, 142, 154, 155, 183, 186, 190, 200, 208, 213, 228, 238, 240, 243, 245, 272, 274, 296	96
Required English Courses	
ENG 101, 102, 103, 204	12
Required Electives	
Two Social Science electives from the following: PSY 101, 206 SOC 101, 102 SSC 205	6
Total Required Hours	**114**

AIR CONDITIONING AND REFRIGERATION MECHANICS

Purpose of Curriculum

There is today a greater demand from industry for qualified mechanical experts in all areas of the field of Air Conditioning and Refrigeration. This curriculum is designed to help equip young people who plan for a vocation in this broad sphere of activity.

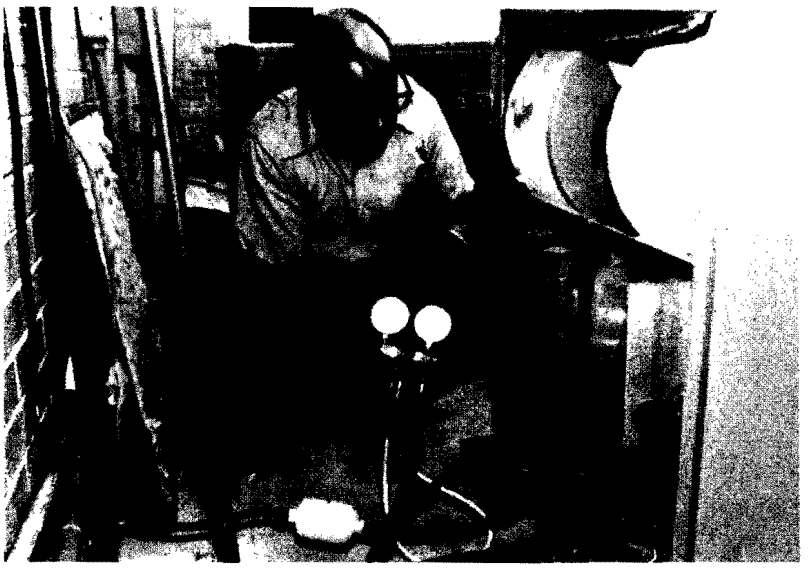
A comprehensive study of theory and fundamentals of refrigeration, heating and air conditioning is completed and the student is enabled to understand rather than merely accept the functions of the mechanical equipment involved. Great emphasis is placed on manipulative skills, installation and service procedures, exercise and training in practical thinking. The related subject phase of the program provides for a better-rounded individual through work in the areas of math, English, and social studies.

Job Description

An abundance of job opportunities exist in the many mechanical contracting organizations in business today. Graduates may pursue one of the many lines of work that make up this great industry. They may remain entirely in the refrigeration branch following the trade of installation or service mechanic, or both. Some of the larger contractors indulge in all phases and provide a vast assortment of jobs including pipe work, metal work, insulation work, control and service work. Background afforded the students often enables their elevation to foreman and supervisory positions. Plant maintenance in industry and government provide attractive possibilities.

AIR CONDITIONING AND REFRIGERATION MECHANICS CURRICULUM

	Quarter Hours Credit
Required Air Conditioning Courses	
AHR 1121, 1122, 1125, 1127, 1129, 1130, 1132, 1133, 1135, 1136, 1141, 1142, 1145, 1146, 1149	71
Required Business Course	
BUS 1103	3
Required Drafting Course	
DFT 1180	4
Required Economics Course	
ECO 1105	3
Required English Courses	
ENG 1101, 1102, 1103	9
Required Math Course	
MAT 1101	4
Required Physics Courses	
PHY 1101, 1102, 1103	12
Required Psychology Course	
PSY 1106	3
Required Welding Course	
WLD 1180	3
Total Required Hours	**115**



ARCHITECTURAL DRAFTING AND DESIGN BUILDING TRADES

Purpose of Curriculum

Since the beginning of man, two of his most basic needs have been food and shelter. The latter, referred to as architecture, has been defined as an expression of civilization through the medium of its buildings. Our buildings are, in fact, architecture reflecting the use of materials, light, and space. Every type of building in our environment is the result of the application of design, drawing and science. Today, architecture is still one of our most basic needs. There are more people involved in satisfying this need than any other single need.

If you are interested in a field of endeavor that is creative in nature and has unlimited opportunities, an architectural drafting and design career could well be the course to pursue.

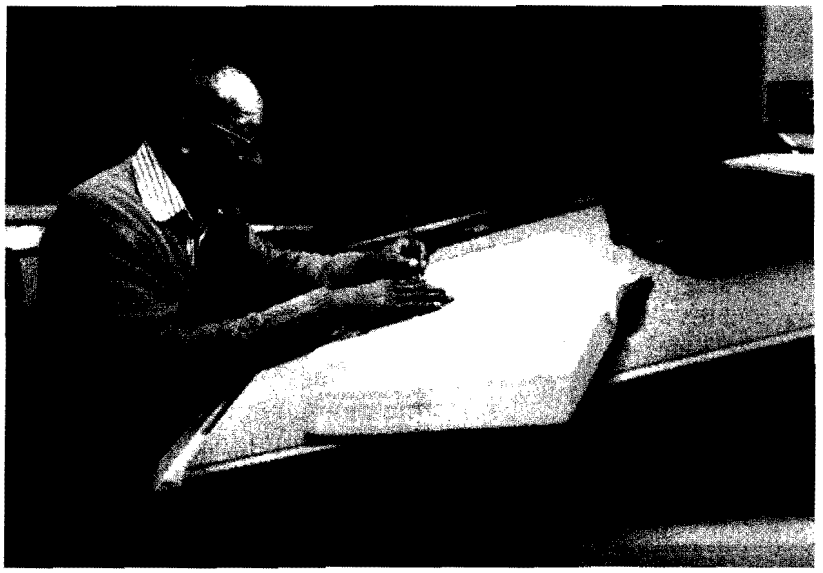
Job Description

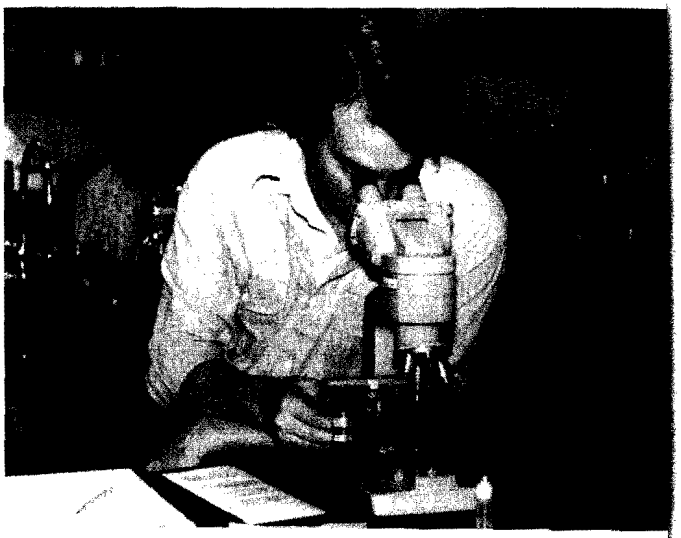
The curriculum at Fayetteville Technical Institute prepares the individual to assume a position in the broad building industry. Opportunities exist in all aspects of design, production and construction of our physical environment. Graduates find work with architects, architectural departments of corporations, contractors, residential designers, city planning departments, decorators, engineering firms, materials manufacturers, and virtually all types of businesses which require individuals skilled in reading, preparing and interpreting architectural drawings.

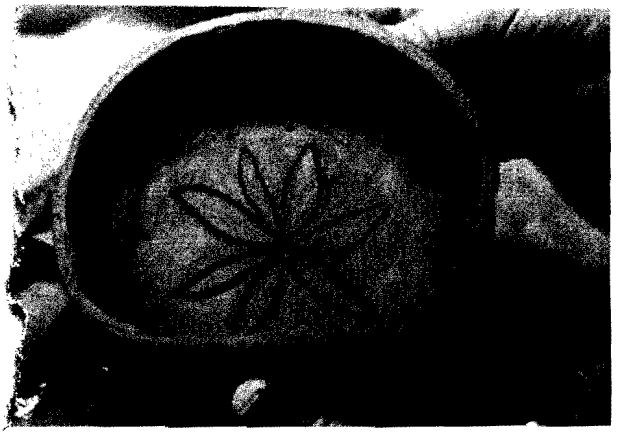
Although instruction is given in many other areas of architecture, the curriculum is basically oriented towards drafting. Also, since one involved in architecture associates with many levels of personnel and must communicate effectively with them, instruction is given in the areas of mathematical communications, social studies, language communications, and the physical sciences. This provides for the student drafting skills, architectural knowledge, confidence in his relations with other persons, and the ability to advance rapidly and proficiently upon entering the field.

ARCHITECTRAL DRAFTING CURRICULUM

	Quarter Hours Credit
Required Architectural Courses	
ARC 1112, 1145, 1226, 1227, 1228, 1231, 1232, 1233, 1238, 1239, 1241, 1242, 1250, 1264, 1265	73
Required Commercial Art Courses	
CAT 1109, 1110, 1111, 1112, 1120, 1121, 1126	24
Required Economics Course	
ECO 1105	3
Required English Courses	
ENG 1101, 1102, 1103	9
Required Math Courses	
MAT 1102, 1103, 1104	11
Required Physics Courses	
PHY 1101, 1102	8
Required Psychology Course	
PSY 1106	3
Total Required Hours	**131**







ASSOCIATE DEGREE IN GENERAL EDUCATION

Purpose of Curriculum

Typically, post-secondary education in North Carolina has been of two types: mainly academic or primarily job-related. While efforts at developing programs embracing both academic and job-related instruction have been largely successful, the opportunities to receive this instruction have been restricted to full-time day students for the most part. Thus, persons who, due to economic necessity or myriad other reasons, decided to forego the academic pursuits during the workday have been denied the opportunity to further their general educational goals in a structured, degree-earning sense.

The aspirational and intellectual growth of persons who did not pursue post-secondary education has continued without a means by which this growth may be brought under systematic development.Thus, the persons who now make up middle management, wives whose families are semi-independent, as well as the more traditional college students (who crave to understand and fully appreciate the intellectural, political, and rational world in which we, today, find ourselves) are provided a means by which they can gain orderly, progressive, awarenesses of the enriching factors which have contributed to our present and which will, in part, determine our future as individuals and as a people.

This program may be terminal (with a degree) or contributory to future individual development, designed specifically along general education lines, with parallel classes offered in the day and in the evening.

Job Description

The General Education Associate Degree Program offered at Fayetteville Technical Institute is for the student who is basically interested in two years of education beyond the high school level.

The program is principally designed for students wanting only two years of higher education; however, many of the required and elective courses in the program are equivalent to four-year college courses and may permit the application of these courses toward senior college degree programs.

When the student has completed basic general education requirements and has accumulated additional satisfactory work to a minimum total of 96 quarter hours credit, he/she will be granted a General Education Associate Degree (GEAD).

GENERAL EDUCATION ASSOCIATE DEGREE CURRICULUM

	Minimum Credit Hours Required
English Composition	9
World Literature	9
Physical Science (Natural Science) BIO 201 and 202	10
Mathematics – one of the following combinations: MAT 108 & 109 or MAT 108 & 105 or MAT 109 & 111 or MAT 109 & 112	10
Social and Behavioral Sciences Western Civilization ..... 9 Philosophy & Logic ..... 6 Art Appreciation ..... 3 Music Appreciation ..... 3 Electives: Two courses must be selected from among the following discipline areas: history, political sciences, psychology, sociology 6	27
Total Required	65
Electives — non-duplicating courses from General Education, Business, Health, Public Service, or Technology Curricula	31
Total Degree Requirements	**96**

GENERAL EDUCATION ELECTIVES

Biology			Class Hours	Lab Hours	Clinic/ Shop Hours	Quarter Hours Credit
BIO	106	Human Anatomy & Physiology I	4	3	0	5
BIO	107	Human Anatomy & Physiology II	4	3	0	5
BIO	108	Microbiology	5	3	0	6
English						
ENG	103	Report Writing	3	0	0	3
ENG	204	Oral Communications	3	0	0	3
ENG	210	American Literature I	3	0	0	3
ENG	211	American Literature II	3	0	0	3
ENG	212	Creative Writing	3	0	0	3
ENG	214	Mythology	3	0	0	3
ENG	216	Modern Drama	3	0	0	3
ENG	217	Children's Literature	3	0	0	3

Mathematics						
MAT	111	College Trigonometry	5	0	0	5
MAT	121	Elementary Technical Mathematics for Civil and Environmental Engineering	5	0	0	5
MAT	122	Basic Technical Mathematics for Civil and Environmental Engineering	5	0	0	5
MAT	123	Intermediate Technical Mathematics for Civil and Environmental Engineering	5	0	0	5
MAT	201	Calculus I	5	0	0	5
MAT	202	Calculus II	5	0	0	5
MAT	203	Calculus III	5	0	0	5
MAT	204	Calculus IV	5	0	0	5
Physical Science						
CHM	101	General Chemistry	3	2	0	4
CHM	102	General Chemistry	3	2	0	4
CHM	103	General and Introductory Analytical Chemistry	3	2	0	4
PHY	101	Properties of Matter	3	2	0	4
PHY	102	Work, Energy, Power	3	2	0	4
PHY	104	Light and Sound	3	2	0	4
Social Sciences and the Humanities						
ART	102	Drawings and Composition	1	2	0	2
ART	103	Drawing and Oil Painting	1	2	0	2
ART	105	Ceramics I	1	2	0	2
ART	106	Ceramics II	1	2	0	2
ART	107	Advanced Drawing I	1	5	0	3
ART	108	Advanced Oil Painting	1	5	0	3
ART	109	Advanced Drawing II	1	5	0	3
ART	110	Pottery I	1	2	0	2
ART	111	Pottery II	1	2	0	2
EDU	100	Principles of Learning	3	0	0	3
EDU	102	Introduction of Library Science	0	2	0	1
EDU	103	Foundations of American Education	3	0	0	3
EDU	104	Teacher's Aide Methods	3	0	0	3
EDU	202	Child Growth and Development	3	0	0	3
EDU	204	Parenting Skills	3	0	0	3
EDU	205	Basic Reading Skills: grades K-3	3	0	0	3
EDU	206	Basic Reading Skills: grades 4-12	3	0	0	3
EDU	207	Reading Readiness and Development	3	0	0	3
EDU	208	Creative Writing and Speaking	3	0	0	3

EDU	210	Art in Early Childhood Programs	3	0	0	3
EDU	211	Social Studies & Primary Children	3	0	0	3
EDU	212	Basic Math Skills	3	0	0	3
EDU	213	Methods and Materials: Exceptional Children	3	0	0	3
EDU	215	The Exceptional Child	3	0	0	3
EDU	216	Working with the Problem Child and Family	3	0	0	3
EDU	234	Methods & Materials: Early Childhood Education	3	0	0	3
HIS	201	American History I	3	0	0	3
HIS	202	American History II	3	0	0	3
HIS	203	American History III	3	0	0	3
HIS	210	North Carolina History I	3	0	0	3
HIS	211	North Carolina History II	3	0	0	3
POL	102	State and Local Government	3	0	0	3
POL	103	National Government	3	0	0	3
PSY	101	Introduction to Psychology	3	0	0	3
PSY	202	Human Growth and Development	3	0	0	3
PSY	204	Abnormal Psychology	3	0	0	3
PSY	208	Grief Psychology	3	0	0	3
PSY	280	Forensic Psychology	5	0	0	5
SOC	101	Introduction to Sociology	3	0	0	3
SOC	102	Marriage and the Family	3	0	0	3
SOC	210	Contemporary Social Problems	3	0	0	3
SSC	205	American Institutions	3	0	0	3

TEACHING ASSISTANT CONCENTRATION

A student may elect a group of courses specifically oriented toward assisting teachers in the classroom and, using those courses as elective in the GEAD curriculum, receive a GEAD upon completion of the program with a Concentration in Teaching Assistant.

The specific courses which must be taken to satisfy the Teaching Assistant Concentration are:

	Quarter Hours Credit
General Education Associate Degree Required Courses (See above)	65
Required Education Courses	
EDU 100, 102, 103, 104, and 202, 204, 205, 206, 207 and 212	25
Required English Course	
ENG 217	3
Electives	
Select one from: EDU 208, 210, 211, 213, 215, 216, 234	3
Total required credits for the General Education Associate Degree with a Concentration in Teaching Assistant	96

DEVELOPMENTAL STUDIES PROGRAM

The Developmental Studies Program is an integrated student-centered program of instruction designed to increase the likelihood of success for students who enter this Institute with academic deficiencies. The goal of this program is to develop the academic ability of every entering student to the extent that he has an above average likelihood of success in one of the several regular curricula areas.

Students are initially assigned to courses appropriate to their desires, to their tested abilities, and as deemed proper by their counselors. As students progress, they are permitted to develop at their own speed, in classes which are within their level of competence.

Each student is encouraged to progress to his utmost capability, and upon completion of the program, is permitted to select a curriculum consistent with his/her proven performance.

The Developmental Studies courses combine academic courses and laboratory/shop instruction to provide students with integrated theory-procedures and practical applicatory understanding of the subject matter requisite to regular curricular success.

Students may spend from one quarter to three quarters, or more, in the Developmental Studies Program. However, normally, the student will stay in the program for three quarters (one academic year). All academic regulations are applicable to this phase of college study. Courses are provided at two or more levels in English (reading, grammar, composition, and speech), mathematics, physical science, social science and curricula related shops and laboratories.

During each quarter, a student will take a course in English, math, and a physical science. In addition to these, he/she may select an elective from the Business, General, Vocational, Technical or Health Education area.

Biology — includes basic and advanced knowledge of an experimentation with living organisms. Biology is appropriately studied by students who plan to major in any of the health sciences, such as Nursing.

English — instruction is designed to provide functional ability in the successful use of the language and includes:

a. Reading — designed to promote interest in reading while enhancing the students' vocabulary and dictionary and research skills.

b. Composition and grammar — review the rules related to meaningful English usage and provide the students with the

opportunity to apply those rules, while focusing on the writing of good sentences and paragraphs.

c. Speech — the oral use of English as a communicative tool, improves the student's enunciation, pronunciation, and language usage. Speech instruction and application is integrated in all English instruction.

Mathematics — designed to teach knowledge and skills needed in everyday life and advanced instruction.

a. Level I, introduces basic operations of the numbers system, kinds of numbers, addition, subtraction, division and multiplication to develop accuracy and speed through drill and problem solving. Success in Level I Mathematics increases the students' likelihood of success in Vocational and Business Curricula.

b. Level II, introduces the student to algebra and geometry and builds the concepts needed in dealing with equations and geometrical problems. Level II also deals with more advanced algebraic and geometrical problems necessary to succeed in Technical curricula. Included are the application of mathematics to problem solving by using: ratio and proportion, direct measurement, line, angles, permetrics, areas, volumes, indirect measurement, triangles, and polygrams. Emphasis is placed on the application of mathematics and mathematical procedures to the industry of today.

Physical Science — instruction designed for students who have had little or no laboratory experience at the high school level, but offered also to others who may have had such experience but who lacked sufficient opportunity to understand the scientific method and scientific discipline.

Developmental Physical Science acquaints the student with lab equipment and practices, scientific terminology, and the scientific method, by using instruction and practical experiments.

a. Level I Physical Science includes basic physical phenomena and scientific practices and is appropriate for students who plan to continue in Vocational and/or Business curricula.

b. Level II Physical Science includes a more advanced approach to the subject.

c. Chemistry includes an introduction to chemical elements and chemical phenomena and is appropriate for students who plan to pursue Technical curricula.

Social Science — Man in his social environment is integrated with the instruction primarily designated English and Physical Science. Social Science instruction fosters the understanding that each of us is dependent upon and supportive of the society of

which we are a part, and is presented by examples drawn from history, sociology, economics, psychology, and the humanities.

Social Science instruction in the Developmental Studies Program is intended to facilitate the development of individual values and value systems in each student appropriate to his/her own life circumstance, style, and his/her environment.

DEVELOPMENTAL STUDIES PROGRAM CURRICULUM

Level I — For students with vocational and business orientations except as selected as an elective course or courses with the instructor's approval.

	Quarter Hours Credit
Required English Courses	
ENG 91, 92, and 93	12
Required Mathematics Courses	
MAT 91, 92, and 93	12
Required Physical Science Courses	
PHY 91, 92, and 93	
or	
BIO 92, 93, and 94	12
Required Education Course	
EDU 80	4
Electives	
Three electives drawn from Developmental Studies electives (listed below)	12
Total Required Hours	**52**

Level II — For students with technical, health, and general education orientations except as selected as an elective course or courses with the instructor's approval.

	Quarter Hours Credit
Required English Courses	
ENG 91, 92, and 93	12
Required Mathematics Courses	
MAT 94, 95, & 96 (GEAD Students) or	
MAT 95, 96, & 97 (Engineering Technology Students)	
MAT 98 (ADN Students)	12
Required Physical Science Courses	
PHY 94, CHM 93, and PHY 95 or CHM 96	
or	
BIO 92, 93, and 94	12
Required Education Course	
EDU 80	4
Electives	
Three electives drawn from Developmental Studies electives (listed below)	12
Total Hours Required	**52**

DEVELOPMENTAL STUDIES ELECTIVES

AHR	95	Shop Practice	2	0	3	3
BUS	85	Typing I	2	3	0	3
BUS	86	Typing II	2	3	0	3
BUS	94	Bookkeeping I	3	2	0	4
BUS	95	Bookkeeping III	3	2	0	4
BUS	98	Bookkeeping II	3	2	0	4
BUS	99	Family Economics	3	2	0	4
CIV	93	Introduction to Technology	2	3	0	3
DFT	90	Mechanical Drawing I	2	3	0	3
DFT	92	Mechanical Drawing II	2	3	0	3
DFT	93	Elementary Drawing	2	3	0	3
MEC	96	Shop Practice (Machines)	2	0	3	3
PME	93	Shop Practice (Automotive)	2	0	3	3
PNE	93	Introduction to Practical Nursing	2	0	7	5
SSC	90	Introduction to the Social Sciences	3	2	0	4
WLD	95	Shop Practice (Welding)	2	0	3	3

PRELIMINARY DEVELOPMENT STUDIES CURRICULUM

To provide access to levels of instruction within their capabilities, preliminary Development Studies courses are available to students who cannot profitably function on either Level I or on Level II. These courses are characterized by a rudimentary level of instruction, concentrated attention, small class size, and special-purpose audio-visual equipment.

	Quarter Hours Credit
Required English Course	
ENG 50	8
Required Math Course	
MAT 50	8
Total Required Courses	**16**

ASSOCIATE DEGREE NURSING PROGRAM

Purpose of Curriculum

One of the great needs of this community in the field of health is the same found in communities across the nation, that being for registered nurses who are prepared to function as staff nurses. It is the purpose of the Associate Degree Nursing Program at Fayetteville Technical Institute to prepare nurses to help meet this need through a well-balanced curriculum of general education and nursing education.

The formal classroom teaching is conducted at Fayetteville Technical Institute. Clinical laboratory experience is obtained in the hospitals and health agencies in the Fayetteville area where learning experiences are selected to meet the objectives of the curriculum. Graduates of the program are granted an associate degree and are eligible to write the National State Board Test Pool Examination for the Registered Nurse.

Job Description

The registered nurse with an associate degree licensed for the practice of nursing participates with other members of the health team in rendering care to individuals. The associate degree nurse assists in planning the day to day care of patients of all ages, implements measures to promote comfort and alleviate distress, assists in evaluating the patient's physical and emotional reactions to therapy, and supervises other workers in the technical aspects of care. The associate degree nurse will be working under the direction and supervision of the professional registered nurse upon graduation.

ASSOCIATE DEGREE NURSING CURRICULUM

	Quarter Hours Credit
Required Nursing Courses	
NUR 101, 102, 103, 104, 205, 206, 207, 208	63
Required Biology Courses	
BIO 106, 107, 108	16
Required Economics Course	
ECO 102	3
Required English Courses	
ENG 104, 105, 204, 210	12
Required History Course	
HIS 106	3
Required Psychology Courses	
PSY 101, 202, 204	9
Required Sociology Courses	
SOC 101, 102	6
Required Electives	
Two Social Science or Humanities	6
Total Required Hours	**118**

AUTOMOTIVE MECHANICS

Purpose of Curriculum

This curriculum provides a training program for developing the basic knowledge and skills needed to inspect, diagnose, repair or adjust automotive vehicles. Manual skills are developed in practical shop work. Thorough understanding of the operating principles involved in the modern automobile comes in class assignments, discussion, and shop practice.

Complexity in automotive vehicles increases each year because of scientific discovery and new engineering. These changes are reflected not only in passenger vehicles, but also in trucks, busses, and a variety of gasoline-powered equipment. This curriculum provides a basis for the student to compare and adapt to new techniques for servicing and repair as vehicles are changed year by year.

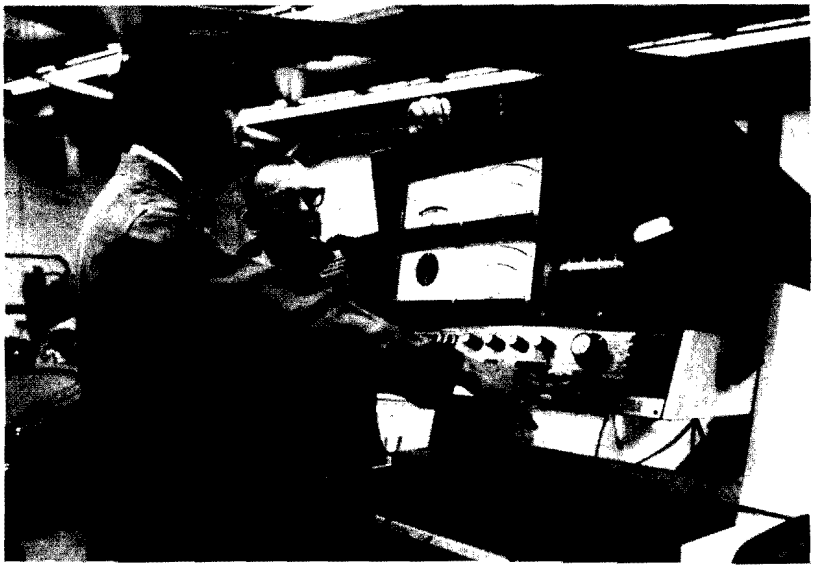
Job Description

Automobile mechanics maintain and repair mechanical, electrical, and body parts of passenger cars, trucks, and busses. 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. They use shop manuals and other technical publications.

Automotive mechanics in smaller shops usually are general mechanics qualified to perform a variety of repair jobs. A large number of automotive mechanics specialize in particular types of repair work. For example, some may specialize in repairing only power steering and power brakes, or automatic transmissions. Usually such specialists have an all-round knowledge of automotive repair and may occasionally be called upon to do other types of work.

AUTOMOTIVE MECHANICS CURRICULUM

	Quarter Hours Credit
Required Automotive Courses	
PME 1101, 1102, 1123, 1124, 1125, 1132, 1133, 1135, 1170, 1181, 1182, 1183	69
Required Business Course	
BUS 1103	3
Required Drafting Course	
DFT 1180	4
Required Economics Course	
ECO 1105	3
Required English Courses	
ENG 1101, 1102, 1103	9
Required Math Course	
MAT 1101	4
Required Machinist Course	
MEC 1198	4
Required Physics Courses	
PHY 1101, 1102, 1103	12
Required Psychology Course	
PSY 1106	3
Required Welding Course	
WLD 1180	3
Total Required Hours	**114**



BANKING AND FINANCE

Purpose of Curriculum

The Associate Degree in Banking and Finance curriculum is designed primarily for banking employees and others who wish to begin work toward a college degree or to continue a degree program interrupted at an earlier date. Many bank employees are presently enrolled in AIB certificate courses for professional development. These same courses, successfully completed, can now also, systematically lead to an Associate Degree in Banking and Finance from FTI. Further, through transfer of credits to a four-year institution, a student may apply for further work toward a bachelor's degree.

Job Description

The ultimate mission of the Banking and Finance curriculum is excellence in job performance. Graduates entering the banking profession will have knowledge, skills, and attitudes consonant with employment opportunities in bank middle management. With only a minimum of specific on-the-job instruction, graduates will quickly be able to make a significant contribution to the banking enterprise.

BANKING AND FINANCE CURRICULUM

	Quarter Hours Credit
Required Banking Courses	
AIB 202, 203, 205, 207, 209, 210, 211, 213, 214, 219, 233	44
Required Business Courses	
BUS 102 or 103, 110, 115, 116, 120, 121, 185, 234, 239, 272 ...	42
Required Economics Courses	
ECO 102, 104	6
Required Electronic Data Processing Course	
EDP 104	3
Required English Courses	
ENG 101, 102, 103	9
Required Math Course	
MAT 110	4
Required Electives	
One Social Science	3
One approved elective	5
Total Required Hours	**116**

Banking Electives

AIB 102, 110, *120, *121, 123, 204, 206, 220, 225, 227, 231, 232, 239, 259

*AIB 120 & 121 are equivalent to BUS 120.

BUSINESS ADMINISTRATION

Purpose of Curriculum

In North Carolina, the opportunities in business are increasing. With the increasing population and industrial development in this State, business has become more competitive and automated. Better opportunities in business will be filled by students with specialized education beyond the high school level. The Business Administration curriculum is designed to prepare the student for employment in one of the many occupations common to business. Training is aimed at preparing the student in many phases of administrative work that might be encountered in the average business.

The specific objectives of the Business Administration curriculum are to develop the following competencies:

1. Understanding of the principles of organization and management in business operations.
2. Understanding our economy through study and analysis of the role of production and marketing.
3. Knowledge in specific elements of accounting, finance, and business law.

Job Description

The graduate of the Business Administration curriculum may enter a variety of career opportunities from beginning sales person or office clerk to manager trainee. The duties and responsibilities of this graduate vary in different firms. These encompassments might include: making up and filing reports, tabulating and posting, operating various office machines, and assisting managers in supervising. Positions are available in businesses such as advertising, banking, credit, finance, retailing, hotel, wholesaling, tourist, travel industry, insurance, transportation, and communications.

BUSINESS ADMINISTRATION CURRICULUM

	Quarter Hours Credit
Required Business Courses	
BUS 102 or 103, 110, 115, 116, 120, 121, 123, 124, 185, 234, 239, 247, 285	53
Required Economics Courses	
ECO 102, 104	6
Required Electronic Data Processing Course	
EDP 104	3
Required English Courses	
ENG 101, 102, 103, 204, 206	15
Required Management Course	
ISC 220	3
Required Math Course	
MAT 110	4
Required Electives	
*Curriculum electives	18
**Business electives	12
Social Science electives	6
Total Required Hours	**120**

**Curriculum Electives*

AIB 202
BUS 125, 229, 235, 243, 257, 272, 279, 282, 286
ECO 201
RLS 286

***Business Electives*

Any technical course offered by the Business Education Division and approved by Department Chairperson and Advisor.

CARPENTRY

Purpose of Curriculum

Carpentry is one of the basic trades in the construction field. Carpenters construct, erect, install, and repair structures of wood, plywood, and wallboard, using hand and power tools. The work must conform to local building codes for both residential and commercial structures.

This curriculum in carpentry is designed to train the individual in safe and proper work habits in order to enter the trade with a background in both skills and related information. He must have a knowledge of mathematics, blueprint reading, estimating materials, methods of construction and a thorough knowledge of building materials.

The modern carpenter will work on new construction, maintenance, and repair of many types of structures, both residential and commercial and should have an understanding of building materials, concrete form construction, rough framing, roof and stair construction, the application of interior and exterior trim, and the installation of cabinets and fixtures.

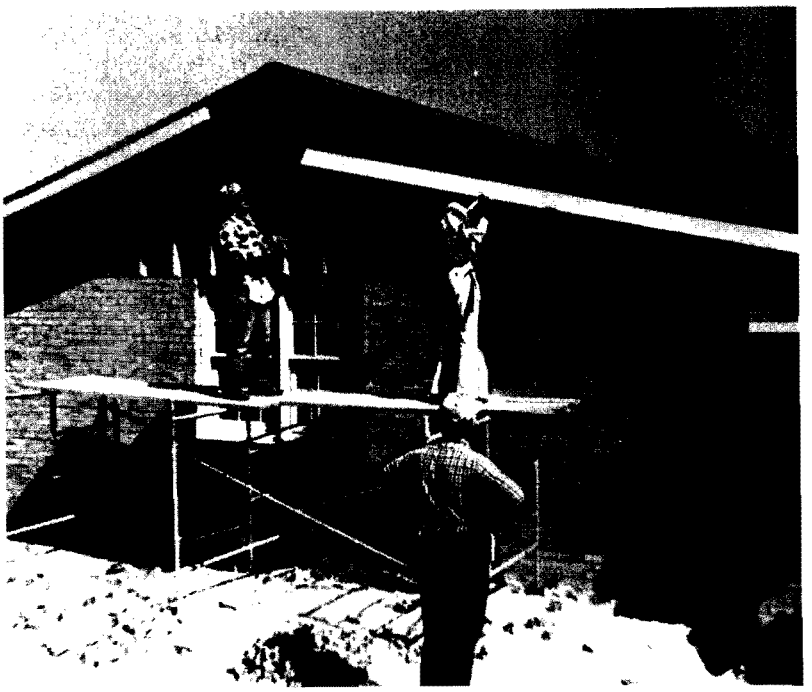
Most carpenters are employed by contractors in the building construction fields. When specializing in a particular phase of carpentry, the job is designated according to the specialty as layout carpenter, framing carpenter, concrete form carpenter, scaffolding carpenter, accoustical and insulating carpenter,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

Job Descripton

The carpenter constructs, erects, installs and repairs structures and fixtures of wood, plywood, wall board and other materials, safely using carpenters handtools and powertools to conform to local building codes. He/She is required to use specifications, blueprints, sketches or building plans for information pertaining to type of material, dimensions, layout and design of structure, and method of construction.

CARPENTRY CURRICULUM

	Quarter Hours Credit
Required Carpentry Courses	
CAR 1101, 1102, 1103, 1104, 1113, 1114	47
Required Business Course	
BUS 1103	3
Required Drafting Courses	
DFT 1110, 1111	4
Required English Courses	
ENG 1101, 1102	6
Required Math Course	
MAT 1101	4
Required Physics Course	
PHY 1103	4
Required Psychology Course	
PSY 1101	3
Total Required Hours	**71**



CIVIL ENGINEERING TECHNOLOGY

Purpose of Curriculum

Civil Engineering is the oldest branch, also one of the broadest fields of engineering. Consequently, the general purpose of the curriculum is to provide the base upon which to build future training either formal, informal, or self-motivated to assure future advancement in the expanding world of technology. Specifically, the curriculum provides training in the acceptable performance of those duties commonly assigned civil engineering technicians including:

A. Field Operations
   1. Field surveys (i.e., plane, geometric and site surveys, utility surveys, geological and traffic surveys).
   2. Project inspections and tests of soils, concrete, asphalt and aggregates and structures.

B. Office Services
   1. Preparation of cost estimates, designs, and drawings.
   2. Writing of specifications, reports, letters, and job orders.
   3. Operation and programming of electronic computers.
   4. Performance of limited photogrammetric duties.
   5. Calculation of field surveys.

C. Construction Management
   1. Preparation of schedules for work and materials, and maintenance of progress records.
   2. Coordination of personnel, financing, materials, facilities, and equipment.
   3. Management of financial records.

Job Description

Civil Engineering technicians perform many of the planning, design and construction tasks in building highways, railroads, bridges, airfields, dams, factories, and ground facilities for sea transportation, and control of the flow of and uses of water for flood protection, power generation and recreation. Although they are trained to perform different tasks, they generally specialize in certain activities. The greater part of the field work, surveys, soil investigation and construction is carried on out-of-doors. Those preferring indoor work would probably be involved in Design Drafting, Estimating, Photogrammetry, Traverse computations or assisting engineers and sociologists as technical assistants for city planning and urban renewal projects.

CIVIL ENGINEERING TECHNOLOGY CURRICULUM

	Quarter Hours Credit
Required Civil Courses	
CIV 101, 102, 103, 107, 108, 114, 202, 204, 217, 219, 221, 223, 225, 228, 229, 230, 231, 271	72
Required Drafting Course	
DFT 101	3
Required Economics Course	
ECO 205	3
Required English Courses	
ENG 101, 102, 103, 204	12
Required Math Courses	
MAT 121, 122, 123, or MAT 101, 102, 103	15
Required Physics Courses	
PHY 101, 102, 103	12
Required Psychology Course	
PSY 206	3
Total Required Hours	**120**

COMMERCIAL ART

Purpose of Curriculum

The Commercial Art curriculum is designed to prepare the graduate with a sound, well-rounded background for technical and creative achievement throughout his/her professional life. The background is developed to prepare the student for performance on a contemporary professional level. Graduates will have adequate backgrounds in illustration, layout and lettering, design and production enabling them to be employed in some facet of commercial artistry.

Job Description

Graduates are qualified for employment in advertising agencies, design studios, department stores, industrial advertising departments, government agencies, newspapers, printing and publishing houses.

COMMERCIAL ART CURRICULUM

	Quarter Hours Credit
Required Commercial Art Courses	
CAT 1109, 1110, 1111, 1112, 1113, 1120, 1121, 1126, 1201, 1202, 1203, 1211, 1212, 1213, 1221, 1222, 1231, 1232, 1251, 1260	85
Required Architectural Courses	
ARC 1226, 1227, 1228	12
Required Economics Course	
ECO 1105	3
Required English Courses	
ENG 1101, 1102, 1103	9
Required Math Courses	
MAT 1102, 1103, 1104	11
Required Psychology Course	
PSY 1106	3
Total Required Hours	**123**

COSMETOLOGY

Purpose of Curriculum

Professional tonsorial and cosmetic care for today's women and men has attained professional status as the once-luxury has become a contemporary necessity. It is generally recognized that the demands for personal grooming in today's professional and personal encounters is essential. Cosmetologists are the experts who, in minimum time, provide many of the personal grooming services necessary to meet contemporary demands.

The cosmetology curriculum is designed to prepare the student for employment in the field of cosmetology. The curriculum provides instruction and practice in manicuring, shampooing, permanent waving, facials, massages, scalp treatments, haircutting, styling, hair pressing, chemical relaxing, thermal waving, curling, and wig service.

Job Description

After fulfilling course work and passing the State Board Cosmetology Test, the cosmetology graduate may begin work immediately. A six-month apprenticeship is required to provide in-depth professional experience with a licensed, experienced cosmetologist while earning and learning. After that, the cosmetologist will be eligible to work in any existing licensed cosmetology establishment or will be free to open a business and be able to perform any duties outlined in the curriculum.

COSMETOLOGY CURRICULUM

	Quarter Hours Credit
Required Cosmetology Courses	
COS 1101, 1102, 1103, 1104, 1105, 1106, 1107, 1108, 1109, 1110, 1111, 1112	72
Total Required Hours	**72**

DENTAL ASSISTING

Purpose of Curriculum

In an effort to meet an ever-increasing demand for dental health services, the team concept of dental service is being practiced. In this concept the dental assistant makes a significant contribution to increased productivity by working with the dentist as a "second pair of hands." Furthermore, in specified procedures, she assumes responsibility for direct intra-oral treatment. Assumption of the latter responsibilities requires formal training. Hence, the current demand for trained dental assistants for expansion and replacement purposes greatly exceeds the supply.

In North Carolina, educational criteria for dental assistants are established. The 1970 amendments to the North Carolina Dental Practice Act designated two categories of dental assistants: Dental Assistant I and Dental Assistant II. Furthermore, qualifications and functions for each classification are defined. The Dental Assistant II is legally permitted to perform certain procedures within the patient's mouth.

Job Descriptions

The primary function of the Dental Assistant is to serve as an extra pair of hands for the dentist. He or she plays an integral role in dental procedures by preparing the patient for treatment, mixing restorative materials, keeping the operative field clear, and sterilizing, organizing and transfering instruments to the dentist during operative procedures.

DENTAL ASSISTING CURRICULUM

	Quarter Hours Credit
Required Dental Courses	
DEN 1001, 1002, 1003, 1004, 1011, 1012, 1013, 1014, 1021, 1022, 1023, 1024, 1031, 1032, 1033, 1041	58
Required English Courses	
ENG 1102, 1103	*6*
Required Psychology Course	
PSY 1101	3
Total Required Hours	**67**

DENTAL HYGIENE

Purpose of Curriculum

The dental hygienist has long been a recognized auxiliary member of the dental profession. Only a relatively small number of hygienists have graduated each year as there were few training programs until recently when the Council on Dental Education encouraged establishment of the curriculum in recognized educational institutions offering college level education and training in technical institutes and community colleges. The number of schools of dental hygiene has grown rapidly in recent years as the dental profession has recognized the contribution that the dental hygienist can make to the extension of services to the public. The demand for graduates far exceeds the present supply and it is anticipated that this will continue into the future.

Subjects in the two-year program in dental hygiene may be grouped under four general headings: general education, basic sciences, dental sciences, and clinical practice.

Approximately 20% of the credits earned in a two-year program may be earned in general education, 30% in basic sciences, 30% in dental sciences, and 20% in clinical practice.

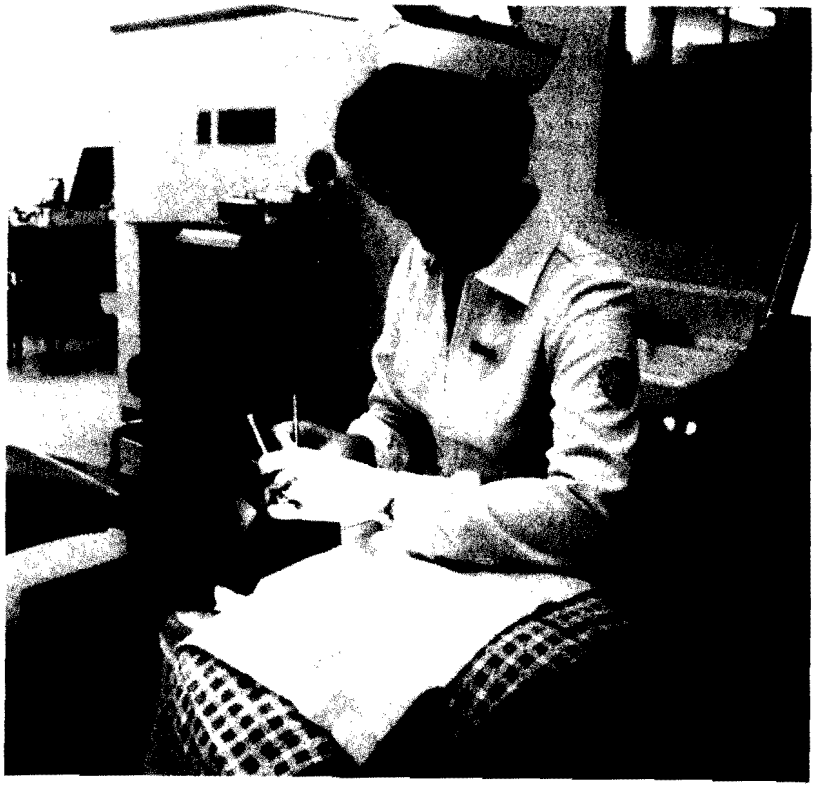
To comply with the policies of the profession and with State dental practice acts, a licensed dentist is available to supervise and direct all clinical phases of dental hygiene training.

Job Description

The role of the dental hygienist is to function as a member of the dental health team, with the primary purposes of providing preventive care and oral hygiene education, under the direction and supervision of a dentist. The dental hygienist is both a clinical practitioner and an oral health educator, using scientific methods of control and prevention of oral diseases, promoting maintenance of optimum health, and using public relations skills in instruction of patients and the public. The duties and functions assigned to the dental hygienist by the dental profession are viewed as essentially professional in nature.

DENTAL HYGIENE CURRICULUM

	Quarter Hours Credit
Required Dental Courses	
DEN 111, 112, 113, 116, 121, 122, 131, 133, 141, 210, 211, 212, 213, 214, 215, 216, 221, 222, 223, 224, 225, 231, 232, 233, 298	82
NUT 101	3
Required Biology Courses	
BIO 106, 107, 108	16
Required English Courses	
ENG 104, 105, 204	9
Required Psychology Course	
PSY 101	3
Required Sociology Course	
SOC 101	3
Required Elective	
One English Elective from the follow: ENG 106, 107, 209, 210, 211	3
Total Required Hours	**119**



DENTAL LABORATORY TECHNOLOGY

Purpose of Curriculum

The Dental Laboratory Technology curriculum prepares a person to enter the dental health field trained in the art and science of fabricating artificial dental restorations for the dental profession.

Dental Technology courses include classroom study and laboratory time for manipulative application.

Candidates should have a high degree of manual dexterity, good color perception, and enjoy detailed work.

Job Description

The objectives of this program are to prepare the student for employment as either a general laboratory technician or as a specialist in removable prosthetics (complete a partial dentures) or fixed prosthetics (crowns and bridges).

DENTAL LABORATORY CURRICULUM

	Quarter Hours Credit
Required Dental Courses	
DEN 101, 102, 104, 106, 107, 108, 109, 110, 114, 117, 118, 201, 202, 203, 204, 205, 206, 207, 208, 209	82
Required English Courses	
ENG 104, 105, 204	9
Required Math Course	
MAT 110	4
Required Psychology Course	
PSY 101	3
Required Sociology Course	
SOC 101	3
Required English elective	
One of the following:	
ENG 106, 209, 210, or 211	3
Total Required Hours	**104**

DRAFTING

Purpose of Curriculum

"Drafting for Industry" training provides instruction and information on drafting techniques and theory from fundamental skills through theory and practice in industrial applications. Each course is prepared to enable an individual to advance rapidly in drafting skills and proficiency upon entering the field of work. Although instruction is basically oriented toward machine and manufacturing drafting, several other areas of industrial drafting are introduced, such as pipe drafting, plant layout drafting, steel fabrication drafting and related areas they may encounter in industry.

Although instruction is given mainly in drafting for manufacturing, other related studies are included.Since the draftsman must be able to communicate with many levels of personnel, instruction will be given in areas of mathematics, English, physical science, and in applied psychology which provide skills in drafting, basic manufacturing processes, confidence in their relations with engineers, administrators and other skilled workers.

Job Description

Industrial drafting includes: preparing accurate working drawings for manufacturing or construction. Draftsmen usually work as a detailer or in layout design drafting, from both specifications, sketches and other design information. Other duties include making changes or adjustments in drawings as deemed necessary by engineers or designers. Of much importance is the utilization of theory and practice in visualizing objects in the preparation of drawings. Drafting by nature is a "Graphic Language". This language, not only saves a tremendous amount of time because of its terseness, but is far less susceptible to misunderstanding than the most carefully prepared written instructions ever could be.

Industrial drafting exercises manual skills in manipulation to tools such as triangles, compasses, drafting machines or other parallel ruling devices. However, the preparation of drawings, utilizing knowledge of materials, various machines and engineering practices in making the drawings for modern industry is the basic work performed by the Industrial Draftsman.

DRAFTING CURRICULUM

	Quarter Hours Credit
Required Drafting Courses	
DFT 1125, 1170, 1171, 1172, 1173, 1190, 1191, 1192, 1193, 1194, 1195	32
Required English Courses	
ENG 1101, 1102	6
Required Math Courses	
MAT 1102, 1104	8
Required Machinist Courses	
MEC 1108, 1110, 1111, 1160, 1161	16
Required Physics Courses	
PHY 1101, 1103	8
Required Psychology Course	
PSY 1101	3
Total Required Hours	**73**

ELECTRICAL INSTALLATION AND MAINTENANCE

Purpose of Curriculum

The rapid expansion of the national economy and the increasing development of new electrical products is providing a growing need for qualified people to install and maintain electrical equipment. By mid-1960 more than 350,000 were employed as either construction electricians or maintenance electricians. Between 5,000 and 10,000 additional tradespeople are required each year to replace those leaving the industry. The majority of the electrical tradespeople today are trained through apprenticeship or on-the-job training programs.

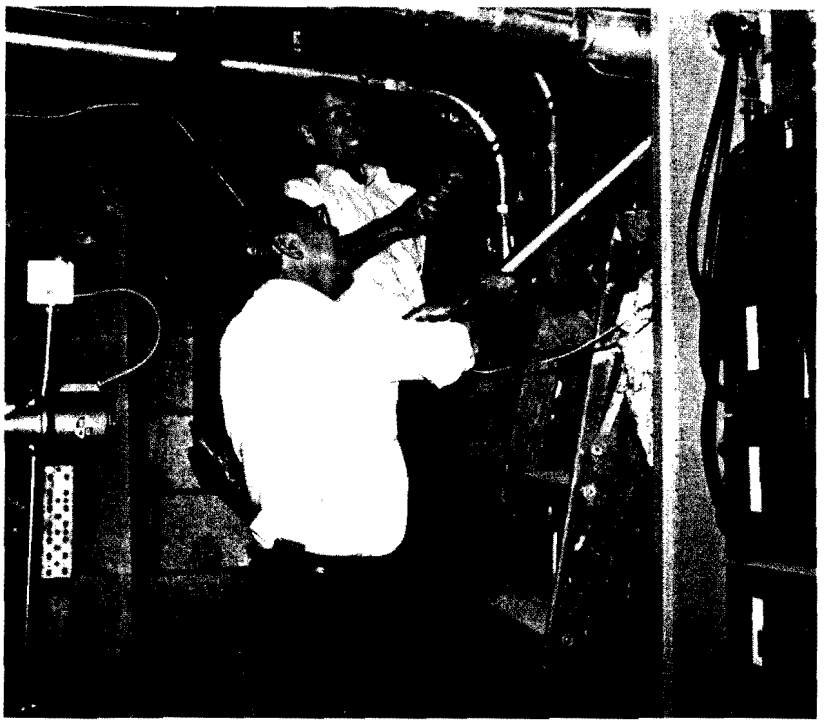
This curriculum provides a training program in the basic knowledge, fundamentals, and practices involved in the electrical trades. A large portion of the program is devoted to laboratory and shop instruction which is designed to give the student practical knowledge and application experience in the fundamentals taught in class.

Job Description

The graduate of the electrical trades program will be qualified to enter an electrical trade as an on-the-job trainee or apprentice, and will assist in the planning, layout, installation, check out, and maintenance of systems in residential, commercial, or industrial plants. He/She will have an understanding of the fundamentals of the National Electrical Code regulations as related to wiring installations, electrical circuits, and the measurements of voltage, current, power, and power factor of single and polyphase alternating circuits and will use a basic knowledge of motor and motor control systems: industrial electronic control systems; business procedures, organization, and practices; communicative skills; and the necessary background to be able to advance through experience and additional training through up-grading courses offered in the center.

ELECTRICAL INSTALLATION AND MAINTENANCE CURRICULUM

	Quarter Hours Credit
Required Electrical Courses	
ELC 1112, 1113, 1124, 1125	37
BMS 1133	4
Required Business Course	
BUS 1103	3
Required Drafting Courses	
DFT 1110, 1113	4
Required Electronic Courses	
ELN 1118, 1119	10
Required English Courses	
ENG 1101, 1102	6
Required Math Course	
MAT 1110	4
Required Physics Course	
PHY 1102	4
Required Psychology Course	
PSY 1101	3
Total Required Hours	**75**



ELECTRONIC DATA PROCESSING

Purpose of Curriculum

The use of computers for electronic data processing in the field of business applications is growing rapidly. The Electronic Data Processing curriculum is designed to prepare a student to enter the business programming field. The graduate will be trained to process programs dealing with business applications such as accounting reports, sales reports, production reports, inventory control, and related topics.

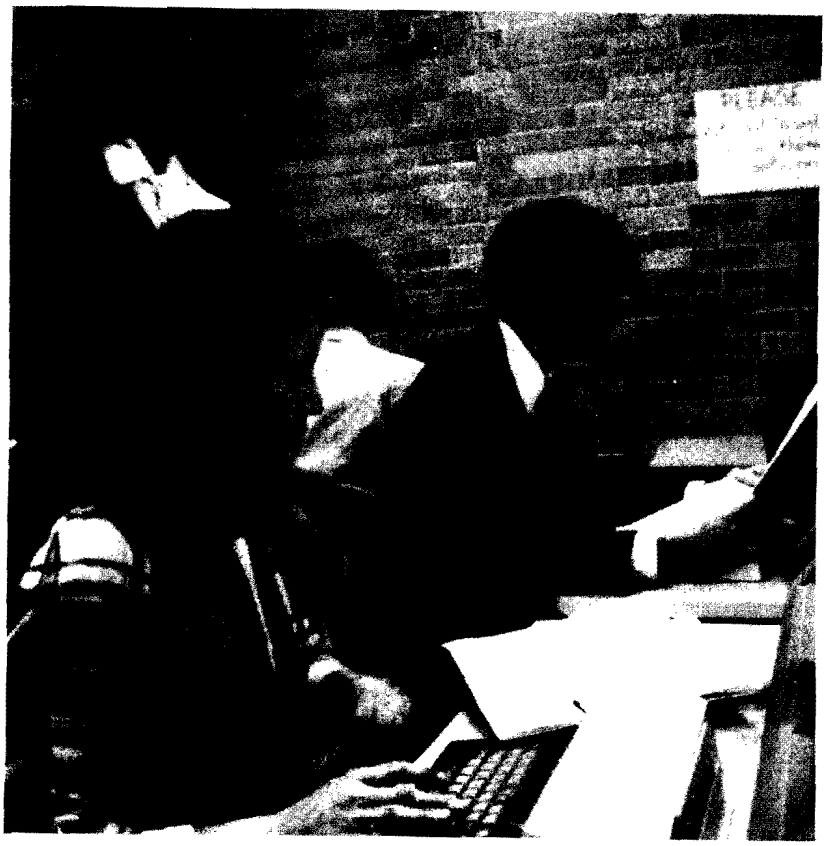
The curriculum is developed on three general levels of depth. The first level is introductory including courses in computer logic, accounting, and an introduction to data processing. The second level is compiler languages and their applications including courses in cobol, assembler, RPG, and Basic. The third level is introduction to systems including courses in computer systems and business statistics. Analysis and solution decision making are taught to the student to prepare him/her as a programmer-analyst trained to solve business and industry problems from inception to completion. Successful completion of the prescribed courses leads to award of an Associate Degree of Applied Science in Electronic Data Processing.

Job Description

As a programmer-analyst in the business environment, the graduate will be capable of handling problems at the system level rather than simply program coding the solution. Analysis of the entire problem, logical determination of the proper solution, coding of the programs to solve the problem in the appropriate computer language, testing the completed system for accuracy, and working with all levels of management are some of the tasks for which the graduate of the Electronic Data Processing curriculum is prepared. The graduate will be qualified to evaluate and select small business micro-computer systems.

ELECTRONIC DATA PROCESSING CURRICULUM

	Quarter Hours Credit
Required Electronic Data Processing Courses	
EDP 103, 104, 109, 110, 114, 204, 207, 208, 216, 221, 223, 230, 231	61
Required Business Courses	
BUS 102 or 103, 115, 120, 121, 122, 123, 229, 234, 282	43
Required Economics Courses	
ECO 102, 104	6
Required English Courses	
ENG 101, 102, 204, 206	12
Required Math Course	
MAT 106	5
Required Social Science Elective	
One Social Science elective	3
Total Required Hours	**130**



ELECTRONICS ENGINEERING TECHNOLOGY

Purpose of Curriculum

The field of electronics is one of the fastest developing engineering disciplines. Communications was the first and still is an important and expanding area within the field. As new electronic devices evolve more branches are generated, such as data processing, automatic industrial control, and collection and analysis of business and political information.

With the expansion of the application of electronics to more and more areas, there is a rapidly growing demand for men and women with education in the field. To meet this demand the curriculum is designed to provide a broad basic background on which the technician can develop in the area of his choice.

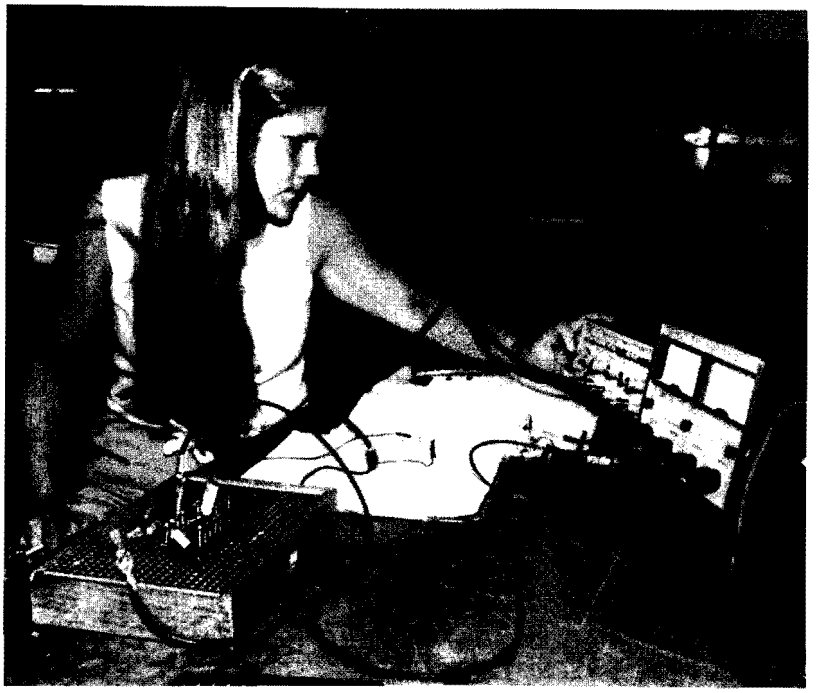
An increasing number of associate degree technicians are continuing their formal education to obtain a baccalaureate in technology.

Job Description

The electronic engineering technician may find opportunities in research, design, development, production, maintenance or sales. His/Her training prepares him/her to meet the problems of the practical implementation of the engineering concept. His/Her knowledge of circuitry and devices as well as measurement equipment and methods prepares him/her to analyze problems and results.

ELECTRONICS ENGINEERING TECHNOLOGY CURRICULUM

	Quarter Hours Credit
Required Electronics Courses	
ELC 101, 103	9
ELN 102, 103, 104, 106, 206, 207, 209, 211, 214, 215, 220, 235, 240, 245	55
Required Drafting Courses	
DFT 101	3
Required Chemistry Course	
CHM 101	4
Required Economics Course	
ECO 205	3
Required English Courses	
ENG 101, 102, 103, 204	12
Required Math Courses	
MAT 101, 102, 103, 286	18
Required Physics Courses	
PHY 101, 102, 104	12
Required Psychology Course	
PSY 206	3
Total Required Hours	**119**



ENVIRONMENTAL ENGINEERING TECHNOLOGY

Purpose of Curriculum

Our ever-increasing population and industrial expansion carries with it the demand for many services. One of the most vital of these services is the production and safeguardinng of our water supply. The production and protection of our water supply represents an economic investment in which North Carolina alone is spending over 20 million dollars per year for the construction and reconstruction of water and waste treatment facilities. Our industries use tremendous amounts of water daily in industrial processes and are spending thousands of dollars each year in research on treatment of liquid waste before it is returned to the streams and rivers. Industrial expansion coupled with rapid increase in automotive vehicles are beginning to create air problems which can only be solved by personnel technically trained in air resources control and sampling techniques.

These activities require increasing numbers of highly skilled personnel to perform the many specialized tasks involved.

These technicians are also being utilized for inspection and safe operation of milk production and processing, meat packing, food processing and service, together with housing and allied health problems, and the control of diseases.

This curriculum is designed to train technicians to work in areas related to Environmental Engineering and Public Health. The student receives related courses in mathematics, science, drawing and surveying in addition to specialized technical courses such as water and waste treatment, sanitation and control systems, air pollution sampling and air resources management.

Job Description

The graduate of this curriculum will have a knowledge of laboratory procedures and skill in performing many types of tests on liquid and solid wastes, foods, water and air to determine physical, chemical and bacteriological characteristics. He/She will be qualified for entry into a variety of positions such as public health engineering aide, sanitarian aide, treatment plant operators, stream sanitation technician positions with federal, State and local governments and municipalities, related to food, and water and air pollution problems.

ENVIRONMENTAL ENGINEERING TECHNOLOGY CURRICULUM

	Quarter Hours Credit
Required Environmental Courses	
ENV 101, 102, 104, 105, 108, 109, 112, 204, 205, 206, 216, 217, 218, 219, 226, 236	61
Required Civil Course	
CIV 101	4
Required Drafting Courses	
DFT 101, 285	5
Required Economics Course	
ECO 205	3
Required Electronics Course	
ELC 205	4
Required English Courses	
ENG 101, 102, 103, 204	12
Required Math Courses	
MAT 121, 122, or MAT 101, 102	10
Required Physics Courses	
PHY 101, 102	8
Required Psychology Course	
PSY 206	3
Total Required Hours	**110**

FOOD PREPARATION SPECIALIST

Purpose of Curriculum

The food service industry, one of the largest in the nation, has undergone many changes and substantial expansion during the past two decades. Large increases in population coupled with greater per capita income, and improved equipment requiring greater operative skills have created an unprecedented demand for well trained personnel. As the population of the nation continues to expand, the food service industry will also experience a similar growth rate. Industry expansion will stimulate the development of more efficient food preparation techniques and equipment; these improvements will simplify production processes which will make possible greater productivity. As a consequence, the demand for well trained food service workers will grow.

This curriculum is designed for training of students in the art and science of quantity food preparation with particular emphasis on institutional food service. In addition to development of knowledge and skills in the art and science of food preparation the students develop an understanding and appreciation of food and equipment purchasing, financial control, record keeping, basic nutrition and menu planning, and supervision.

Job Description

A food preparation specialist follows the principles of food preparation and cooking procedures that includes preparation of salads, stocks, soups, sauces, gravies, and beverages. The duties may include those of assistant cook, short order cook, chef's assistant, baker, or pastry cook.

FOOD PREPARATION SPECIALIST CURRICULUM

	Quarter Hours Credit
Required Food Service Courses	
FSO 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 117, 122	51
Required English Courses	
ENG 101, 102, 103	9
Required Psychology Course	
PSY 206	3
Required Elective	
One Social Science elective	3
Total Required Hours	**66**

FOOD SERVICE MANAGEMENT

Purpose of Curriculum

The food service industry, one of the largest in the nation, has undergone many changes and substantial expansion during the past two decades. Large increases in population coupled with greater per capita income, and improved equipment requiring greater operative skills have created an unprecedented demand for well trained personnel. As the population of the nation continues to expand, the food service industry will also experience a similar growth rate. Industry expansion will stimulate the development of more efficient food preparation techniques and equipment; these improvements will simplify production processes which will make possible greater productivity. As a consequence, the demand for well trained food service workers will grow.

This curriculum is developed for the training of students on the supervisory or "middle management" level in food service with particular emphasis on institutional food service. This program offers a second-year option in supervision management to the student completing the one-year Food Preparation Specialist curriculum.

Job Description

A food service manager interprets company policies, plans production schedules, maintains records, prepares menus, purchases food and equipment, analyzes and resolves work problems, and initiates or suggests plans to motivate workers to achieve work goals.

FOOD SERVICE MANAGEMENT CURRICULUM

	Quarter Hours Credit
Required Food Service Courses	
FSO 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 117, 122, 202, 203, 204, 205, 206, 207, 210, 211, 212	83
Required Business Courses	
BUS 235, 272	6
Required English Courses	
ENG 101, 102, 103, 204	12
Required Psychology Course	
PSY 206	3
Required Electives	
Two Social Science electives	6
Two Business electives	6
Total Required Hours	**116**

FUNERAL SERVICE EDUCATION

Purpose of Curriculum

The Funeral Service Education curriculum is a two-year college level program leading to the Associate in Applied Science Degree. The curriculum is designed to support "The Whole-Man-Total-Funeral Concept". The student is provided with the opportunity to acquire the knowledge and skills necessary to practice both embalming and funeral directing. The student learns both through lecture and laboratory, the basic funeral service skills which include embalming techniques and restorative art practices.

The principles, techniques, and practices of the operation of the historic and modern funeral home are taught for the student to acquire a foundation on which to build his professional practice.

A very important function of the program is to provide communications and human relations skills in order for the student to be better qualified to counsel the families of the deceased.

The student examines the detail current mortuary case law, death registration and the laws, rules, and regulations of both funeral service and vital statistics from the state in which he seeks licensure.

In the Professional Practicum, the student applies what he has been previously taught and experiences the panorama of modern funeral service practice by participation following funeral services from removal through interment.

Job Description

The graduate is qualified to take the National Board Examination which is produced by the Conference of Funeral Service Examining Boards. Licensees may practice funeral service by gaining employment at a funeral home. They may become funeral home owners or salesmen of funeral supplies. The graduate may elect to continue work on a Funeral Service baccalaureate degree at a four-year institution.

FUNERAL SERVICE EDUCATION CURRICULUM

	Quarter Hours Credit
Required Funeral Service Education Courses	
FSE 101, 115, 121, 206, 209, 210, 211, 212, 213, 214, 215, 224, 225, 257, 268, 280, 282	55
Required Biology Courses	
BIO 103, 104, 105	14
Required Business Courses	
BUS 115, 116, 119	*14*
Required Chemistry Course	
CHM 101	4
Required English Courses	
ENG 104, 105, 204	9
Required Psychology Courses	
PSY 101, 208	6
Required Sociology Courses	
SOC 101, 203	6
Required Electives	
One approved elective from the following: BUS 234, 235, PSY 204, 260, SOC 210	3/5
One English elective from the following: ENG 106, 107, 206, 209, 210, 211	3
Total Required Hours	**114/116**

GENERAL OFFICE TECHNOLOGY

Purpose of Curriculum

More people are now employed in clerical occupations than in any other single job category. Automation and increased production will mean that these people will need more technical skills and a greater adaptability for diversified types of jobs.

The General Office Occupations curriculum is designed to develop the necessary variety of skills for employment in the business world. Specialized training in skill areas is supplemented by related courses in mathematics, accounting, business law, and applied psychology.

Job Description

The graduate of the General Office Technology curriculum may be employed as an administrative assistant, accounting clerk, assistant office manager, bookkeeper, file clerk, machine transcriptionist, or a variety of other clerical-related jobs. Positions are available in almost every type of business, large or small.

GENERAL OFFICE TECHNOLOGY CURRICULUM

	Quarter Hours Credit
Required General Office Courses	
BUS *102, 104, 105, 110, 112, 183, 184, 204, 205, 211, 214, 261, 262, 270, 290	53
Other Required Business Courses	
BUS 115, 120, 185, 248, 271	19
Required Economics Course	
ECO 102	3
Required Electronic Data Processing Course	
EDP 104	3
Required English Courses	
ENG 101, 102, 103, 110, 204, 206	18
Required Math Course	
MAT 110	4
Required Electives	
Two Social Science	6
Total Required Hours	**106**

*Credit will be given if high school grade is C or better.

HORTICULTURE BUSINESS TECHNOLOGY

Purpose of Curriculum

Horticulture has experienced accelerated development in recent years in response to the growing demand for house, garden, agriculture, and ornamental plants. This expansion in the horticulture field has generated a specific need for the preparation of horticulture business technicians to work in supervisory and managerial positions in the production, operation, and sales of horticulture plants.

The Horticulture Business curriculum is designed to help students acquire the knowledge, understanding, and ability in the broad field of horticulture production and management. It combines the knowledge of horticulture with business accounting, supervision, and sales principles to prepare the graduate for many of the employment opportunities in horticulture.

Job Description

As horticulture business firms increase in number and size, the demand for technically trained business-oriented personnel becomes greater. Horticulture businesses are experiencing rapid changes in technologies of production, sales, and management; therefore, future employees of such firms must be prepared to understand these changes and adapt themselves easily. Successful completion of this curriculum will enable a person to assume responsibilities in horticulture business and advance at an acceptable rate.

Upon graduation from this curriculum an individual should qualify for various jobs in the production of a variety of horticultural plants in greenhouses, the operation of garden shops and nurseries, and certain service types of activities, such as lawn and garden establishment and maintenance.

The broad-based business training offered in the curriculum coupled with on-the-job training, will enable the graduate to advance rapidly to a managerial position with high-level responsibility.

HORTICULTURE BUSINESS TECHNOLOGY CURRICULUM

	Quarter Hours Credit
Required Horticulture Courses	
HOR 151, 153, 200, 201, 204, 205, 228, 254, 299	42
Required Agriculture Courses	
AGR 104, 170, 185, 201	21
Required Business Courses	
BUS 110, 115, 119, 123, 185, 228, 272, 285	30
Required Chemistry Course	
CHM 101	4
Required English Courses	
ENG 101, 102, 103, 204	12
Required Math Course	
MAT 110	4
Required Electives	
Two Social Science electives from the following:	
PSY 101, 206	
SOC 101, 102	
SSC 205	6
Total Required Hours	**119**

INDUSTRIAL MAINTENANCE

Purpose of Curriculum

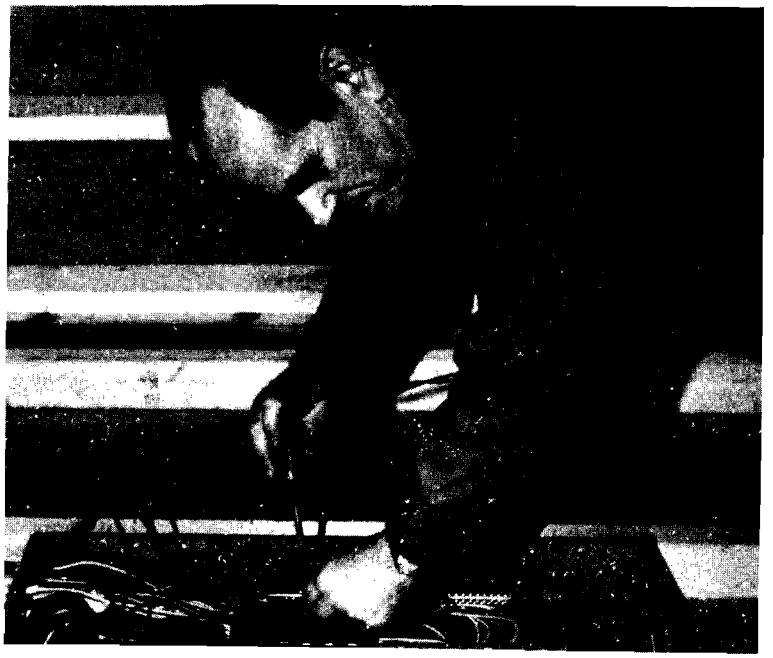
This curriculum provides training in the basic knowledge, fundamentals, and industrial practices in the maintenance of equipment, machinery and physical plant within industrial complexes. With the industrial growth of North Carolina and the wide variety of machinery and equipment used throughout the average manufacturing plant, qualified maintenance specialists who have a basic knowledge of general repair, maintenance and servicing practices in several areas and systems are in demand. Maintenance specialists develop a high degree of operational skill in performing daily maintenance tasks generally under the supervision of a skilled craftsman.

Job Description

The Maintenance Specialist works on assignments in which a high degree of manipulative skill, knowledge of tools and their uses are required. He has the ability to follow precise and detailed instructions which are required in the successful completion of the job. These jobs include removing, servicing, disassembling, reassembling, and installing components and accessories of various equipment or systems routinely found in a manufacturing, industrial or physical plant layout. He/She repairs and maintains machinery and equipment in accordance with drawings, diagrams, sketches, operations' manuals and manufacturer's specifications and must have knowledge and skill in the use of hand tools, power tools, machine tools, welding equipment and precision-measuring and testing instruments. Much of the specialist's time is spent at preventative maintenance to include maintenance record keeping and reporting.

INDUSTRIAL MAINTENANCE CURRICULUM

	Quarter Hours Credit
Required Industrial Maintenance Courses	
ELC 1104, 1105, 1106	12
Required Air Conditioning Course	
AHR 1120	8
Required Automotive Course	
PME 1158	4
Required Carpentry Course	
CAR 1106	4
Required Drafting Course	
DFT 1110	2
Required English Courses	
ENG 1101, 1102, 1103	9
Required Mathematics Course	
MAT 1101	4
Required Machine Shop Course	
MEC 1112	3
Required Plumbing Course	
PLU 1110	10
Required Welding Courses	
WLD 1120, 1121	15
Total Required Hours	**71**



INDUSTRIAL MANAGEMENT

Purpose of Curriculum

Industry's needs in positions of supervision and mid-management have grown extensively with the development of new methods of manufacturing and with the increase in the national economy. This need emphasizes the necessity for well-trained individuals who can understand new methods and keep abreast of trends in the economy. The supervisor and persons in mid-management must be concerned daily with human behavior and the psychological factors which affect personnel working under their direction. They must also be conscious of the responsibilities of their position toward the total economic well-being of the industry. These requirements have set forth the objectives in developing this program to prepare people for supervisory and mid-management responsibilities in industry.

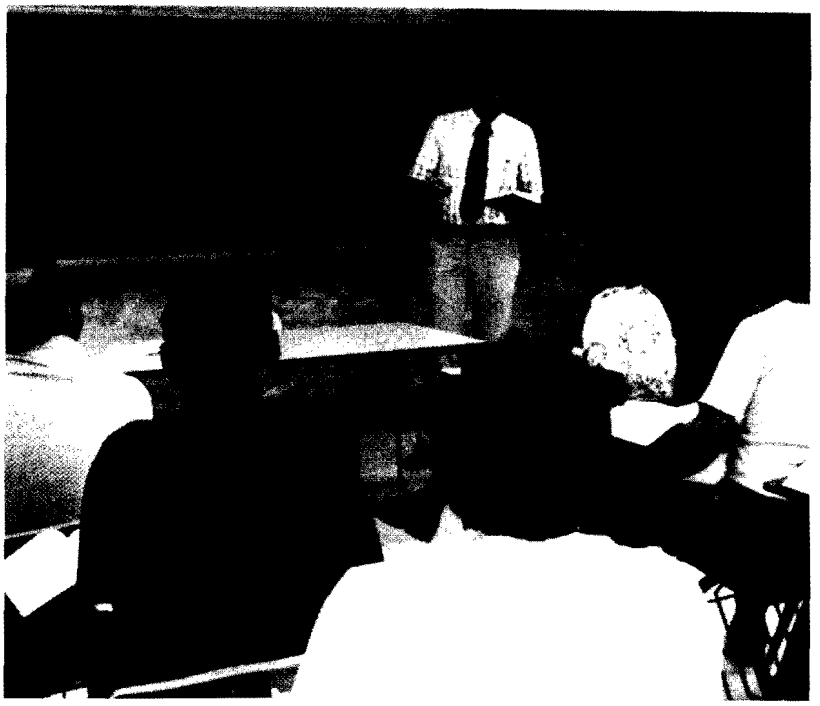
The program develops the individual's abilities in the art of communicating with his fellow worker by providing training in business and industrial management, psychology, production methods, and the general and social education that broadens one's perspective. This training provides one with the opportunity to enter into an industrial occupation and, with experience, assume the responsibilities that go with supervisory and mid-management positions in industry.

Job Description

The supervisor or foreman coordinates the activities of workers in one or more occupations. His/Her duties may encompass interpreting company policies to workers involving planning of production schedules, estimating man-hour requirements for job completion, establishing or adjusting work procedures, analyzing and resolving work problems, and initiating or suggesting plans to motivate workers to achieve work goals.

INDUSTRIAL MANAGEMENT CURRICULUM

	Quarter Hours Credit
Required Industrial Management Courses	
ISC 102, 120, 202, 204, 220, 221, 232, 235, 240	33
Required Business Courses	
BUS 102 or 103, 110, 115, 116, 120, 123, 185, 234, 239, 247	39
Required Economics Courses	
ECO 102, 104	6
Required Electronic Data Processing Course	
EDP 104	3
Required English Courses	
ENG 101, 102, 103, 204, 206	15
Required Math Course	
MAT 110	4
Required Psychology Course	
PSY 206	3
Required Electives	
One Social Science	3
Electives (any technical courses approved by Department Chairperson and Advisor)	14
Total Required Hours	**120**



LAW ENFORCEMENT/CRIMINAL JUSTICE

Purpose of Curriculum

Today's criminal justice personnel must be knowledgeable in many areas if they are to function effectively in our complex society. They are expected to handle matters dealing with human relations, often handled by those specifically trained in the behavioral sciences; they frequently must act in legal matters requiring trained law personnel and much deliberation to resolve; and they must be skilled in the most recent operational techniques in order to insure equality of justice to all.

To this end, the Law Enforcement/Criminal Justice program is dedicated to the purpose of developing proficiency in both preservice high school graduates and in-service personnel. Its development is based on present and future educational needs. It offers theoretical and practical instruction to meet the requirements of various law enforcement-criminal justice agencies and provides the student with the skills, knowledge, and attitudes necessary for employment in the various areas of this profession.

Job Description

The graduate of the Law Enforcement/Criminal Justice curriculum will be prepared to do the following: (1) to be a more knowledgeable and effective employee in law enforcement, corrections, or private security; or (2) to transfer at an advanced level to a four-year college/university in pursuit of a baccalaureate degree in criminal justice.

Opportunities for employment are open to the graduate in the private sector as well as in governmental agencies at the local, state, and federal levels.

LAW ENFORCEMENT/CRIMINAL JUSTICE CURRICULUM

	Quarter Hours Credit
Required Law Enforcement Courses	
LCJ 101, 102, 103, 104, 203, 209, 210, 211, 212	42
Required English Courses	
ENG 101, 102, 103, 204	12
Required Physical Education Course	
PED 111	3
Required Political Science Courses	
POL 102, 103	6
Required Psychology Courses	
PSY 101, 204	6
Required Sociology Course	
SOC 101	3
Required Electives	
*Law Enforcement	23
**Math	5
***Two Sciences	10
Sociology	3
Other Approved Electives	12
Total Required Hours	**125**

*LCJ 108, 201, 202, 205, 206, 207, 208, 213, 214, 215, 216, 217, 218, 219, 220

**MAT 101, 108, 109, 110

***BIO 201, 202, or BIO 106, 107
CHM 101, 102
PHY 101, 102, 103, or 104

Note: Both science electives must be in the same scientific disciplinary area.

LIFE INSURANCE

Purpose of Curriculum

The purpose of this curriculum is to provide the student with a broad understanding of the general fields of life insurance with which he/she should be acquainted as a professional within the insurance industry. The student will become familiar with the economic foundation upon which insurance is based, the legal aspects of insurance contracts, business applications of insurance, and the role of insurance in planning for future economic security through wise financial planning.

Job Description

Employment opportunities in insurance are available in a variety of specialties including agents, underwriters, rate analysts, actuaries, and others related to the insurance process. The insurance industry also provides significant opportunities in other specialty areas such as marketing, advertising, accounting, investments, and public relations.

Graduates completing the program may want to apply for the examination prerequisite to the Chartered Life Underwriter (CLU) designation. Individuals employed in the life insurance industry are encouraged to enter this program.

LIFE INSURANCE CURRICULUM

	Quarter Hours Credit
Required Life Insurance Courses	
INS 201, 202, 203, 204, 205, 206, 207, 208, 209, 210	30
Required Business Courses	
BUS 102 or 103, 110, 115, 116, 185, 234, 239, 247	30
Required Economics Courses	
ECO 102, 104	6
Required Electronic Data Processing Course	
EDP 104	3
Required English Courses	
ENG 101, 102, 103	9
Required Math Course	
MAT 110	4
Required Electives	
Social Science	3
Approved electives	23
Total Required Hours	**108**

MACHINIST

Pupose of Curriculum

This curriculum was prepared to meet a definite need for training of machinists. Surveys recently completed in North Carolina show that many of the existing industries lack time and facilities for training enough machinists to meet present and planned needs. Expanding industries already located in our State and new industries under development invariably express the need for skilled craftsmen who have the background knowledge and potential to advance.

Job Description

The machinist is a skilled metal worker who shapes metal parts by using machine tools and hand tools. He/She is trained and experienced in turning out a machined product and in switching readily from one kind of product to another. A machinist is able to select the proper tools and material required for each job and to plan the cutting and finishing operations in their proper order so that he/she can complete the finished work according to blueprint or written specifications. He/She makes standard shop computations relating to dimensions of work, tooling, feeds, speeds of machining, and uses precision measuring instruments such as micrometers and gages to measure the accuracy of work to thousandths of an inch.

This skilled worker must be able to set up and operate most types of machine tools. The machinist also must know the composition of metals so that he/she can heat and quench cutting tools and parts to improve machinability. Wide knowledge enables him/her to turn a block of metal into an intricate, precise part.

MACHINIST CURRICULUM

	Quarter Hours Credit
Required Machinist Courses	
MEC 1101, 1102, 1103, 1104, 1105, 1106, 1107, 1180, 1181, 1182, 1183, 1184	58
Required Drafting Courses	
DFT 1180, 1181, 1281	11
Required Economics Course	
ECO 1105	3
Required English Courses	
ENG 1101, 1102, 1103	9
Required Math Courses	
MAT 1101, 1102, 1123, 1180	16
Required Physics Courses	
PHY 1101, 1102, 1103	12
Required Psychology Course	
PSY 1106	3
Required Welding Course	
WLD 1180	3
Total Required Hours	**115**

MARKETING AND RETAILING

Purpose of Curriculum

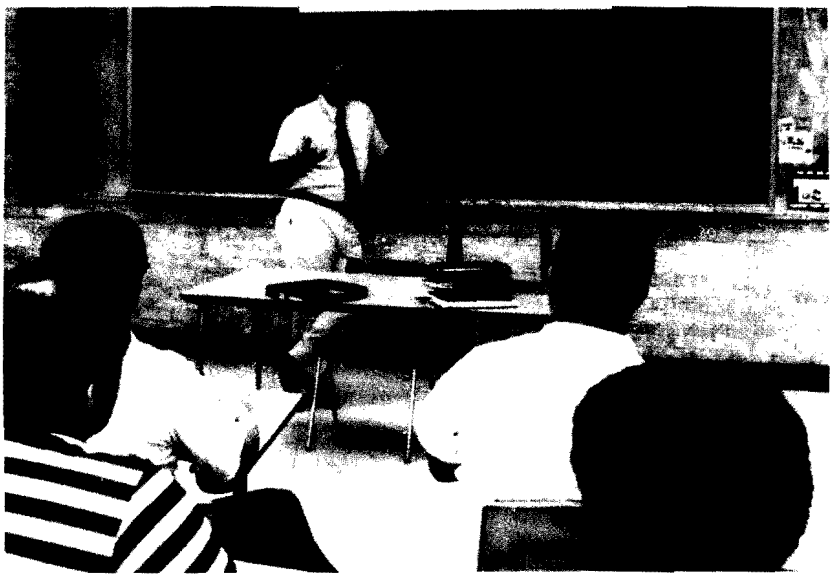
Marketing and Retailing is a program of instruction which teaches students the techniques of marketing, management and distribution which are used in many businesses. The program is designed to give the student a chance to learn the theoretical, as well as practical, aspects of marketing and retailing occupations at the mid-management level. Marketing and retailing occupations are those which are followed by workers engaged in marketing or merchandising activities or in contact with buyers and sellers when (1) distributing to consumers, retailers, jobbers, wholesalers, and others, the products of farm and industry or selling services or (2) managing, operating, or conducting retailing, wholesale, or service businesses. Distribution pertains to business and industrial goods as well as to consumer goods, and to business and consumer services. Marketing and retailing occupations are many and diverse, ranging from stock clerk to the head of a giant distribution-oriented corporation. Thus, there are hundreds of entry occupations in this field. Ideally, the student starts into the profession as a management trainee. After having served as an apprentice in his second year, the student is well prepared in his chosen area of marketing and retailing and may move directly into the establishment for which he/she has served as an apprentice. The student is also given academic credit for his apprenticeship.

Job Description

The graduate of the Marketing and Retailing curriculum may enter a variety of career opportunities from beginning sales person to a manager trainee. Opportunities are available in the following type institutions: retailing, wholesaling, manufacturing, and others such as hotel, motel, transportation, finance, real estate, insurance, and other institutions that are performing the market functions such as buying, management, and marketing (export, industrial, credit operations, and sales promotion).

MARKETING AND RETAILING CURRICULUM

	Quarter Hours Credit
Required Marketing and Retailing Courses	
BUS 239, 243, 249, 268, 285, 287, 288, 289, 291	41
Other Required Business Courses	
BUS 102 or 103, 110, 115, 116, 120, 121, 123, 185, 234, 247	40
Requied Economics Courses	
ECO 102, 104	6
Required Electronic Data Processing Course	
EDP 104	3
Required English Courses	
ENG 101, 102, 103, 204, 206	15
Required Math Course	
MAT 110	4
Required Psychology Course	
PSY 206	3
Required Electives	
Social Science	3
Any approved Technical course	5
Total Required Hours	**120**



MASONRY

Purpose of Curriculum

Masons are the craftsmen in the building trades that work with artificial stone, brick, concrete masonry units, stone, and the like. During the past decade, there has been a steady increase in the demand for these craftsmen. As building construction continues to increase, the demand for bricklayers, cement masons, and stonemasons will also increase.

This curriculum is designed to train the individual to enter the trade with the knowledge and basic skills that enable him/her to perform effectively. He/She must have a knowledge of basic mathematics, blueprint reading, and masonry technology and must know the methods used in laying out a masonry job with specific reference to rigid insulation, refractories, and masonry units specified for residential, commercial, and industrial construction.

Most employment opportunities for masons may be found with contractors in new building construction. However, a substantial proportion of masons are self-employed or work with contractors doing repair, alteration, or modernization work.

Job Description

Most masons are employed by contractors in the building construction fields to lay brick and blocks of tile, concrete, glass, gypsum or terra cotta. Also, he/she constructs or repairs walls, partitions, arches, sewers, furnaces, and other masonry structures.

After gaining experience in the various types of the masonry trade along with leadership training, it is possible for the tradesperson to become a foreman, inspector, and eventually a contractor.

MASONRY CURRICULUM

	Quarter Hours Credit
Required Masonry Courses	
MAS 1101, 1102, 1103, 1104, 1105, 1113	46
Required Business Course	
BUS 1103	3
Required Drafting Courses	
DFT 1110, 1111, 1114	6
Required English Courses	
ENG 1101, 1102	6
Required Math Course	
MAT 1110	4
Required Physics Course	
PHY 1103	4
Required Psychology Course	
PSY 1101	3
Total Required Hours	**72**

NURSES' ASSISTANT

Purpose of Curriculum

A course designed to prepare qualified men and women to give effective nursing care to selected patients, to make and report observations, and to carry out routine aspects of ward management. Classroom teaching is centered around modern concepts of health, functional relationships within a hospital, fundamentals of effective interpersonal relations, and nursing procedures related to daily needs of patients and to common therapeutic measures. Throughout the course emphasis is given to the role of the nurse's assistant. Clinical experiences provide opportunities for applying classroom learnings to practice in the hospital setting.

Job Description

The Nurse's Aid is a member of the nursing team who performs non-professional nursing care prescribed by and performed under the direction of a registered nurse or a licensed practical nurse.

THE NURSES' ASSISTANT CURRICULUM

	Quarter Hours Credit
Required Nursing Courses	
PML 1001, 1190, 1191, 1192, 1193, 1194, 1195, 1196.....	17

PARALEGAL TECHNOLOGY

Purpose of Curriculum

Paralegals are highly trained lawyers' assistants, capable of performing many law-related tasks to save lawyers' time. Paralegals facilitate the more efficient and less costly delivery of legal services to a wider segment of the population.

This program is designed to train this new professional, the paralegal, in substantive law, as well as in procedures and practical applications of law. Emphasis is on professional ethics and responsibility, on individual organizational skills, and on management as competent, personable handling of the law office.

Job Description

A paralegal will interview clients and witnesses, investigate crime scenes, verify data, do library research and write legal briefs, prepare documents, and file them in appropriate court offices. In real property closings, a paralegal will also search the title, arrange for mortgages and mortgage and title insurance, note or pay off liens. In corporate work, a paralegal will draft bylaws, solicit proxies, and assist directors in orderly handling of securities. In domestic work, the paralegal may assist in negotiations. The paralegal may never give legal advice, or present a case before a court.

PARALEGAL TECHNOLOGY CURRICULUM

	Quarter Hours Credit
Required Paralegal Courses	
LEG 101, 113, 117, 132, 135, 204, 214, 215, 217, 224, 225, 290	55
Required Business Courses	
BUS 102, 115, 116, 119, 228	20
Required English Courses	
ENG 101, 102, 204, 206	12
Required Electives	
Math	4-5
Paralegal	2-3
Social Science	6
Any approved electives	6-7
Total Required Hours	**105-108**

PHARMACY TECHNOLOGY

Purpose of Curriculum

This program is designed to provide the educational needs and skills for an individual to become a Pharmacy Technologist. The program combines technical, general education with clinical education in regional pharmacy delivering environments such as community pharmacies and hospitals. All clinical components of the curriculum are conducted under the direction and the supervision of a registered pharmacist.

The satisfactory completion of this two-year program fulfills the educational requirements for confirmation of the Associate Degree in Applied Science (AAS).

Job Description

As pressures center upon the cost of Health Care delivery in the U.S. by the government and private sector, logically those same pressures apply to the Pharmacy Profession. This curriculum is designed to train persons to assist the pharmacist in the delivery of prescribed medication. Courses which provide knowledge and experiences to persons who in turn become the "extra hands" of the pharmacist are included. Pharmacy technicians may be employed by hospitals, nursing care centers, private and chain community pharmacies, drug manufacturers, wholesale drug houses as salespersons, etc. The curriculum also prepares the student to continue his education at higher levels in college and university settings.

PHARMACY TECHNOLOGY CURRICULUM

	Quarter Hours Credit
Required Pharmacy Courses	
PHM 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 120, 202	61
Required Biology Courses	
BIO 106, 107, 204	15
Required Business Course	
BUS 102	3
Required Chemistry Courses	
CHM 101, 102, 103	12
Required Economics Course	
ECO 102	3
Required English Courses	
ENG 104, 105, 108	9
Required History Courses	
HIS 104, 105, 106	9
Required Math Course	
MAT 108, 109	10
Total Required Hours	**122**

PHYSICAL THERAPY ASSISTANT

Purpose of Curriculum

This program is designed to prepare the student to fill the role of technical assistant working under the supervision of a licensed physical therapist in providing quality physical therapy care. After the physical therapist evaluates and plans a program for the patient, the physical therapist assistant will provide direct patient care in such activities as ambulation, gait training with crutches/canes/walkers, assist and teach patient specific exercise routines (to retain strength, range of motion, endurance), apply heat, massage, electrical stimulation, hydrotherapy to relieve pain and promote relaxation.

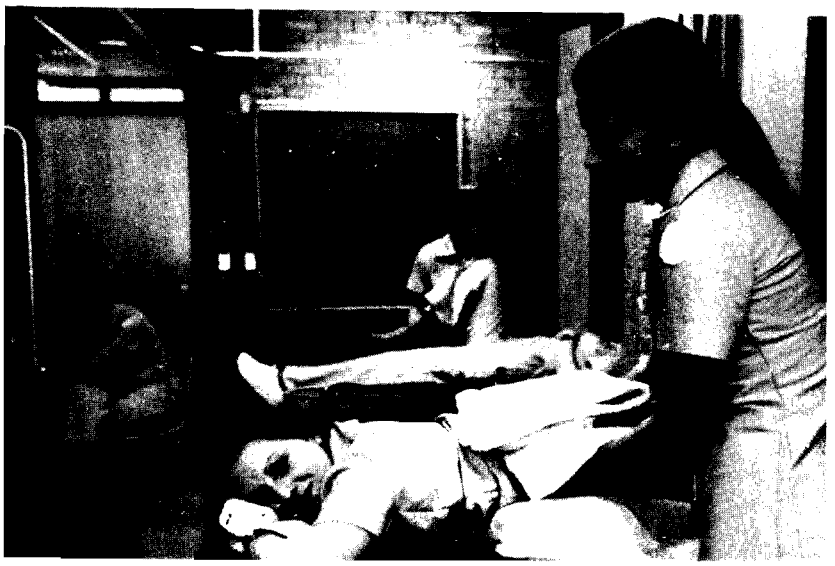
Employment settings include hospitals, rehabilitation centers, Home Health Agencies, public schools, private clinics, and Public Health Clinics.

Job Description

Many of these patient care needs can be met by developing physical therapy services which utilize a technical level worker—the physical therapy assistant. Such a worker is recognized by the American Physical Therapy Association and the North Carolina Chapter of that association. The profession has long utilized supportive personnel for clerical, maintenance, and transportation duties. The formal education of a second level worker in physical therapy will produce more people to provide therapeutic care for the patient. At the same time, this will permit the professional physical therapist to extend his/her services in specialized therapy, supervision, consultation, and teaching.

PHYSICAL THERAPY ASSISTANT CURRICULUM

	Quarter Hours Credit
Required Physical Therapy Courses	
PTH 101, 102, 103, 104, 105, 106, 110, 201, 202, 210, 215, 298	62
Required Biology Courses	
BIO 103, 104	10
Required Business Course	
BUS 102	3
Required English Courses	
ENG 103, 104, 105, 115, 204	15
Required Math Course	
MAT 108	5
Required Physical Education Course	
PED 111	3
Required Psychology Courses	
PSY 101, 202, 210	9
Required Sociology Course	
SOC 101	3
Required Elective	
Physical Education	1
Total Required Hours	**111**



PLUMBING

Purpose of Curriculum

Plumbers are the craftsmen who install pipe systems which carry water, steam, air, or other liquids or gases needed for sanitation, heating, industrial production, and various other uses. During the past decade, there has been a steady increase in the demand for these craftsmen. As building construction continues to increase, this demand for plumbers will also increase.

This curriculum in plumbing and heating is designed to train the individual to enter this occupation with the knowledge and basic skills that will enable effective performance. Courses in plumbing practices and heating are included to provide practical experience as well as the theoretical information that one must know to advance and keep up-to-date with new innovations. Other courses in communication skills, physics, human relations, and business operations are provided to assist the individual in occupational growth.

Opportunities for plumbers and pipefitters may be found with plumbing and pipefitting contractors in new building construction. A substantial proportion of plumbers are self-employed or work for plumbing contractors doing repair, alteration, or modernization work. Some plumbers install and maintain pipe systems for government agencies and public utilities, and some work on the construction of ships and aircraft. Pipefitters, in particular, are employed as maintenance personnel in the petroleum, chemical, and food-processing industries.

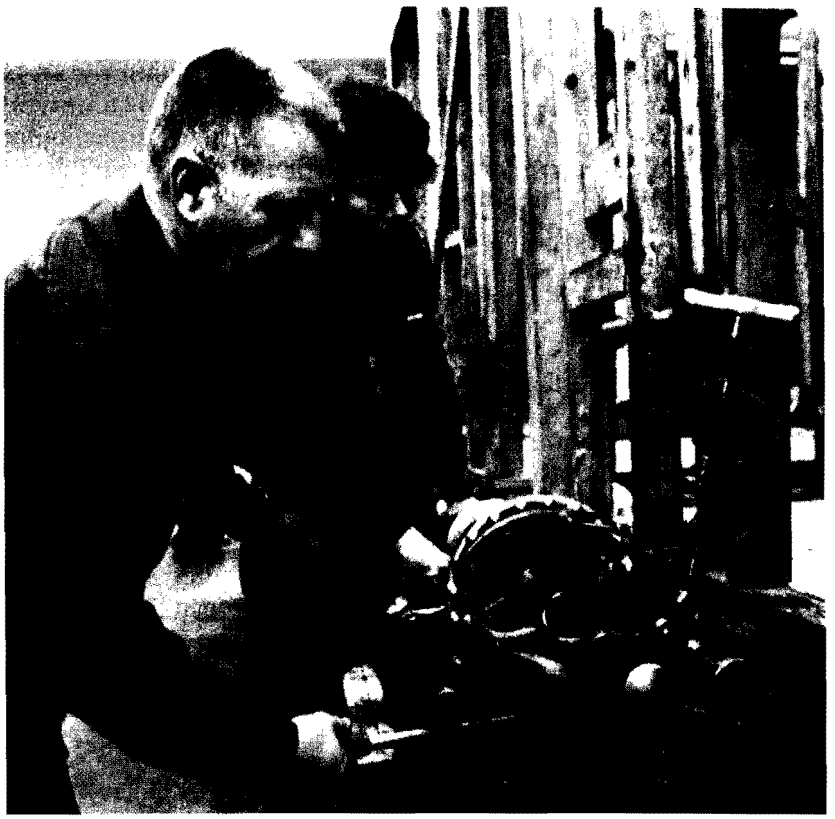
Job Description

Most plumbers are employed by contractors in the building construction fields to install pipe systems which carry water, steam, air, or other gases for sanitation, heating, industrial production, and various other uses. They also alter and repair existing pipe systems and install plumbing fixtures, appliances, and heating and refrigeration units.

Plumbing and pipefitting are sometimes considered to be a single trade; journeymen in this field can specialize in either one. Water, gas, and waste disposal systems are installed by plumbers. Pipefitters install both high and low pressure pipes that carry hot water, steam, and other liquids and gases, especially those in industrial and commercial buildings and defense establishments, such as missile launching and testing sites.

PLUMBING CURRICULUM

	Quarter Hours Credit
Required Plumbing Courses	
PLU 1110, 1111, 1112, 1120, 1121, 1123, 1125, 1126	44
BMS 1134	3
Required Business Course	
BUS 1103	3
Required Drafting Courses	
DFT 1110, 1115	4
Required English Courses	
ENG 1101, 1102	6
Required Math Course	
MAT 1116	4
Required Psychology Course	
PSY 1101	3
Required Welding Course	
WLD 1180	3
Total Required Hours	**70**



POSTAL SERVICE TECHNOLOGY

Purpose of Curriculum

The Postal Service Technology degree curriculum is an intensive college-level program. The curriculum is designed to prepare present and future employees for advancement in the United States Postal Service.

The immediate principal objective is that the program will afford all students the opportunity to become aware of and knowledgeable in the functional complexities of the system. Thus, the students will better understand the relationships of various job duties and divisions, they will be prepared to function effectively within a variety of positions, and they will have received excellent training to facilitate achievement of their career development goals.

Students who complete the two-year program will receive an Associate of Applied Science degree and will be better educationally qualified for advancement to higher level positions.

Job Description

The ultimate objective of the Postal Service Technology degree program is excellence in job performance. The graduate will, if already employed by the U.S. Postal Service, be more eligible to progress to a management position which will include a variety of responsibilities within the postal system.

POSTAL SERVICE TECHNOLOGY CURRICULUM

	Quarter Hours Credit
Required Postal Courses	
POS 101, 103, 105, 201, 202, 203, 205, 207, 208	27
Required Business Courses	
BUS 102, 115, 116, 120, 121, 125, 229, 234, 260, 272	42
Required Economics Courses	
ECO 102, 104, 201, 205	13
Required Electronic Data Processing Course	
EDP 104	3
Required English Courses	
ENG 101, 102, 103, 204, 206	15
Required Math Course	
MAT 110	4
Required Physical Education Course	
PED 111	2
Required Psychology Course	
PSY 206	3
Required Social Science Course	
SSC 205	3
Required Elective	
Any approved elective	3
Total Required Hours	**115**

PRACTICAL NURSE EDUCATION

Purpose of Curriculum

The accelerated growth of population in North Carolina and rapid advancement in medical technology demanded an increased number of well-trained personnel for health services. Realizing this need, Fayetteville Technical Institute, in conjunction with local hospitals, public health services, nursing homes, and kindergartens, administers a program of Practical Nurse Education.

The administrative staff and faculty of FTI's Practical Nurse program believe that the practical nurse is a vital and integral segment of the health team who bridges the gap between that which the individual can provide for oneself and that which requires the complexity of skills given by professional members of the health team; that her/his place is at the patients' bedside fulfilling needs requiring moderate nursing skills and assisting with activities dependent upon more complex skills always under the guidance of the professional leader.

Job Description

After passing the state board, the practical nurse is entitled to receive a license and to use a legal title "Licensed Practical Nurse". Her/his license must be renewed according to individual state's requirements, and she/he is eligible for inter-state licensure.

In all situations, the practical nurse functions under the supervision of a registered nurse and/or licensed physician or a dentist. She/he is prepared to function in a variety of situations: hospitals, nursing homes, doctors' offices, and, in some localities, public health facilities. Her/his supervision may be minimal in a situation where the patient's condition is stable and not complex. She/He must avoid assuming responsibility beyond that for which the one-year program can prepare one.

PRACTICAL NURSE EDUCATION CURRICULUM

	Quarter Hours Credit
Required Nursing Courses	
PNE 1101, 1102, 1103, 1104, 1105, 1106, 1107, 1108, 1109, 1110, 1111, 1112, 1113, 1115, 1116, 1298	73
Required English Course	
ENG 1101	3
Required Math Course	
MAT 1105	3
Total Required Hours	**79**

RADIOLOGIC TECHNOLOGY

Purpose of Curriculum

This program is designed to provide the educational needs and skills to an individual to become a radiologic technologist. The course of study combines technical and general education courses. The clinical education is planned and correlated with the classroom instruction and is provided by the hospitals and community facilities available. This clinical education is conducted under the direction and supervision of a physician radiologist.

The completion of this two-year course fulfills the educational requisite for confirmation of the Associate Degree in Applied Science and meets the requirements for the examination by the American Registry of Radiologic Technologists for certification as a registered technologist in radiologic technology.

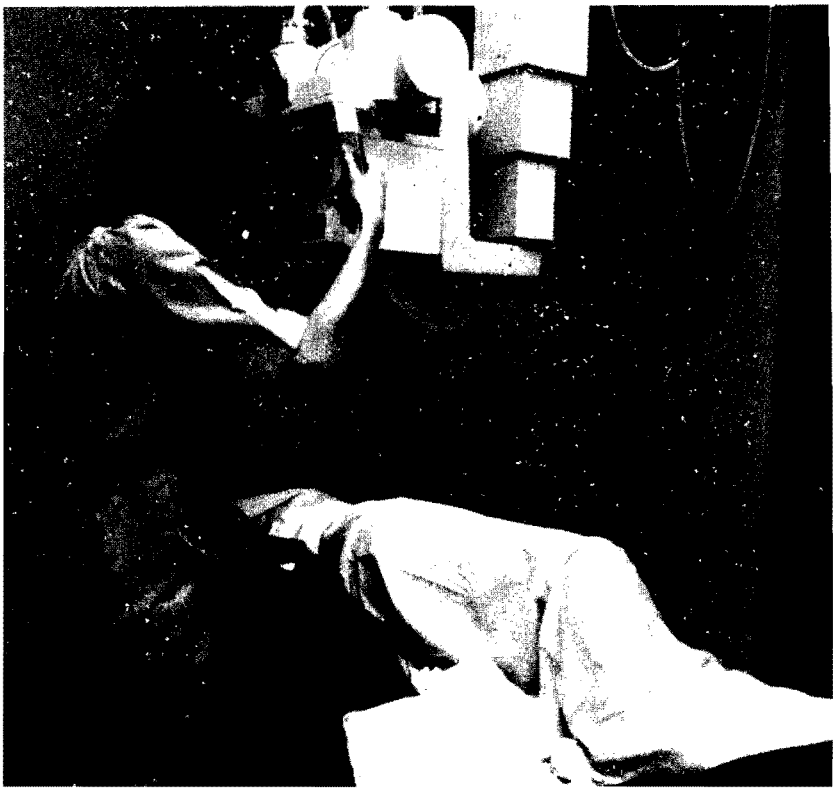
Job Description

Radiologic technologists are in demand in research laboratories, industry, and government agencies in addition to health clinics, hospitals, nuclear medicine, radiation therapy and special procedures departments.

The radiologic technologist is a technical assistant to a radiologist — a physician who specializes in the diagnosis and treatment of disease through radiography. The radiologic technologist is a major part of the medical team working with the patient, as other medical services, specializing in his/her own technical abilities. He/She is the primary assistant for the radiologist with diagnosis of disease or abnormality. As a professional, the radiologic technologist has the choice of several specialized occupations within his/her own field; for example: nuclear medicine, the use of radioactive materials to study certain structures of the body; radiation therapy, the use of high energy x-ray equipment in the treatment of cancer and malignant diseases; and special procedures, the use of a contrast agent to study the vessels of the body abnormalties and disease.

RADIOLOGIC TECHNOLOGY CURRICULUM

	Quarter Hours Credit
Required Radiologic Courses	
RDT 101, 102, 103, 111, 112, 113, 114, 204, 205, 206, 215, 216, 217, 218	97
Required Biology Courses	
BIO 103, 104, 208	13
Required English Courses	
ENG 103, 104, 105, 204	12
Required Math Course	
MAT 105	5
Required Physics Courses	
PHY 110, 111	6
Required Psychology Courses	
PSY 101, 202	6
Required Electives	
Two Social Science	6
Any approved elective	3
Total Required Hours	**148**



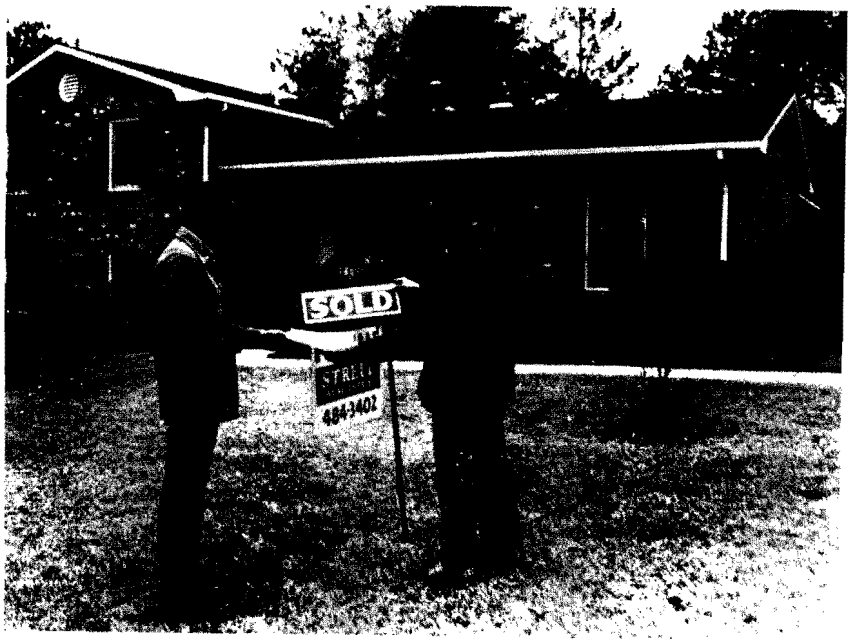
REAL ESTATE

Purpose of Curriculum

In North Carolina, the opportunities in the real estate business are increasing. With the increasing population and industrial development in this state, real estate has become a more competitive and complicated industry. Better opportunities in real estate will be filled by students with specialized education beyond the high school level. The real estate curriculum is designed to prepare the student for employment in one of many occupations common to real estate. Training is aimed at preparing the student in many phases of administrative work that might be encountered in the real estate industry.

Job Description

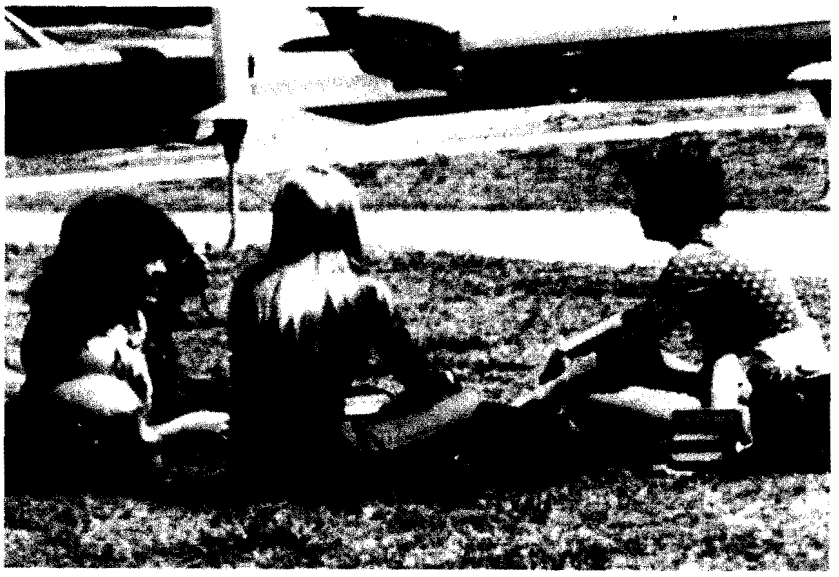
The graduate of the real estate curriculum may enter a variety of career opportunities from beginning sales person or office clerk to manager or manager trainee. The duties and responsibilities of this graduate vary in different firms. These duties might include preparing and filing sales reports, tabulating and posting data in various books, sending out bills, checking calculations, adjusting complaints, and assisting managers in supervising. Positions are available in real estate such as advertising, mortgage banking, credit, finance, retailing, brokerage, and insurance.



REAL ESTATE CURRICULUM

	Quarter Hours Credit
Required Real Estate Courses	
RLS 209, 216, 221, 231, 286, 292, 296	30
Required Business Courses	
BUS 102 or 103, 110, 115, 116, 120, 121, 185, 229, 234, 239, 247, 272	50
Required Economics Courses	
ECO 102, 104	6
Required Electronic Data Processing Course	
EDP 104	3
Required English Courses	
ENG 101, 102, 103, 204, 206	15
Required Math Course	
MAT 110	4
Required Paralegal Course	
LEG 214	3
Required Psychology Course	
PSY 101 or 206	3
Required Electives	
Social Science	3
Any approved elective	3
Total Required Hours	**120**

The following advanced courses may be taken in addition to those listed above with the permission of the Advisor: RLS 202, 226, 228, 293, 294



RECREATION ASSOCIATE

Purpose of Curriculum

The Recreation Associate program is designed to train young men and women to plan and supervise recreational activities for all age groups in a variety of settings. Students are taught one to one as well as group leadership responsibilities and abilities. Graduates are qualified to supervise/operate recreational facilities such as community centers, play grounds, campsites, and resort facilities.

Job Description

A variety of career opportunities are available to graduates of the recreation associate curriculum. Opportunities in community recreation programs as playground supervisors, activity specialists, center supervisors; in industry, planning programs of employee recreation; in summer camps, planning programs for young persons still within their pre-teen years, and supervising public and private resorts.

Professionals in the field are becoming acutely aware that the use of paraprofessionals is an asset to them as they try to fill the ever-increasing need within the field of recreation.

RECREATION ASSOCIATE CURRICULUM

	Quarter Hours Credit
Required Recreation Courses	
REC 109, 110, 111, 112, 119, 120, 121, 201, 204, 207, 211, 220, 221, 225, 231, 235, 250, 299	62
Required Audio Visual Course	
AVA 201	3
Required Business Course	
BUS 272	3
Required Economics Course	
ECO 205	3
Required English Courses	
ENG 101, 102, 103, or 104, 105, 108	9
Required Math Course	
MAT 110	4
Required Physical Education Course	
PED 111	3
Required Psychology Courses	
PSY 101, 104	6
Required Sociology Course	
SOC 101	3
Required Electives	
Art or Physical Education	6
Business or Physical Education	3
English or other by Department approval	3
Total Required Hours	**108**

RECREATIONAL VEHICLE AND EQUIPMENT REPAIR

Purpose of Curriculum

This curriculum provides a training program for developing the basic knowledge and skills required to inspect, diagnose, repair, or adjust recreation vehicles. A thorough understanding of the variety of recreation vehicles, such as boats, motorcycles, golf carts, and all other mechanical recreational equipment will be presented in class assignments, discussion, demonstration, and shop practice.

Complexity in the technology of the recreational vehicles increases each year along with a tremendous increase in the number of recreational vehicles. This curriculum provides a basis for each student to learn the principles and techniques of recreation vehicle maintenance coupled with adaptation to the current changes in equipment and engine designs.

Job Description

Recreational vehicle mechanics maintain and repair mechanical, electrical, and body parts of the recreational vehicle to include motorcycles, outboard motors, small gasoline engines, and other mechanical recreational equipment. Mechanics inspect, test, diagnose, and repair faulty operations of the recreational vehicle.

RECREATIONAL VEHICLE AND EQUIPMENT REPAIR CURRICULUM

	Quarter Hours Credit
Required Vehicle and Equipment Repair Courses	
PME 1011, 1018, 1104, 1109, 1151, 1158, 1160	39
Required Business Course	
BUS 1103	3
Required English Courses	
ENG 1101, 1102	6
Required Math Course	
MAT 1101	4
Required Physics Course	
PHY 1101, 1102	8
Required Psychology Course	
PSY 1101	3
Required Welding Course	
WLD 1180	3
Total Required Hours	**66**

RESPIRATORY THERAPY

Purpose of Curriculum

This program is designed to provide a sound learning environment for individuals seeking an education in respiratory therapy by preparing them for entry level positions as respiratory therapist. Through didactic and clinical preparation, graduates of the program are able to enter their chosen profession with the necessary skills and knowledge.

Job Description

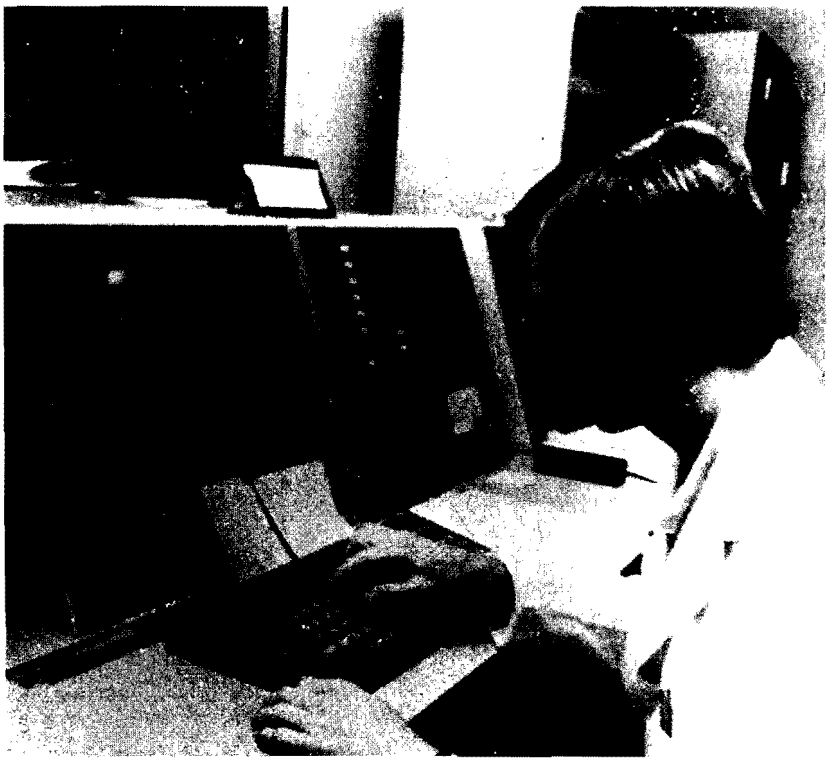
The respiratory therapist specializes in the application of scientific knowledge and theory to practical, clinical problems of respiratory care. He/She is qualified to assume primary clinical responsibilities involved in supervision of respiratory technicians functions.

The therapist will be able to exercise considerable independent, clinical judgement in the respiratory care of patients under direct or indirect supervision of the physician. Further, the therapist is capable of serving as a technical resource person to current practices in respiratory care and to the hospital staff as to effective and safe methods for administering respiratory therapy.

The therapist's scope of patient care includes, but is not limited to: intermittent positive pressure breathing (IPPB), humidity/aerosol therapy, medical gas administration, bronchopulmonary drainage, continuous ventilation, airway management, emergency care, pulmonary function testing, cardiorespiratory rehabilitation, infection control, and cardiorespiratory drug administration.

RESPIRATORY THERAPY CURRICULUM

	Quarter Hours Credit
Required Respiratory Therapy Courses	
RTH 105, 106, 111, 112, 151, 213, 241, 242, 243, 251, 252, 253	73
Required Biology Courses	
BIO 106, 107, 108, 208	19
Required Chemistry Course	
CHM 101	4
Required English Courses	
ENG 104, 105, 115	9
Required Math Course	
MAT 105	5
Required Physics Course	
PHY 101	4
Required Psychology Course	
PSY 101	3
Required Sociology Course	
SOC 101	3
Total Required Hours	**120**



SECRETARIAL SCIENCE

Purpose of Curriculum

The need for better qualified secretaries in our ever-expanding business world is becoming more acute. The constant increase in job opportunities for the two-year graduate reflects this demand.

The secretarial curriculum is designed to offer the students the necessary secretarial skills in typing, word processing, office machines, dictation, transcription, and terminology for employment. Specialized courses in secretarial subjects are supplemented by related courses in mathematics, English, accounting, business law, and personality development to provide training in the accepted procedures required by the business world and to enable a person to become proficient soon after accepting employment in the business office. With today's office so profoundly influenced by the impact of automation, the students are acquainted with equipment and procedures which effect their secretarial duties. In addition to skill development, special emphasis is placed on grooming habits and proper attitudes for the office situation.

Job Description

The graduate may be employed as a stenographer or a secretary in a variety of offices, such as insurance companies, banks, and financial institutions, marketing firms, medical and health organizations, federal and State governmental agencies, and legal offices. Intensive training in this curriculum also provides the background for jobs as office managers and administrative assistants.

SECRETARIAL SCIENCE CURRICULUM

	Quarter Hours Credit
Required Secretarial Courses	
BUS 102, 104, 105, 106, 107, 108, 112, 183, 184, 204, 205, 206, 207, 208, 211, 214, 262, 270, 271, 290	76
Other Required Business Courses	
BUS 110, 115, 120, 185 or ECO 102, BUS 248	19
Required Electronic Data Processing Course	
EDP 104	3
Required English Courses	
ENG 101, 110, 204, 206	12
Required Electives	
Two Social Science	6
Total Required Hours	**116**

BUS 102 — Credit will be given if high school grade is C or better.
BUS 106 — Credit will be given if high school grade is B or better.

SURGICAL TECHNOLOGY

Purpose of Curriculum

This is an introductory course devoted to developing an understanding of the principles of operating room technique and to acquiring fundamental skills essential to assisting in the operating room. Instruction includes environmental and personal orientation; weights and measures; anesthesia, operating room procedures; operating room techniques; operating room personnel duties; and ethical, moral and legal responsibilities. Laboratory exercises are designed to provide support through practice and skill development for the principles and techniques discussed in class.

Job Description

The surgical technician is prepared to be part of the medical-surgical team by working directly with patients' surgical preps, transportation to the operating room, positioning of patients and applications of dressing. The surgical technician always works under the direct supervision of a registered professional nurse while cleaning, stocking, and preparing the operating room; functions as scrub nurse at the operative field, assists the surgeon by anticipating his needs; handles sterile instruments, sutures and equipment.

The surgical technician assists the anesthetist and the anesthesiologist, prepares specimen, prepares notes on operative procedures, and prepares the operating room for surgery by pulling instruments and special supplies from the stock supply. The surgical technician operates sterilizers and all other equipment commonly used in the operating room, determines what is and is not sterile by using aseptic technique priciples. A surgical technician performs the duties of circulating nurse.

SURGICAL TECHNOLOGY CURRICULUM

	Quarter Hours Credit
Required Nursing Courses	
PML 1080, 1085, 1090, 1091, 1092, 1093, 1094, 1095, 1096, 1097, 1098, 1099	50
Required English Course	
ENG 1101	3
Total Required Hours	**53**

TOOL AND DIE

Purpose of Curriculum

Year by year, the machines-tools industry is faced with an increasing shortage of tool and die makers. This shortage has been brought about by rapid expansion of industry and the retirement of the older craftsmen in this field. The purpose of this curriculum is to provide a training program that will give the student the necessary background in theory and practice to enable him to become a capable tool and die maker in far less time than would be required to obtain these skills and knowledge without formal instruction.

Complexity of new tools in industry increases each year due to new engineering, scientific discovery, and the space age need for closer tolerances. This complexity is reflected first in the tools, dies, gages, and molds that must be built by the tool and die maker. This curriculum provides a basis from which the students may equip themselves with the knowledge, techniques, and skills to meet this great challenge and critical need.

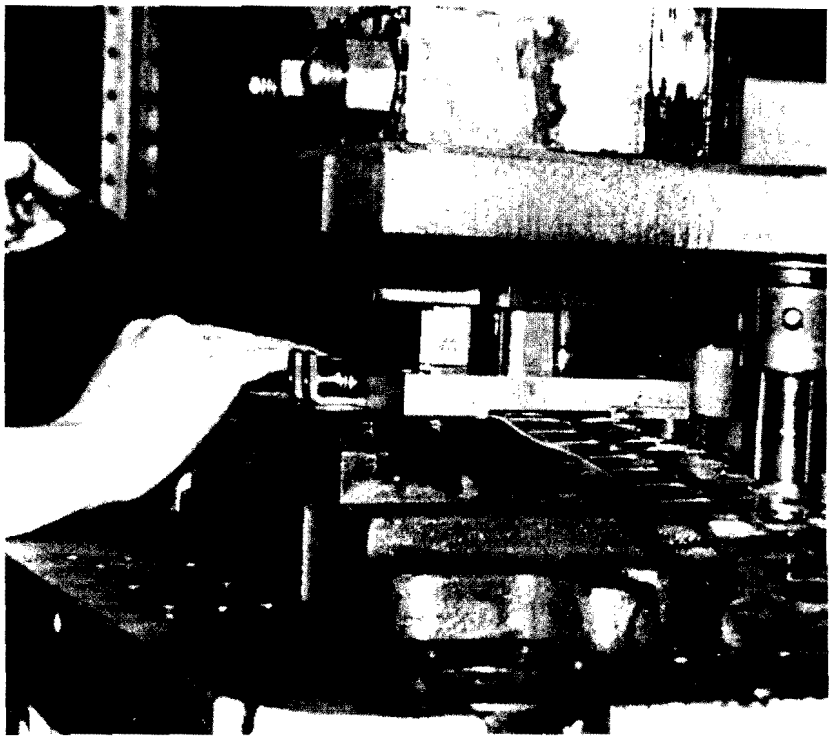
Job Description

Tool and die makers are responsible for the accuracy of thousands of parts because the jigs, fixtures, dies, molds, and gages which are the basic tools of mass production are built by the tool and die men. They must be able to proficiently operate all the basic shop equipment, be able to read precision measuring instruments and interpret complicated engineering drawings, and have the know-how to reproduce these drawings in the form of finished metal parts.

Tool and die making is a term used to describe the overall job of the mechanic in this phase of industry. The journeyman tool and die maker usually has the knowledge and skill required to perform all phases of this type of work, although some may specialize in a particular phase of the trade, such as progressive dies, jigs, and fixtures and gage making.

TOOL AND DIE CURRICULUM

	Quarter Hours Credit
Required Machinist Courses	
MEC 1101, 1102, 1103, 1104, 1105, 1106, 1107, 1151, 1152, 1153, 1154, 1155, 1156, 1158, 1159, 1170, 1171, 1172, 1180, 1181, 1182, 1183, 1184	103
Required Drafting Courses	
DFT 1180, 1181, 1281	11
Required Economics Course	
ECO 1105	3
Required English Courses	
ENG 1101, 1102, 1103	9
Required Math Courses	
MAT 1101, 1102, 1123, 1151, 1152, 1180	22
Required Physics Courses	
PHY 1101, 1102, 1103	12
Required Psychology Course	
PSY 1106	3
Required Welding Course	
WLD 1180	3
Total Required Hours	**166**



WATER AND WASTEWATER PLANT OPERATORS PROGRAM

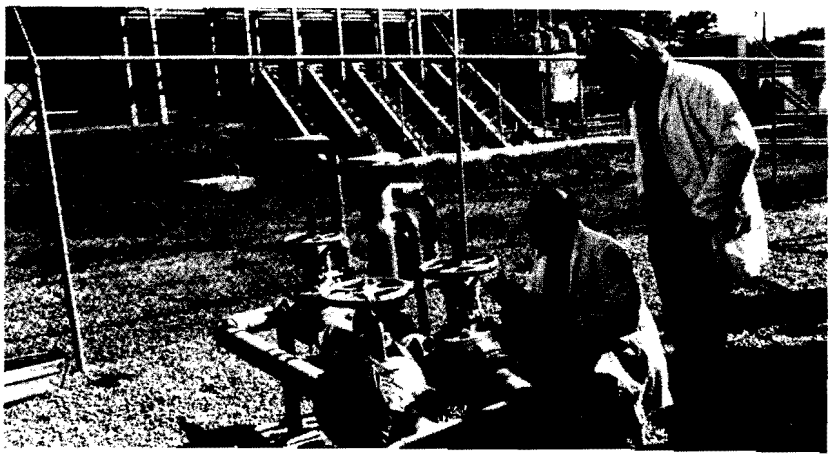
Purpose of Curriculum

Our ever-increasing population and industrial expansion carries with it the demand for many services with one of the most vital of these services being the production and safeguarding of our water supply. To meet the increasing demand for cleaner water and to handle the complexity of pollutants from new products, technology has created more sophisticated and complicated systems for water purification and wastewater treatment. These technological advances have created a growing demand for highly trained personnel who can analyze, operate, and control industrial water purification and wastewater treatment facilities, whether it be public or private.

This program is designed to train operators to perform at many levels, including management, in various types of water purification and wastewater treatment facilities. The student receives related courses in mathematics, English, drafting, and the humanities.

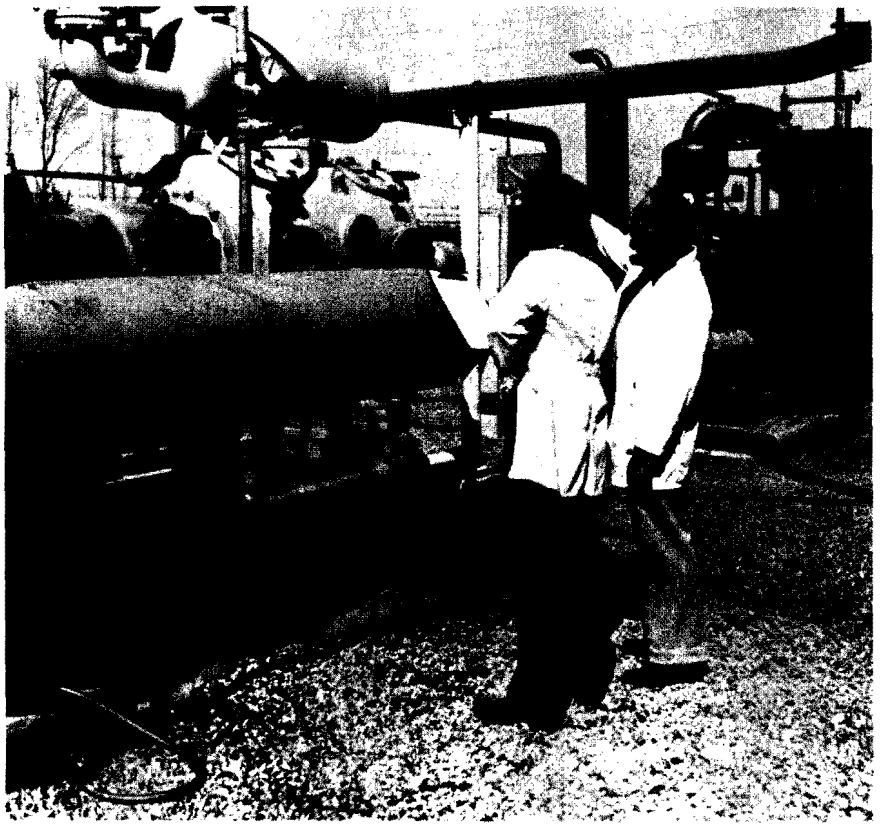
Job Description

The graduate of this program will have a knowledge of laboratory procedures and skill in performing many types of tests on water and wastewater. He/She will have a knowledge of the purpose, construction, operation, and maintenance of many processes and of equipment incidental to effective operation of water purification and wastewater treatment plants. To give the operator a basic understanding of the entire plant operation, application of laboratory results to optimum plant operation is stressed.



WATER AND WASTEWATER PLANT OPERATIONS PROGRAM CURRICULUM

	Quarter Hours Credit
Required Environmental Courses	
ENV 1100, 1101, 1102, 1103, 1104, 1105, 1107, 1108, 1109, 1110, 1111	40
Required Chemistry Course	
CHM 1101	4
Required Drafting Course	
DFT 1180	4
Required English Courses	
ENG 1101, 1102	6
Required Math Courses	
MAT 1101, 1102	8
Required Psychology Course	
PSY 1101	3
Total Required Hours	**65**



WELDING

Purpose of Curriculum

This curriculum was developed to fill the tremendous need for welders in North Carolina. The recently completed manpower survey shows quite clearly that many welders will be needed annually to fill present and projected vacancies in the State.

The content of this curriculum is designed to give students sound understanding of the principles, methods, techniques and skills essential for successful employment in the welding field and metals industry.

The field of welding offers a person prestige, security, and a future of continuous employment with steady advancement. It offers employment in practically any industry: shipbuilding, automotive, aircraft, guided missiles, railroads, construction, pipefitting, production shop, job shop, and many others.

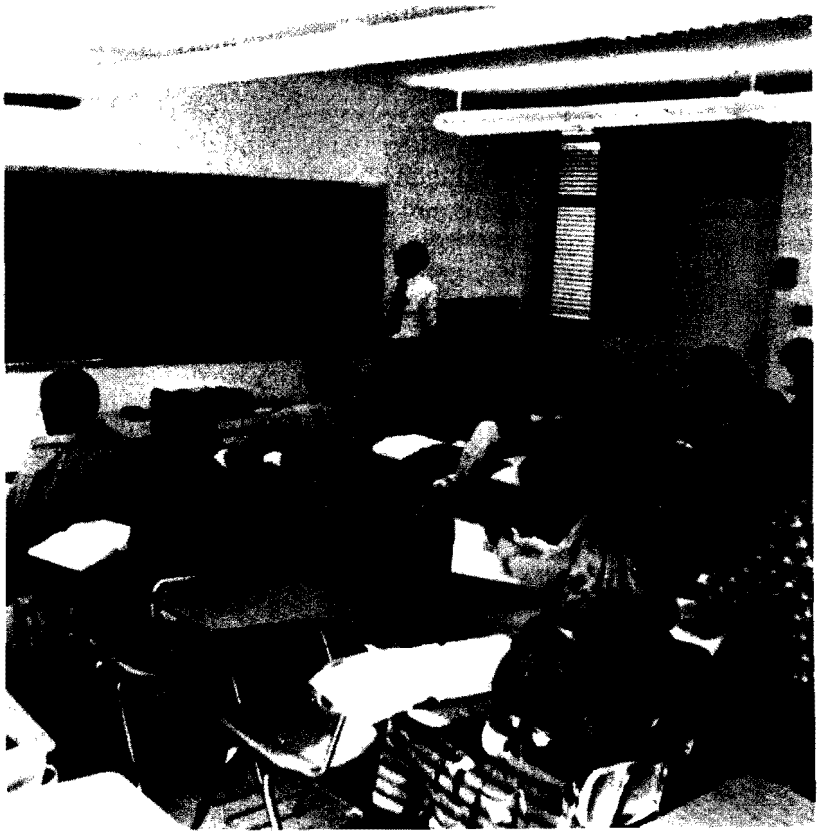
Job Description

Welders join metals by applying intense heat, and sometimes pressure, to melt the edges to form a permanent bond. Closely related to welding is "oxygen cutting". Of the more than 35 different ways of welding metals, arc, gas, and resistance welding are the three most important.

The principle duty of the welder using manual techniques is to control the melting by directing the heat from either an electric arc or gas welding torch, and to add filler metal where necessary to complete the joint. He/She should possess a great deal of manipulative skill with a knowledge of jigs, welding symbols, mathematics, basic metallurgy, and blueprint reading.

WELDING CURRICULUM

	Quarter Hours Credit
Required Welding Courses	
WLD 1112, 1120, 1121, 1122, 1123, 1124, 1125	39
Required Drafting Courses	
DFT 1104, 1117, 1118	7
Required Electrical Course	
ELC 1180	3
Required English Courses	
ENG 1101, 1102	6
Required Machinist Courses	
MEC 1104, 1112	7
Required Math Courses	
MAT 1101, 1103	7
Required Psychology Course	
PSY 1106	3
Total Required Hours	72



COURSE DESCRIPTIONS

Agricultural Courses

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

AGR 101 Farm Tractors I 1 0 3 2

A study of farm tractors including gas and diesel engines. Emphasis is placed on combustion engines and electrical systems. Prerequisite: None.

AGR 102 Farm Tractors II 1 0 3 2

A course designed to continue the study of gas and diesel farm tractors. Emphasis will be placed on learning the operation and maintenance of diesel tractors, including their power trains and operational systems. Prerequisite: None.

AGR 104 Introduction to Agricultural Economics 3 2 0 4

An introduction to economics, the functions of the economic system and the role of agriculture in the economy. A review of the functions of the manager and an introduction to the principles he uses in making decisions to adjust to changing conditions. An analysis of factors which affect change in agricultural firms. Prerequisite: None.

AGR 106 Techniques of Welding 1 0 3 2

This course will cover arc and gas welding, the safe and correct methods of assembling, and the operation of welding equipment. The application of welding to mechanical repair work and steel fabrication will be emphasized. Care, maintenance and selection of welding equipment and supplies are applied in the course. Prerequisite: None.

AGR 108 Beef Cattle Production 2 0 0 2

A study of the principles of selecting, feeding, breeding, and management of beef cattle. Emphasis will be placed upon cow-calf and feeder cattle operations. Prerequisite: None.

AGR 109 Soil Management, Terracing & Draining 2 2 0 3

The application of soil science principles to the mechanics of soil management, terracing and drainage. Soil types will be related specifically to terracing and drainage. Prerequisite: None.

AGR 112 Small Engine Repair 1 0 3 2

A study of two and four cycle, one cylinder gasoline engines and their power trains. The student will be taught preventive maintenance, trouble shooting & repair of the typical auxillary engine on the farm. Prerequisite: None.

AGR 114 Farm Electrification 1 2 0 2

An introduction to the practical application of farm electric wiring. The major phases of the study include the basic wiring techniques according to the current Electrical Code and applying the practices to practical use. Prerequisite: None.

AGR 118 Feed Grain Crops 3 0 0 3

A study of the scientific methods and the application of approved practices to the production of corn, oats, barley, sorghum, and millet. Varieties, soils, fertilization, cultivation, harvesting and utilization are included. Prerequisite: None.

AGR 121 Weed Identification & Control 3 0 0 3

A study of the Identification and Control of annual and perennial weeds of economic importance in North Carolina. Prerequisite: None.

AGR 122 Farm Machinery Repair & Maintenance 1 3 0 2

This course emphasizes the proper care, service and management of farm machinery. All kinds of farm machinery will be utilized to develop skills needed to repair farm machinery and to maintain them properly. Prerequisite: None.

AGR 124 Plant Reproduction 2 0 0 2

A study of the various methods of scientific reproduction in the greenhouse and in field situations. Special attention is given to the propagation of plants and shrubs for the farm and home landscape. Prerequisite: None.

AGR 125 Animal Science 5 2 0 6

Animal Science covers dairy and beef cattle, swine, poultry, sheep, horses and ponies. It provides an introduction to and a survey of the total animal industry, from the basis for genetic improvement to meat, milk, egg, and wool utilization trends. Prerequisite: None.

AGR 126 Farm Forest Management 2 0 0 2

The fundamentals of forestry and farm forestry problems, including planting, thinning and harvesting timber production and the marketing of forestry products. Prerequisite: None.

AGR 127 Animal Nutrition 2 0 0 2

A study of the composition of feeds, feed additives, and the nutritional requirements of livestock. Principles used in the formulation of practical and economical livestock rations are employed. Prerequisite: None.

AGR 128 Farm and Home Construction 2 3 0 3

This course deals with the fundamentals of farm building layout and selection of appropriately designed structures to meet farm enterprise needs. Emphasis is placed on foundations, carpentry construction, pole type structures, block and concrete construction and fencing. Field trips will be used to study farm structures. Prerequisite: None.

AGR 131 Soybean Production 2 0 0 2

A study of crop characteristics, varieties, approved production practices; the effects of environmental factors, rotation, fertilizers, pests and disease upon the profitable production of soybeans. Prerequisite: None.

AGR 133 Farm Water and Plumbing Systems 2 0 0 2

A study dealing with the farm water needs and waste disposal. Attention is given to planning and installing the system, and its proper care and maintenance. Prerequisite: None.

AGR 136 Agricultural Math 2 0 0 2

This course stresses the fundamental mathematical operations and their application to farm business problems and situations. Management problems dealing with pricing, payrolls, interest and discount, commission and taxes are also given consideration. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

AGR 138 Farm Records & Taxes 3 0 0 3

This study deals with the kinds of Farm Records needed and how they should be kept in order to have an adequate farm accounting system. Exercises involving procedures of tax computation skills will be used for income tax filing. Prerequisite: None.

AGR 141 Surveying 2 3 0 3

Theory and practice of elementary plane surveying, measurements, differential and profile leveling; the use of transits and tapes in laying-out farm buildings, grading for proper tile drain, installation of open ditches, and the laying-out of terraces. Prerequisite: None.

AGR 142 Agricultural Finance 2 0 0 2

Analysis of the capital structure of modern commercial agricultural with emphasis on the sources of credit; lending institutions, credit instruments and repayment schedules. Practice in the procedure of evaluating farm resources with attention to information needed for valuation will be provided. Prerequisite: None.

AGR 154 Swine Production 2 0 0 2

A study of the scientific methods of selecting, breeding, feeding, and management of swine. Special attention will be given to housing and marketing. Prerequisite: None.

AGR 155 Plant Diseases 3 0 0 3

A course dealing with the nature and symptoms of disease of crops; characteristics, causal agents, cause, identification and control of the major plant diseases of the area. Prerequisite: None.

AGR 170 Plant Science 5 2 0 6

An introductory general botany and a study of fundamental principles in crop production. The application of these principles to the major and minor field and horticultural crops in North Carolina. The elements of plant identification, crop grading and judging. Prerequisite: None.

AGR 183 Poultry & Egg Production 2 0 0 2

Poultry & Egg Production is designed to introduce the various aspects of poultry production with emphasis placed upon the business know-how and the trends in the future of poultry production. Business principles will be incorporated in class presentation concerning nutrition, care and marketing of poultry products. Prerequisite: None.

AGR 185 Soil Science & Fertilizer 5 2 0 6

A course dealing with the basic principles of efficient classification, evaluation, and management of soils; care, cultivation, and fertilization of the soil, and the conservation of soil fertility. Prerequisite: None.

AGR 186 Soils & Fertilizers 4 2 0 5

A course dealing with basic principles of the efficient classification, evaluation, and management of soils; the care, cultivation, and fertilization of the soil, and the conservation of soil fertility. Prerequisite: None.

AGR 190 Greenhouse Production and Management 3 2 0 4

A study of the principles involved in the operation of a greenhouse on a commercial basis. Class instruction will be basic to student assignments in greenhouse operations. Construction of facilities to the greatest advantage will be emphasized. Prerequisite: None.

AGR 200 Chemical Pest Control 2 2 0 3

A study of farm chemicals, their importance, ingredients, formulation, and farm application with emphasis on the effective and safe farm utilization of chemicals in agricultural pest control. Prerequisite: None.

AGR 201 Agricultural Chemicals 4 2 0 5

A study of farm and horticulture chemical pesticides, their ingredients, formulation and application with emphasis upon the effective use of chemicals in agricultural pest control. Prerequisite: CHM 101 or equivalent.

AGR 204 Farm Business Management 4 4 0 6

A review of the functions of the manager of a business firm and the problems he faces. Development of the concept of planning by both partial and complete budgeting. Review of the concepts of costs and the length of run in production. Practice in preparing enterprise budgets as an aid in choosing what to produce; use and analysis of input-output potentials in the development of a farm management plan that results in an efficient farm operation. Prerequisite: AGR 104.

AGR 205 Agricultural Marketing 5 0 0 5

An analysis of the functions of marketing in the economy and a survey of the problems marketing faces. A review of the market structure and the relationship of local, terminal, wholesale, retail and foreign markets. Problems in the operations of marketing including buying and selling, processing, standardization and grading, risk taking and storage, financing, efficiency and cooperation. Discussion of procedures of marketing such commodities as grain, cotton, livestock, and tobacco. Prerequisite: AGR 104 or equivalent.

AGR 208 Marketing Farm Products 3 0 0 3

A review of the market structure including local, terminal, wholesale, and retail markets. Problems involving the operation of marketing firms, buying, selling, processing, standardizing and grading, risk taking, storage, and financing are considered. Emphasis is placed on the marketing of grain, tobacco, cotton, soybeans, swine, beef animals, poultry and daily products. Prerequisite: None.

AGR 213 Farm Enterprise Management 2 2 0 3

A course dealing with the functions of a manager, production costs, length of run in production, partial and complete budgeting of enterprises for complete farm planning and operation. Exercises will be provided for practice and the development of skill in developing least cost, analysis of production data for the selection of the most desirable enterprise, and production factors in relation to the size, type and income of a farm. Prerequisite: None.

AGR 218 Farm Mechanization 3 2 0 4

A study of farm machinery management and labor-saving devices. The economics of selection and operation of farm machinery. Study and evaluation of feed grinders and mixers, storage facilities, harvester and materials handling systems. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

AGR 228 Livestock Diseases and Parasites 3 2 0 4

A course dealing with the common diseases and parasites of livestock; sanitation practices and procedures with emphasis on the cause, damage, symptoms, prevention and treatment of parasites and diseases, and management factors relating to disease and parasite prevention and control. Prerequisite: AGR 125.

AGR 238 Farm Mechanization 3 0 0 3

A study of farm machinery management and labor-saving devices. The economics of selection and operation of farm machinery. Study and evaluation of feed graders, mixers, storage facilities, harvesters and materials handling systems. Prerequisite: None.

AGR 240 Fruit & Vegetable Production 2 2 0 3

This course includes the selection of fruit and vegetable enterprises as cash crops; the selection of varieties, soil preparation, propagation, cultivation disease and insect control, harvesting and marketing of these crops. Prerequisite: None.

AGR 243 Farm Income 2 0 0 2

Consideration of new areas of production that are not in practice in the student's present farming program. The farm enterprise system is analyzed and new enterprises suggested. Prerequisite: None.

AGR 245 Crop Insects 2 0 0 2

A study of common local crop insects, their economic importance, identification, cycle and host. Field trips will be utilized as a means of noting insect damage and identifying the causative insects. Prerequisite: None.

AGR 256 Crop Production 4 2 0 5

A course dealing with the production of agricultural crops. A study of the characteristics, adaptability and productivity of different crops and how soil management, cultivation, fertilization and other factors effect the yield and ultimately the profitability of the crop. Prerequisite: AGR 170.

AGR 257 Livestock Production 4 2 0 5

A course dealing with the feeding, breeding and management of beef and dairy cattle, horses, swine, and poultry. Special emphasis is placed upon the application of sound principles and practices which make for profitable production in each type of animal production unit. Prerequisite: AGR 125.

AGR 272 Tobacco Production 3 2 0 4

This course includes the production practices relevant to flue cured tobacco in North Carolina. Topics covered include plant bed practices, field production practices including the use of machinery in cultivation, fertilization and harvesting of tobacco, and the preparation of tobacco for marketing. Prerequisite: None.

AGR 274 Pastures & Forages 3 2 0 4

A review of the major grasses and legumes of economic importance utilized for pastures, hay or silage. Attention is given to establishing pastures and in the production of forages crops of high nutrient value in keeping with livestock needs. Prerequisite: None.

AGR 296 Agricultural Programs and Agencies 3 0 0 3

A review of the public agricultural programs and agencies that provide services, including financial aid for agricultural production and the organization, objectives, functions, and services of these organizations. Prerequisite: None.

AGR 299 Cooperative Training 1 15 0 6

This course is designed to provide the student with an opportunity to pursue and be involved in, under faculty supervision, work experience in a specialty field. The student may choose employment involving either/or a combination of production, processing, manufacturing, distributing, marketing, or inspecting agricultural products, or the provision of a type of agricultural service. Prerequisite: Minimum of 35 quarter hours credit in curriculum courses.

Air Conditioning, Heating, and Refrigeration Courses

AHR 95 Shop Practice 2 0 3 3

A practical course including the elemental refrigerator cycle, copper tubing tools and processes, fans and air flow and basic electricity. Instruction emphasizes an introduction to metal shop and metal equipment. Prerequisite: None.

AHR 1120 Air Conditioning and Heating Maintenance 4 0 12 8

Introduction to the terminology used in the trade, principles of heating, and refrigeration, use and care of tools and equipment, and the identification and function of component parts of heating and air conditioning systems. The student has an opportunity to work with refrigeration tools, sheet metal equipment and basic electrical test equipment. Standard operating procedures and safety measures are stressed in the use of special tools or equipment and refrigerants. Throughout the course, emphasis is placed on troubleshooting, minor repair, control devices, assembling and disassembling and overall service and preventative maintenance practices. Prerequisite: None.

AHR 1121 Fundamentals of Refrigeration 5 0 6 7

Terminology used in the trade, principles of refrigeration; identification of basic system components; introduction to and practice with tools and shop equipment found in the field today. Standard procedures and safety measures are included. Prerequisite: None.

AHR 1122 Domestic and Commercial Refrigeration 4 8 0 7

A follow-up in basic refrigeration utilizing theory, procedures, tools and equipment relative to domestic and commercial refrigeration. Emphasis is placed upon mechanical problems and their solutions prevalent in the medium and low temperature range. Prerequisite: AHR 1121.

AHR 1125 Principles of Air Conditioning 3 2 0 4

Review of refrigerant cycle and characteristics of mechanical cooling equipment. Sensible and latent heat loads; air mixtures and dehumidification; system capacity and air distribution; pipe schematics and component symbols. Prerequisite: AHR 1145.

AHR 1127 Refrigeration Equipment Application 1 2 0 2

A course designed to complement course AHR 1122 (Domestic and Commercial Refrigeration) to provide for proper commercial refrigeration equipment selection in its various applicatons, and the installation, connection and service procedures for correct equipment performance. Prerequisite: AHR 1122.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

AHR 1129 Air Conditioning Shop Practice I 3 0 6 5

A continuation of practice on all shop procedures encountered by the student to this point; work on air conditioning compressors, central installations and trouble shooting; sheet metal duct fabrication and installation; also duct insulation materials and procedures. Prerequisite: AHR 1136 and 1146.

AHR 1130 Heat Pumps 3 0 3 4

Basic principles, coefficient of performance; reversing valves, unit controls, defrosting, heat capacity limits, supplementary strips, balance points and comparative cost of operation. Prerequisite: AHR 1125.

AHR 1132 Hot and Chilled Water Systems 3 0 3 4

Principles of hot and chilled water systems, components application, and service. Prerequisite: AHR 1146.

AHR 1133 Air Conditioning Shop Practice II 3 0 6 5

Emphasis on pipe work and water circuits with boilers and chillers; emphasis on control work with heat pumps, chillers and direct expansion air conditioning systems; fabrication and installation of motorized dampers automatically operated; strengthen all manipulative skills through practice. Prerequisite: AHR 1129.

AHR 1135 Sheet Metal Layout & Fabrication I 2 0 4 3

Work is divided between drafting room and metal shop. Layout procedures for elementary fittings are learned as patterns are developed on paper. Good shop practice is taught and applied as these same fittings are fabricated from metal. Prerequisite: None.

AHR 1136 Sheet Metal Layout & Fabrication II 0 0 3 1

A continuation of AHR 1135. Layout skills are more fully developed with more complicated projects. Greater experience is utilized as advanced work is completed. Prerequisite: AHR 1135.

AHR 1137 Air Conditioning Heating Code 3 0 3 4

Code interpretation of the minimum standards, provisions and requirements for reasonable safety, stable design and methods of installation of air conditioning, heating, refrigeration and ventilation systems installed within the state of North Carolina. Prerequisite: None.

AHR 1140 Oil Burner Service 3 0 3 4

Pot burners, low and high pressure gun burners, domestic and commercial equipment electric controls; service procedures; efficiency test; burner application and safety. Prerequisite: None.

AHR 1141 Control Systems I 2 0 3 3

Review of basic electricity and simple circuitry for controls. System components for special applications. Thermostats, solenoid valves, pressure switches, oil failure controls. Installation and service practice. Prerequisite: AHR 1145.

AHR 1142 Control Systems II 3 0 3 4

A continuation of the study of controls for automatic operation of mechanical systems. Motor controllers and starters. Motorized dampers and valves. Electric and pneumatic operations. Prerequisite: AHR 1141.

AHR 1145 Heating Systems I 5 4 3 8

Introduction to warm air systems; burners, fans, ducts, humidifiers. Systems are installed, operated, checked and adjusted. Prerequisite: AHR 1122.

AHR 1146 Heating Systems II 4 0 6 6

Warm air test instruments, service procedures, equipment selection. Prerequisite: AHR 1145.

AHR 1149 Blueprint Reading and Estimating 5 6 0 8

Interpretation of blueprints and specifications common to the mechanical contracting industry. Take off procedures; cost calculation; job pricing and bids. Prerequisite: AHR 1146.

AHR 1199 Cooperative Training 1 0 15 6

Work in the field with local contractors and service organizations. Prerequisite: Must have completed the first year of school curriculum.

American Institute of Banking Courses

AIB 102 Principles of Economics I 4 0 0 4

Macroeconomics — An introductory economics course with attention focused on such problems as the level of unemployment, the rate of inflation, the nation's total output of goods and services, the ways in which government raises and spends money, and other matters of economy-wide significance. Prerequisite: None.

AIB 104 Principles of Economics II 4 0 0 4

Microeconomics — An introductory economics course concerned with the specific units or parts that make up an economic system and the relationships between these parts. Emphasis is placed on understanding the behavior of individual firms and households and the ways in which such entities interact. Prerequisite: None.

AIB 110 Teller Training 4 0 0 4

To allow the student to gain necessary knowledge and skills which will benefit the student in gaining active employment or improving their present employment practices as a teller. Prerequisite: None.

AIB 120 Accounting I 4 0 0 4

A basic course in accounting principles and procedures. Coverage includes analysis of transactions, the acounting cycle, special journals and ledgers, payroll and control systems, payables and receivables, taxes and accruals. AIB 120 & 121 are equivalent to BUS 120. Prerequisite: None.

AIB 121 Accounting II 4 0 0 4

This course builds upon the foundation developed in Accounting I. The student learns more advanced concepts and techniques including departmentalized accounting, the partnership accounting cycle, branch and home office accounting, manufacturing and cost accounting, budgeting and statement analysis. Prerequisite: AIB 120 (AIB 120 and AIB 121 are equivalent to BUS 120).

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

AIB 123 Financial Business Enterprises 4 0 0 4

Basic financial management including the study of the nature of financial management and financial analysis, planning and control; long-term investment decisions; and valuation and financial structure. This course is taught from the standpoint of the banking institution. Prerequisite: None.

AIB 202 Principles of Bank Operations 4 0 0 4

Principles of Bank Operations is a course designed to provide the student with an overview of basic functions of the banking system. The course defines the many services that banks provides for its depositors. The course is broken down into subject areas that relate to the different phases of the banking system. It explains what takes place in banking operations and why these procedures are followed. Prerequisite: None.

AIB 203 Bank Investments 4 0 0 4

This course is designed to help acquaint the student with the role of investments by banks in the free-enterprise economy, and the problems of commercial banks as investors. Encompassed in the course are the different types of securities held by banks, the considerations weighed in choosing the right form of investment, primary and secondary reserves, market fluctuations, and other factors which influence investment policy. Prerequisite: None.

AIB 204 Effective English 4 0 0 4

This course seeks to impress upon the student the need to consider both the purpose of the communication and the person who will receive it; the fundamental principles underlying effective use of the English language. It points out the ways in which communication may be heightened by proper use of the techniques of language. It also is concerned with the mastery of language through wide reading, an interest in words, and practice in writing. Prerequisite: None.

AIB 205 Bank Management 4 0 0 4

This course is designed to provide the student, new and experienced banker, with a practical working knowledge of bank management. Incorporated into this course is a look at the nature and objectives of banking. The basic structure of organizational planning coupled with staffing and management contracts offer a complete guideline to the experienced banker and student. A complete explanation of bank funds, investments, trusts, and current bank issues is presented. The success or failure of any bank depends on the quality of its management. Clearly, resourceful and able managers are prerequisite to achieving these aims. This course will enable the student to become aware of these problems and will assist him in reaching solutions. Prerequisite: None.

AIB 206 Bank Letters and Reports 4 0 0 4

This course is designed to aid the student in developing a mastery of the written language as it deals particularly with the everyday workings of the bank. Stress will be placed on the organization of ideas in a logical order, and to present them in a consistent and easily understood manner. Communication between the writer and recipient must carry ideas clearly from one mind to another and therefore the written language must ensure understanding. This course will stress clear and concise communication by letter, report, memorandum, and telephone.Prerequisite: None.

AIB 207 International Banking 4 0 0 4

This course begins with a definition of the world in which the international banker lives. It is an introduction to a vast field for those working in international departments as well as for those involved in the domestic activities of their banks. International banking has become a most dynamic growth area dealing with the transfer of money from one country to another, the financing of trade, what exactly constitutes international agencies and how money is changed from one currency to another. Beginning with these basic operational coverages, the course discusses various credit instruments, basic principles of international lending and international credit agencies that supply funds. The course concludes with a discussion of how international banking effects the services of local bank customers. This course is very beneficial to the student concerned with developing his career in the banking field. Prerequisite: None.

AIB 209 Installment Credit 4 0 0 4

In this course the techniques of installment lending are presented concisely. Emphasis is placed on establishing the credit, obtaining and checking information, servicing a loan and collecting the amounts due. Topics discussed are inventory financing, special loan programs, and public relations aspect of installment lending. Prerequisite: None.

AIB 210 Money and Banking 4 0 0 4

This course deals with the many aspects of the money and banking system. The student gains a better understanding of the problems facing the money and banking system and such problems as the limitations of our central banking control, the different types of spending, about our governmental and economic role here and abroad, and how they are effecting our money and banking system. This course describes the what and the why of our money and banking system. The modern banker must understand the system clearly to identify clearly his industry's role in the American economy. Prerequisite: None.

AIB 211 Federal Reserve System 4 0 0 4

In 1913, when the Federal Reserve Act was enacted, the economic problems of the world seemed relatively simple and economic systems relatively stable. Governmental intervention in economic life was minimal. Prior to World War I, the Federal government took little action to mitigate cyclical fluctuations or to relieve the hardships of depression. Changing economic conditions and the depression of the 1930's brought about problems which have been ameliorated through actions of Federal Reserve System. The Federal Reserve Bank continues to play an important part in the American economic scene. This course defines and discusses the many functons, effects, and organization of the Federal Reserve Bank as it influences commercial banking. Prerequisite: None.

AIB 213 Trust Functions and Services 4 0 0 4

This course describes the different types of trust functions and the duties of the trust officer. Variations in the trust laws among the states are stressed. The business and legal aspects of trust functions are kept clear and distinct and excludes detailed treatment of such matters that belong in a more specific study of law. Prerequisite: None.

AIB 214 Effective Speaking 4 0 0 4

In this course, Effective Speaking, students are given an opportunity to study all phases of speech situations. Having studied the basic principles involved in organizing and presenting a speech, the student is given suggestions to aid in the development of speaking ability. The classroom is the forum in which each student is given an opportunity to use his/her skills in communicating with others. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

AIB 216 Introduction to Commercial Bank Lending 4 0 0 4

This is a new introductory course for bankers who wish to develop their skills and expand their knowledge in the field of lending to businesses. Major topics are: commercial lending; the lending process; portfolio management; and regulations and business development. Prerequisite: None.

AIB 219 Credit Administration 4 0 0 4

This course is designed to assist in the training of lending officers and bank credit administration. It stresses the importance for a banking institution to develop and follow sound lending and credit administration policies. Methods of credit investigation and analysis, credit techniques, specific credit problems, and regular as well as unusual types of loans are presented and discussed. No attempt is made, however, to show the student when to grant or when to refuse a loan. Credit granting is more an art than a science and can only be developed by patience and practice; which is emphasized by this course. Prerequisite: None.

AIB 220 Business Financial Management 4 0 0 4

This course has the primary objective of acquainting the student thoroughly with the principles of finance as applied to the operations of a profit-seeking (non-bank) firm. Active participation in the process of financial administration and decision-making teaches the student to use the tools and techniques necessary for the efficient financial management of a modern business enterprise. An up-to-date overview of the activities of the modern business financial manager is provided. Prerequisite: None.

AIB 225 Home Mortgage 4 0 0 4

This course approaches the subject from the view point 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 all overall portfolio management. Prerequisite: None.

AIB 227 Management of Commercial Bank Funds 4 0 0 4

This course deals with those necessary principles from which the student can derive an adequate philosophy of funds management. Differences between practices in large banks and smaller institutions are defined. The importance of funds management as the catalyst that brings together policies in the areas of loans, deposits, investments and capital, and relates each to the other. Prerequisite: None.

AIB 231 Savings and Time Deposit Banking 4 0 0 4

This course is designed to acquaint the student with the historical development of savings institutions and awareness of the basic economic function of the savings process. Different types of financial savings are reviewed to give a better understanding of deposit type savings and other time accounts. The student becomes familiar with problems and policies with respect to the current operation of savings institutions such as asset management, operations and control, supervision, examination, liquidity and marketing of savings services. Prerequisite: None.

AIB 232 Agricultural Finance 4 0 0 4

Reflecting the rapid growth of the off-farm agri-busines sectors (the suppliers of farm inputs), this course emphasizes general principles associated with the evaluation of management resources which are more closely aligned with agricultural production. An understanding of agricultural finance helps the banker satisfy the credit needs of modern agriculture. Prerequisite: None.

AIB 233 Analyzing Financial Statements 4 0 0 4

A primary function of banking is the extension of credit. To know how to extend credit soundly and constructively, a banker must be able to understand and interpret financial statements. This course is carefully designed to give a thorough understanding of financial statements and their interpretation. It is soundly based on what actually occurs in the industry. Prerequisite: BUS 120.

AIB 239 Marketing for Bankers 4 0 0 4

This course is directed toward students and bank personnel who are unfamiliar with marketing principles as they pertain to the banking industry. Some of the topics covered in the course are fundamental concepts and philosophies of marketing; marketing information and research; production distribution, promotion and pricing strategies, and marketing planning. Prerequisite: None.

AIB 259 Law and Banking 4 0 0 4

The object of this course is to present simply but accurately the rules of law which underlie banking. Certain basic legal principles must be understood before any successful attempt can be made to master the commercial laws that support and control the banking industry. American commercial law is essentially now under the Uniform Commercial Code. The course, although broadly presenting commercial law principles, concentrates its attention on the Uniform Commercial Code as it deals with banking. Prerequisite: None.

Architectural Drafting Courses

ARC 1112 Architectural Estimating 3 0 0 3

The study of estimating tasks involved in architectural construction including approximate and detailed estimates. Instruction is given in the areas of materials, cost, labor cost, plant and equipment cost, overhead cost, profit, and bid and contract procedures. Prerequisite: ARC 1265.

ARC 1121 Interior Design 1 5 0 3

Basic concepts of Interior Design incorporating historical styles, current manufactured products, coordinations of colors, furniture, floor coverings fabrics, wall paper, drapery and accessories. Prerequisite: None.

ARC 1145 Specifications and Contracts 3 0 0 3

A study of building codes and their effect in relation to specifications and drawings. The purpose and writing of specifications are studied along with their legal and practical application to working drawings. Contract documents are analyzed and studied for the purpose of client-architect-contractor responsibilities, duties, and mutual protection. Prerequisite: None.

ARC 1226 Graphic Communications I 3 0 3 4

The study of systems of graphic communications including orthographic projection and the pictorial group; axonemetric, oblique, perspective; shades and shadows. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

ARC 1227 Graphic Communications II 3 0 3 4

A continuation of ARC 1226 (Graphic Communicaitons I). See course description ARC 1226. Prerequisite: ARC 1226.

ARC 1228 Graphic Communications III 3 0 3 4

A continuation of ARC 1227 (Graphic Communications II). See course description ARC 1227. Prerequisite: ARC 1227.

ARC 1231 Architectural Drafting and Design I 3 2 6 6

The study of methods of drafting architectural working drawings; the design process and their relationship to each other. Instruction also is given in drafting room organization and operation in conjunction with the architectural office. Prerequisite: None.

ARC 1232 Architectural Drafting and Design II 3 2 6 6

A continuation of ARC 1231 (Architectural Drafting and Design I). See course description ARC 1231. Prerequisite: ARC 1231.

ARC 1233 Architectural Drafting and Design III 3 2 6 6

A continuation of ARC 1232 (Architectural Drafting and Design II). See course description ARC 1231. Prerequisite: ARC 1232.

ARC 1238 Architectural Environmental Systems I 3 0 3 4

The study of architectural environmental systems with emphasis upon a comparison of different types of heating, air conditioning and electrical systems, their implications for architectural drafting room production of mechanical drawings. Prerequisite: ARC 1265.

ARC 1239 Architectural Environmental Systems II 3 0 3 4

A continuation of ARC 1238 (Architectural Environmental Systems I). See course description ARC 1238. Prerequisite: ARC 1238.

ARC 1241 Architectural Presentations I 3 2 6 6

The study of methods of production of architectural presentations. Instruction is given in architectural delineation and architectural models. Prerequisite: None.

ARC 1242 Architectural Presentations II 3 2 6 6

A continuation of ARC 1241 (Architectural Presentations I). See course description ARC 1241. Prerequisite: ARC 1241.

ARC 1250 Site Surveying & Site Development 3 2 3 5

A study of site improvement methods including basic surveying instrumentation and topography, analysis and control of storm drainage, traffic flow and vehicular access, site design and landscaping. Prerequisite: ARC 1233.

ARC 1264 Materials and Methods of Architectural Construction I 4 0 6 6

Materials used in architectural construction are studied. Their limitations as effected by the nature of the material, economic values, and codes are stressed. Instruction also is given in methods of residential and commercial construction. Prerequisite: None.

ARC 1265 Materials and Methods of Architectural Construction II 3 2 6 6

A continuation of ARC 1264 (Materials and Methods of Architectural Construction I). See course description ARC 1264. Prerequisite: ARC 1264.

Art Courses

ART 102 Drawing and Composition I 1 2 0 2

This drawing course is designed for beginning students. The student is introduced to various techniques and methods of drawing as well as problems of composing a picture. Still life, nature, and student models are the subject matter. Prerequisite: None.

ART 103 Drawing and Oil Painting 1 2 0 2

This course is an introductory, first course in oil painting. It includes the study of color including the color wheel and its applicaiton in the use of oil pigments. Other major subjects are: choice of subject for painting, composition, drawing on the prepared canvas, and techniques including underpainting, glazing, impacts, and varnishes, the care of colors, brushes and palettes, and other basic oil painting techniques and practices. Prerequisite: ART 102.

ART 104 Art Appreciation 3 0 0 3

Art appreciation is designed to establish an understanding of art, to develop an appreciation for the relationship between art and man, and to study art in a cultural environment. Prerequisite: None.

ART 105 Ceramics I 1 2 0 2

This is a basic course in the hand-building processes of ceramics as a fine art. Prerequisite: None.

ART 106 Ceramics II 1 2 0 2

Ceramics II is a continuation of Ceramics I with an emphasis on technique and an introduction to the pottery wheel. Prerequisite: ART 105.

ART 110 Pottery I 1 2 0 2

This course is designed to help develop basic skills and knowledge in wheel-thrown pottery and continues with advanced hand-building techniques. Prerequisite: ART 106.

ART III Pottery II 1 2 0 2

Pottery II is an advanced continuation of skills and knowledge developed in Pottery I in both wheel-throwing and hand-building techniques as well as the development of a working knowledge of pottery as a profession. Prerequisite: ART 110.

ART 112 Sculpture I 1 2 0 2

This course is designed to help develop basic skills and knowledge in various techniques and media in sculpture, and to help develop basic concepts of shape and form integration. Prerequisite: None.

ART 113 Sculpture II 1 2 0 2

This second course in sculpture is designed to help refine and improve basic skills and techniques already developed in Sculpture I and to explore new media on an individual basis. Prerequisite: ART 112.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

ART 202 Drawing and Composition II 1 2 0 2

The purpose of this course is to teach the student good design and composition through drawing and the use of design principles. The student is also introduced to new techniques to increase his/her skill with techniques introduced in ART 102. Prerequisite: ART 102.

ART 203 Painting 1 2 0 2

This is a continuation of ART 103 with greater emphasis on color and individual style. Prerequisite: ART 103.

ART 220 Drawing and Composition III 1 5 0 2

This course is a continuation of ART 202 and offers the opportunity for advanced study of design and composition through various drawing techniques. Structure and color are also studied. Prerequisite: ART 202.

AVA 201 Audio Visual 2 2 0 3

This course is designed to teach students the various types of audio visual aids in planning activities. Included are equipment (projectors, cameras, etc.), bulletin boards, and photography.Prerequisite: None.

Biology Courses

BIO 92X Fundamental Biology 3 0 0 4

An introduction to the cellular nature of life, including cell structure and function, nuclear division, reproduction, laws of genetics and evolution. Prerequisite: None. Corequisite: BIO 92Y.

BIO 92Y Fundamental Biology Lab 0 2 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in BIO 92X. Prerequisite: None. Corequisite: BIO 92X.

BIO 93X Fundamental Biology II 3 0 0 4

A continuation for Biology 92. An introduction to general principles and concepts of biology: cell structure, chemistry and function; differentiation; inheritance and genetics. Prerequisite: BIO 92. Corequisite: BIO 93Y.

BIO 93Y Fundamental Biology Lab 0 2 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in BIO 93X. Prerequisite: BIO 92. Corequisite: BIO 93X.

BIO 94X Fundamental Biology III 3 0 0 4

A basic course in biology with emphasis on the identification and association of the organism and its parts as associated with nursing. Prerequisite: None. Corequisite: BIO 94Y.

BIO 94Y Fundamental Biology Lab 0 2 0 0

An introduction to the general principles and concepts of ecology, with emphasis on man's role in his environment. Prerequisite: None. Corequisite: BIO 94X.

BIO 103X Human Structure and Function I 3 0 0 5

A general 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 functional aspects of the integumentary, muscular and nervous systems. Prerequisite: High school biology or equivalent. Corequisite: BIO 103Y.

BIO 103Y Human Structure and Function Lab 0 4 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in BIO 103X. Prerequisite: High school biology or equivalent. Corequisite: BIO 103X.

BIO 104X Human Structure and Function II 3 0 0 5

A continuation of the study of the structure and function of man as a living organism. Emphasis is placed on the special senses of vision and hearing and upon the circulatory, respiratory, digestive, reproductive, urinary and endocrine systems. Fluid and electrolyte balance are considered along with the above mentioned systems. Prerequisite: BIO 103X. Corequisite: BIO 104Y.

BIO 104Y Human Structure and Function Lab 0 4 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in BIO 104Y. Prerequisite: BIO 103Y. Corequisite: BIO 104X.

BIO 105X Basic Microbiology 3 0 0 4

An elementary course in microbiology introducing special terminology and the disciplines covered in the study of microbiology. Emphasis is placed on microbiological equipment and procedures, characteristics of microbes, specific microbial organisms such as bacterial cells, rickettsia, chlamydia, viruses, fungi, and protozoans, etc. Special treatment is given to microbial control, its purpose and its varied agents. Also included is microbial ecology of air, water, milk, food, and man. Microbial interactions with man with regard to normal flora and pathogenicity are covered. Prerequisite: High school biology or equivalent. Corequisite: BIO 105Y.

BIO 105Y Basic Microbiology Lab 0 2 0 0

Laboratory exercises emphasizing the uniqueness of microorganisms and their control. Basic microbiological laboratory techniques are developed by the student as well as basic microscopy techniques. Prerequisite: High school biology or equivalent. Corequisite: BIO 105X.

BIO 106X Human Anatomy and Physiology I 4 0 0 5

A course in Anatomy and Physiology of the human body with special emphasis on the morphological and physiological aspects of the body as an integrated whole, including cellular biology, and the cardiovascular, respiratory, skeletal and muscular systems. Laboratory experiments are integral parts and exist as vital support components to the lecture material. Prerequisite: BIO 93 or BIO 202 and CHM 96 or CHM 102 or equivalent. Corequisite: BIO 106Y.

BIO 106Y Human Anatomy and Physiology Lab 0 3 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in BIO 106X. Prerequisite: BIO 93 or BIO 202 and CHM 96 or CHM 102 or equivalent. Corequisite: BIO 106X.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

BIO 107X Human Anatomy and Physiology II 4 0 0 5

The student will cover the nervous, digestive, urinary, reproductive, and endocrine systems. Laboratory experiments are integral parts and exist as vital support components to the lecture material. Prerequisite: BIO 106. Corequisite: BIO 107Y.

BIO 107Y Human Anatomy and Physiology Lab 0 3 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in BIO 107X. Prerequisite: BIO 106. Corequisite: BIO 107X.

BIO 108X Microbiology 5 0 0 6

A basic course in microbiology with emphasis on micro-organisms and laboratory procedures for the identification, differentiation, eradication and preservation of the microbes both pathogenic and non-pathogenic. The use of chemical, physical and biological agents to accomplish the goals is emphasized. Prerequisite: BIO 107 or BIO 202 and BIO 110. Corequisite: BIO 108Y.

BIO 108Y Microbiology Lab 0 3 0 0

A basic course in laboratory methods and techniques as they relate to the supporting instructional materials in Biology 108 lecture. Prerequisite: BIO 107 or BIO 202 and BIO 110. Corequisite: BIO 108X.

BIO 201X Biology I 4 0 0 5

An introduction to principles and concepts of biology; a study of the chemical and cellular basis of life with a general and comparative review of plants, invertebrate, and vertebrate animals. On the systems level, circulation, respiration, digestion and chemical control of body functions are emphasized. Prerequisite: None. Corequisite: BIO 201Y.

BIO 201Y Biology Lab 0 2 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in BIO 201 lecture. Prerequisite: None. Corequisite: BIO 201X.

BIO 202X Biology II 4 0 0 5

A continuation of General Biology 201: a general and comparative review of the basic problems faced by all forms of life; plant, invertebrate and vertebrate, with special emphasis on mammals. Prerequisite: BIO 201. Corequisite: BIO 202Y.

BIO 202Y Biology Lab 0 2 0 0

The primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in Biology 202 lecture. Prerequisite: BIO 201. Corequisite: BIO 202X.

BIO 208 Pathology for Paramedical Personnel 3 0 0 3

The student is acquainted with the general principles of pathology from the anatomic, histochemical, biochemical and physiological aspects, and a study of frequently seen systemic diseases with a discussion of the pathology of the various systems. Emphasis is placed on the features of the various conditions which should be known by the technologist in performance of the indicated x-ray examinations. Prerequisite: Second Year Student — Respiratory Therapy Curriculum.

Building Maintenance Codes Courses

BMS 1133 Building Codes and Laws **4 0 0 4**

Building code requirements pertaining to residential and commercial structures; general study of heating, air conditioning, plumbing and electrical equipment, materials, and symbols; reading and interpretating local, State and national codes. Prerequisite: None.

BMS 1134 Building Codes and Laws — Plumbing **4 0 0 4**

Building code requirements pertaining to residential and commercial structures. General study of heating, air conditioning, plumbing and electrical equipment, materials and symbols. Reading and interpretation of local, State and national codes. Prerequisite: None.

Business Courses

BUS 85 Typewriting I **2 3 0 3**

Introduction to the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, centering, and simple tabulation. Prerequisite: None.

BUS 86 Typewriting II **2 3 0 3**

Instruction emphasizes the development of speed and accuracy with further mastery of correct typewriting techniques. These skills and techniques are applied in typing tabulation, manuscript, and personal and business correspondence problems. Prerequisite: BUS 85 or equivalent.

BUS 94 Bookkeeping I **3 2 0 4**

An introductory bookkeeping course designed to give an overview of the complete bookkeeping cycle in its simplest form. Prerequisite: None.

BUS 95 Bookkeeping III **3 2 0 4**

The course continues the expansion of basic bookkeeping principles begun in bookkeeping 98. It covers the use of special journals and many of the nonroutine transactions most businesses encounter, such as notes and interest, sales tax, fixed assets, depreciation and others. It also introduces those aspects of partnership and corporation accounting which differ from the sole proprietorship. Prerequisite: BUS 98.

BUS 98 Bookkeeping II **3 2 0 4**

A continuation of the basic bookkeeping course, designed to cover the bookkeeping problems of a merchandising business including payroll and payroll taxes. Prerequisite: BUS 94.

BUS 99 Consumer Economics **3 2 0 4**

A study of the economic principles involved in the personal and family problems of earning an income, wise management of money and savings, protection from loss through insurance, and the procurement of a home. Prerequisite: None.

BUS 102 Typewriting **2 3 0 3**

Introduction to the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, tabulation, and manuscripts. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

BUS 103 Typewriting 2 3 0 3

Instruction emphasizing the development of speed and accuracy with further mastery of correct typewriting techniques. These skills and techniques are applied in tabulation, manuscript, correspondence, and business forms. Prerequisite: BUS 102 or equivalent.

BUS 104 Typewriting 2 3 0 3

Emphasis on production typing, problems, and speed building. Attention given to the development of the student's ability to function as an expert typist, producing mailable copies. The production units are tabulation, manuscript, correspondence, and business forms. Prerequisite: BUS 102.

BUS 105 Typewriting 2 3 0 3

Emphasis on production typing, problems, and speed building. Attention given to the development of the student's ability to function as an expert typist, producing mailable copies. The production units are tabulation, manuscript, correspondence, and business forms with emphasis on specialized areas. Prerequisite: BUS 104.

BUS 106 Shorthand 3 2 0 4

A beginning course in the theory and practice of reading and writing shorthand. Emphasis on phonetics, penmanship, word families, brief forms, and phrases. Prerequisite: None.

BUS 106A Shorthand 2 1 0 2

The first half of BUS 106. Course divided into two parts to provide additional preparation time for night students who hold full-time jobs. Refer to BUS 106 for course descriptions. Prerequisite: None.

BUS 106B Shorthand 1 1 0 2

The final half of BUS 106. Course divided into two parts to provide additional preparation times for night students who hold full-time positions. Refer to BUS 106 for course description. Prerequisite: BUS 106A.

BUS 107 Dictation and Transcription 5 2 0 6

Review of shorthand theory and the introduction of the mailable letter and the speed take on new-matter dictation. Minimum dictation rate of 60 words per minute required for five minutes on new material. Prerequisites: BUS 106 or equivalent and BUS 102 or equivalent. Corequisite: ENG 110.

BUS 108 Dictation and Transcription 3 2 0 4

Continued review of theory and further emphasis on the transcription of mailable copy. Minimum dictation rate of 80 words per minute for five minutes on new material. Prerequisites: BUS 107 and BUS 104.

BUS 110 Business Math with Calculators 2 3 0 3

A beginning course emphasizing the touch operation on ten-key electronic calculators. Students receive instructions in computing interest; calculating percent of increase or decrease; calculating payroll records; reconciling bank statements; calculating selling price, cost and markup; calculating installment purchases; discounting notes; computing chain discounts; computing prorating and sequential math problems; and computing various depreciation problems. Prerequisite: None.

BUS 111 Shorthand Speed Building 0 5 0 2

A course designed to reinforce shorthand theory and to develop the ability to construct new outlines under the stress of dictation. Minimum dictation rate of 60 words per minute for five minutes on new material. Prerequisites: BUS 106 or equivalent and BUS 102 or equivalent.

BUS 112 Filing 3 0 0 3

Fundamentals of indexing and filing, combining theory and practice through the use of a practice set. Alphabetic, numeric, geographic, and subject filing are emphasized. Prerequisite: None.

BUS 115 Business Law I 3 2 0 4

A general course designed to acquaint the student with certain fundamentals and principles of business law, including contracts, real property, and wills. Prerequisite: None.

BUS 116 Business Law II 3 2 0 4

Includes the study of laws pertaining to sales, negotiable instruments, bailments, and agency. Prerequisite: BUS 115.

BUS 119 Accounting for Non-Business Majors 5 3 0 6

A study of the mechanics of accounting. The students analyze, record, summarize and report information for service and merchantile enterprises. A study of payroll, checking account records, and cash control is included. This course is designed for those students who are required to take only one quarter of accounting. It will not be accepted in lieu of BUS 120 or BUS 121 nor does it meet the prerequisite requirements for BUS 121. Prerequisite: None.

BUS 120 Accounting I 5 3 0 6

The basic principles of bookkeeping including the analysis and recording of transactions; preparation of work sheets and financial statements. The theory and recording of notes, interest, inventories, fixed assets and depreciation, and accruals and deferrals. Prerequisite: None.

BUS 121 Accounting II 5 3 0 6

This course includes a study of cash control systems including use of a bank account and voucher system; a payroll system with controls, documentation and reports; also the basic concepts and theories applied to the recording of transactions. Transactions effecting partnership capital and corporation capital stock, retained earnings, bonds and investments are studied in detail. Prerequisite: BUS 120.

BUS 122 Managerial Accounting 5 3 0 6

Accounting for control and decision making purpose including departmental and branch accounting, cost accounting and budgeting. Also, includes managerial reporting and analysis as well as preparation of funds and cash flow statements. Prerequisites: BUS 120 and BUS 121.

BUS 123 Business Finance 2 2 0 3

Basic financial management including the study of the nature of financial management and the business environmental financial analysis, planning and control; long-term investment decisions; and valuation and financial structure. Prerequisite: BUS 120.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

BUS 124 Business Finance 2 2 0 3

A continuation of BUS 123 including the study of working capital management, long-term financing and valuation in mergers and corporate readjustment. Prerequisite: BUS 123.

BUS 125 Personal Finance 3 0 0 3

A course designed to enable the student to analyze and direct his own or family's financial affairs. The student is given a general overview in the areas of money management, borrowing, investment principles, and retirement. Prerequisite: None.

BUS 141 Medical Terminology and Vocabulary 3 2 0 4

To provide the student with knowledge of medical terms in order that they may carry out the duties required by doctors, hospitals, clinics etc. Prerequisite: None.

BUS 183 Terminology and Vocabulary 5 0 0 5

A course designed to increase and improve the student's vocabulary with meaningful learning experiences in the development of spelling ability and vocabulary enrichment. Special emphasis is placed on business and professional vocabularies. Prerequisite or Corequisite: ENG 110.

BUS 184 Terminology and Vocabulary 5 0 0 5

A continuation of the study to increase and improve the student's vocabulary with meaningful learning experiences in the development of spelling ability and vocabulary enrichment. Emphasis is placed on business and special vocabularies as well as a review of grammar, punctuation, and basic business information in preparation for employment tests. Prerequisite: BUS 183.

BUS 185 Business Organization 3 0 0 3

Designed to provide the student with an understanding of the general concepts of business. Basic materials are presented which will provide an understanding of both the major facets of the business world and the interrelationships of these facets. Cases are provided which allow feedback from the student thereby increasing their retention of information, class participation, ego involvement, and understanding of application of business principles and knowledge. Topics covered include the foundations of responsibilities of business, management of the business firm, human factors in management, financing the business firm, quantitative aids of the business manager, marketing and distribution, and legal, governmental, and social environment. Prerequisite: None.

BUS 204 Advanced Typewriting 2 3 0 3

Emphasis is placed on increasing individual production rates. The student applies techniques in planning and typing mailable office copy. A review of letter styles, manuscripts, and statistical reports is stressed. Prerequisite: BUS 211.

BUS 205 Typewriting 2 3 0 3

An accumulation of skills and techniques in typing from rough-draft material in a simulated office approach. Stress is placed upon the student's ability to make decisions, use initiative, place priorities upon work, and produce mailable copy in form and content. Prerequisite: BUS 204.

BUS 206 Dictation and Transcription 3 2 0 4

An advanced shorthand course designed to increase the student's dictation and transcription rate. Emphasis on mailable copy is further stressed. Individual dictation speeds are satisfied in lab and speed-building exercises. Minimum dictation rate of 90 words per minute for five minutes on new material. Prerequisites: BUS 105 and BUS 108.

BUS 207 Dictation and Transcription 3 2 0 4

An advanced shorthand course designed to increase the student's dictation and transcription rate. Emphasis on mailable copy is further stressed. Individual dictation speeds are satisfied in lab and speed-building exercises. Minimum dictation rate of 100 words per minute for five minutes on new material. Prerequisite: BUS 206.

BUS 208 Dictation and Transcription 3 2 0 4

An advanced shorthand course designed to increase the student's dictation and transcription rate. Emphasis on mailable copy is further stressed. Individual dictation speeds are satisfied in lab and speed-building exercises. Minimum dictation rate of 110 words per minute for five minutes on new material. Prerequisite: BUS 207.

BUS 211 Word Processing and Duplication 2 3 0 3

The secretarial and general office student receives instruction in the manipulation of the proportional spacing, the magnetic tape, and memory typewriters. Extensive training in the preparation of materials for the use of various duplicating equipment is included. Prerequisite: BUS 105.

BUS 214 Secretarial Procedures 3 2 0 4

A course designed to help the secretary become a more efficient and valuable employee. Personality and efficient work habits are stressed. Semi-executive duties involving secretarial decision-making and planning are included to promote job enhancement. Prerequisite: BUS 211.

BUS 221 Intermediate Accounting I 3 2 0 4

Review of the accounting process and a thorough understanding of the valuation procedures for balance sheet presentation of current assets. Prerequisites: BUS 120 and BUS 121.

BUS 222 Intermediate Accounting II 3 2 0 4

Review of the accounting process and a thorough understanding of the valuation procedures for balance sheet presentation of fixed and intangible assets, and current liabilities. Prerequisite: BUS 221.

BUS 223 Intermediate Accounting III 3 2 0 4

Review of the accounting process and a thorough understanding of balance sheet presentation of long-term liabilities, paid in capital, and retained earnings. Also, calculating earnings per share and preparation of Statement of Changes in Financial Position. Prerequisite: BUS 222.

BUS 224 Advanced Accounting 5 3 0 6

Advanced accounting theory and principles as applied to special accounting problems, bankruptcy proceedings, estates and trusts, consolidation of statements, partnership accounting, and parent and subsidiary accounting. Prerequisite: BUS 223.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

BUS 225 Cost Accounting 5 3 0 6

The nature and purpose of cost accounting; accounting for direct materials, labor and factory overhead; job cost, process cost and standard cost procedures. Accumulation, recording and reporting of cost data. Prerequisite: BUS 122.

BUS 227 Managerial Accounting 5 3 0 6

The student will use accounting data to prepare various reports used by management for planning and control including, but not limited to, budgets, gross profit and department profit analysis, break-even analysis, cost-volume-profit analysis, differential and comparative cost analysis, capital expenditure planning, and opportunity cost analysis. The student will also be introduced to the use of linear programming for planning and decision making. Prerequisite: BUS 225.

BUS 228 Personal Income Taxes 2 2 0 3

A study of the Internal Revenue Code as it applies to income tax for individuals. Prerequisite: None.

BUS 229 Federal Income Taxes 3 4 0 5

A study of the Internal Revenue Code as it applies to income tax for individuals, partnerships and corporations. Prerequisite: BUS 121.

BUS 233 Personnel Management 4 0 0 4

A study of the important traditional, current, and emerging practices to help the student develop a practical, realistic, and modern view of personnel management. Consideration is given to key problems in the areas of employee selection, hiring, and placement; training; wage and salary administration; promotion, transfer and separation; and personnel services. Prerequisite: None.

BUS 234 Business Management 5 0 0 5

A course designed to introduce the student to the basic principles of management including planning, organizing, staffing, directing, and controlling. To provide the student with the necessary skills and insights necessary to make a more efficient transition into a managerial position. Cases are provided to help supplement the text material, to provide knowledge of actual situations, and to encourage maximum student participation. Prerequisite: None.

BUS 235 Small Business Management 3 0 0 3

This course prepares the student to initiate and manage a small business. The course is applicable for any student who is contemplating going into business, is in the process of setting up a business, or who is already operating a business. Topics covered include small business environment, managerial functions, initiating a business, marketing, financial controls, administrative controls, and governmental controls. Prerequisite: None.

BUS 239 Marketing 5 0 0 5

An introductory course designed to emphasize key concepts and issues underlying the modern practice of marketing. Modern day illustrations are used in order to provide better examples of how certain concepts work within the total marketing system. The four main decision areas in marketing—products, distribution, promotion, and pricing are covered as well as the interactions of marketing and society. Prerequisite: None.

BUS 243 Advertising 5 0 0 5

A presentation of the management, planning, creation, and use of advertising in a non-technical manner in order to provide the students with an understanding and background that will allow them to continue their study in this area. Changes in the advertising field and things that have influenced these changes are discussed. The concepts and materials of advertising that have proven to be successful through the years are also discussed in the course. Prerequisite: None.

BUS 247 Business Insurance I 3 0 0 3

A presentation of the basic principles of life, health and accident insurance and their application. Also included are the principal topics on which State examinations for licenses as life and/or health and accident agents will be based. Prerequisite: None.

BUS 248 Insurance Principles & Procedures 3 0 0 3

A presentation of the basic principles of life, health, property, and automobile insurance. Emphasis is placed on the role of the secretary in the specialized office as well as in the multiple-line agency offices. Prerequisite: For Secretarial Science & General Office Students only.

BUS 249 Buying & Merchandising 2 2 0 3

A course dealing with the changes and opportunities apparent in retailing today. Many aspects of the business recession of the early 70's including inflation, curtailed buying by consumers, and uncertainty in fashion are discussed. Also emphasized are the new techniques and managerial measures required for successful retail operation in today's business environment. Prerequisite: None.

BUS 257 Business Insurance II 3 0 0 3

A presentation of the business uses of life and health insurance, including proprietorship, partnership and corporation continuation problems, and their solutions through the use of buy-sell agreements properly funded to preserve and distribute business values. Other business uses of life and health insurance, such as a key man insurance, non-qualified deferred compensation plans and split-dollar plans are covered as well as corporate recapitalizations, professional corporations and business use of property and liability insurance. Prerequisite: BUS 247.

BUS 260 Government and Business 2 2 0 3

A course dealing with political trends and government activity which effect business. Major topics covered are the distribution of powers within our multi-unit system of government, the constitutional limitations that restrict government in regulating business, the different powers of the governments and the regulations that have been imposed under their authority, and the actual problems of administration of government regulations. Prerequisite: None.

BUS 261 Introduction to Machine Transcription 2 3 0 3

A course that acquaints the student with dictation-transcription equipment. The student is introduced to mailable transcription, which involves correct spelling and punctuation. Prerequisite: BUS 104. Corequisite: ENG 110.

BUS 262 Machine Transcription 2 3 0 3

This course develops the skill of direct transcription from oral dictation to mailable typewritten form. Decisions in editing, punctuation, spelling, and formatting are emphasized. Prerequisites: BUS 105 and ENG 110, and BUS 261 for General Office students.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

BUS 263 Payroll Taxes 3 0 0 3

An examination of federal, State, and local laws as they pertain to payroll taxes. Includes a review of the record-keeping needs to meet the information demand of the taxing authority. Also gives insight into the different payroll systems and accounting procedures used in relation to payroll taxes. Prerequisite: None.

BUS 268 Marketing and Retailing Internship 2 21 0 9

A study of on-the-job problems associated with marketing and retailing. An orientation to decision making and techniques used in the management of a retail establishment. Practical experiences in actual work environment will be carried out and discussion with practical solutions being a main objective. Prerequisite: All Marketing & Retailing required courses.

BUS 269 Auditing 3 2 0 4

The auditing standards and auditing procedures that are necessary in order for the auditor to be able to express an opinion as to the fairness of financial statements prepared by the client. Prerequisite: BUS 223.

BUS 270 Office Practice Seminar 3 0 0 3

This course is designed to further involve students in projects and duties that will be encountered on the job. A review of office procedures and attitudes encountered in the internship is also analyzed. Prerequisite: Permission of Instructor.

BUS 271 Office Management 2 2 0 3

Presents the fundamental principles of office management. Emphasis on the role of office management including its functions, office automation, planning, controlling, organizing and solving office problems. Also, includes on site visitations to cross-section of actual office situations. Prerequisite: BUS 206. Corequisite: BUS 214.

BUS 272 Supervision 3 0 0 3

Introduces the basic responsibilities and duties of the supervisor and his relationship to his supervisors, subordinates, and associates. Its major emphasis is in the area of human relations, but it does provide the student with a good deal of practical advice in such areas as communications, evaluation, grievance procedure, and personal growth. More than this, it attempts to work on attitudes of people about people while retaining the necessary amount of flexibility that is required in a course of this nature. Prerequisite: None.

BUS 275 Production Management 4 0 0 4

A study of the production system and its functions. Emphasis is placed upon the interaciton aspects of the goods fabrication function with the related elements of manufacturing and service organizations. Prerequisite: None.

BUS 276 Marketing Management 4 0 0 4

A study of the management of the total marketing function in modern businesses. Emphasis will be on product planning and development, promotion planning, pricing, marketing organization, sales forecasting, managing sales personnel, and customer servicing. Prerequisite: None.

BUS 277 Financial Management 4 0 0 4

A study of the nature of financial management and how finance relates to the other functions of the business firm. Emphasis is placed on working capital management, intermediate and long-term financing, capital budgeting and cost of capital, and major financial management problems such as merger and reorganization plans. Prerequisite: None.

BUS 279 Stocks and Bonds 3 0 0 3

Focuses on the development of a coherent and logical framework of thought for coming to decisions about investment policy. Selection and management of stock and bond portfolios of individual investors and the formulation of suitable portfolio policies and their revisions to meet changing conditions are emphasized. Prerequisite: None.

BUS 282 Business Statistics I 5 0 0 5

An introductory course to general statistical principles which will be found useful to all individuals regardless of their fields of specialization. Emphasis will be oriented toward business and industrial concepts. The course presents clear statements or pertinent definitions, theorems and principles, followed by problems drawn from actual business statistical situations. Prerequisite: One year high school algebra or equivalent.

BUS 285 Salesmanship 5 0 0 5

A course designed to emphasize the necessity of selling skills in a modern business career. Emphasis is placed on industrial selling, legal aspects of selling, and the techniques involved in various types of sales situations. The selling process is given a thorough step-by-step treatment in order to expose the student to vital concepts that they must be acquainted with. Prerequisite: None.

BUS 286 Contemporary Business and Economic Problems 3 0 0 3

A course designed to identify and analyze significant national and local business economic problems. The student will evaluate the historical, economic, technological, and sociological causes. The ability of the student to relate his personal value system and his philosophy of management to potential solutions is stressed.Prerequisite: None.

BUS 287 Commercial Display and Design 2 4 0 3

An introductory course to provide general principles and examples of display in order to acquaint the student with this very important area. The course provides a background which allows one to obtain a practical working knowledge of the purpose and functions of display. The course also includes demonstrations, creating displays, and observing displays in order to allow the student to obtain a well rounded knowledge of commercial display and design. Prerequisite: None.

BUS 288 Fashion in Retailing 2 2 0 3

A course designed to meet the needs of virtually all students in the field of Marketing and Retailing whether they intend to gain a career in Fashion Merchandising or not. The principles and concepts involved in the field of fashion merchandising are presented in such a manner as to provide the students with the skills needed to fulfill their job requirements. The course covers the history and movement of fashion apparel and accessories, fashion buying and planning, and fashion promotion and coordination. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

BUS 289 Advanced Salesmanship 3 0 0 3

A course which concentrates on the human aspects of selling and sales management. It is designed to relate real world selling experiences to the students so that they might obtain a knowledge of the principle do's and don'ts of the sale's world. A full and frank look is taken at the human aspects of selling. This is a How-To course. Prerequisite: PSY 101.

BUS 290 Secretarial Internship 1 15 0 6

This course provides on-the-job secretarial work experiences. The employer and the type of work experience must be approved by the advisor. Prerequisite: Consent of Advisor.

BUS 291 Distribution Management 5 0 0 5

This course will divide the study of distribution management into two parts. Students will be introduced to the major topics of both physical distribution management and traffic/transportation management. Case studies will be included to develop seasoned judgement in these areas. Prerequisite: BUS 239.

BUS 1103 Small Business Operations 3 0 0 3

An introduction to business with emphasis placed on basic business law, business forms and records, financial problems, employer-employee relations, and problems of starting and operating a small business. Prerequisite: None.

Carpentry Courses

CAR 1101 Carpentry 5 0 15 10

A brief history of carpentry and present trends of the construction industry. The course will involve operation, care, and safety of carpenter's hand tools and power tools in cutting, shaping, and joining construction materials used by the carpenter. Major topics of study will include theoretical and practical applications involving: Materials and methods of construction, preparation of the building site, building layout, footings and foundation wall construction including form construction and erection. Prerequisite: None.

CAR 1102 Carpentry: Framing 5 0 15 10

Instruction is given in the principles and practices of frame construction beginning with the foundation sills and including floor joist, bridging, subflooring, wall framing, roughing in of window and door openings, ceiling joist, rafters, bracing, and sidewall and roof sheathing. Selection and application of all materials is included. Roof construction includes the layout and construction methods of common types of roofs using standard rafter construction, truss construction and post and beam construction. Consideration is given to the coordination of carpentry work with installation of the mechanical equipment such as electrical, air conditioning, heating and plumbing. Prerequisites: CAR 1101 and DFT 1111.

CAR 1103 Carpentry: Millwork and Cabinet Making 5 0 15 10

Cabinet making and millwork as performed by the general carpenter for building construction. Use of shop tools and equipment will be emphasized in learning methods of construction of millwork and cabinetry. Practical applications will include measuring, layout, and construction of base and wall cabinets, built-in desk, door and window frames, stairs, and interior and exterior cornice and trim. Materials and finishes will also be studied. Prerequisites: CAR 1102, DFT 1111, PHY 1103 and ENG 1102.

CAR 1104 Carpentry: Finishing 5 0 15 10

Exterior and interior trim and finish carpentry will complete the general carpentry program. Included will be materials and application methods used in finish carpentry such as exterior siding, exterior cornice and mouldings, finish flooring, paneling, door frames and trim, doors and their hardware, window trim, moulding, interior trim, installation of hardware, installation of built in equipment and cabinets. Prerequisites: CAR 1103, CAR 1113, and PSY 1101. Corequisite: CAR 1114.

CAR 1106 Basic Woodworking 3 0 3 4

This course provides the knowledge necessary to attain success in woodworking projects attempted by the homeowner, hobbyist, and apprentice. An explanation of the basic rules governing the safe use of hand tools and power tools is given. This is accomplished through classroom instruction, shop demonstration, and hands on experience. An introduction is given to the various materials and their uses. The student is required to construct a suitable project to demonstrate proficiency in the proper use of tools and materials. Prerequisite: None.

CAR 1107 Advanced Woodworking 3 0 3 4

A continuation of CAR 1106. The student is introduced to joints and the art of jointery is examined in depth, along with some of the many applications of the various joints. A study of projects of more complex design is also stressed. Emphasis is upon construction of a suitable project. Prerequisite: CAR 1106.

CAR 1113 Carpentry Estimating 3 0 3 4

A practical course in quantity take-off from prints of jobs performed by the carpenter and in figuring the quantities of materials needed, and costs of building various components and structures. Prerequisites: DFT 1111 and MAT 1112.

CAR 1114 Carpentry Building Codes 3 0 0 3

A study is made of building codes and the minimum requirements for local, county and State construction regulations. This involves safety, sanitation, mechanical equipment and materials. Also, a review is made of the minimum property requirements of the Federal Housing Administration and the North Carolina State Code. Prerequisite: CAR 1103. Corequisite: CAR 1104.

Commercial Art Courses

CAT 1109 Composition 1 3 0 2

Problems relating to the art of combining parts to produce the harmonious whole. Studies in size, location, shape line and color relations. Prerequisite: None.

CAT 1110 Sketching and Drawing 1 3 0 2

The study of freehand graphic representation by developing visual form relationships and qualities from observation, verbal descriptions or one's own mental images. Emphasis is placed on various drawing media, surfaces, and encouragement of graphic expression. Prerequisite: None.

CAT 1111 Reproduction Processes I 3 6 0 5

The study of methods and techniques of reproduction including diazo, black and white photographic processes, microfilm process, and use of electrostatic type equipment. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

CAT 1112 Reproduction Processes II 3 0 6 5

A continuation of Reproduction Processes I including instruction in color photographic processes. Prerequisite: CAT 1111.

CAT 1113 Reproduction Processes III 3 0 6 5

A continuation of reproduction processes II including instruction in advanced methods and techniques of photographic processes. Prerequisite: CAT 1112.

CAT 1120 Creative Problem Solving 2 6 0 4

The study of basic skills and related information required to solve problems by organizing the thought processes, planning, and application of available and appropriate resources. Prerequisite: None.

CAT 1121 History of Graphics and Art 4 0 0 4

An introduction to the basic concepts and philosophies that govern the development of art. Prerequisite: None.

CAT 1126 Lettering and Type 1 0 3 2

Hand-lettering equipment and materials, type and copy-fitting. Emphasis is placed on the use of type and lettering as an element of visual communications. Prerequisite: None.

CAT 1201 Commercial Art I 3 0 9 6

An introduction to basic layout and design fundamentals and principles. Emphasis placed on line, two and three dimensional shapes, letter indication, sketching, equipment and materials of the art and design profession. Prerequisite: ARC 1228.

CAT 1202 Commercial Art II 3 0 9 6

Advanced material in drawing, basic design, lettering equipment and materials. Emphasis is placed on 2 and 3-dimensional form, perspective, sketching rough and finished lettering. Laboratory consists of assigned graphical problems with critique by class participation. Prerequisite: CAT 1201.

CAT 1203 Commercial Art III 3 0 9 6

Layout and design for printing. Lab exercises consist of comprehensive art form for presentation on magazine covers, book covers, textile designs, furniture designs, fashion figures, displays and exhibits, assigned problems with critique by class. Prerequisite: CAT 1202.

CAT 1211 Graphic Arts I 1 0 3 2

An introduction to preparing art for printing. The student is acquainted with the nature, function, and elements of mechanical art, tools, and materials required for its execution and related terminology. Prerequisite: CAT 1112.

CAT 1212 Graphic Arts II 1 0 3 2

Practice in preparing art for printing is continued with greater emphasis on mechanical proficiency and accuracy of work. Prerequisite: CAT 1211.

CAT 1213 Graphic Arts III 1 0 3 2

Experience includes the introduction and practice of preparing art for multi-color printing and the principles and techniques of mechanical color separation. Students will undertake more complex mechanical art problems. Prerequisite: CAT 1212.

CAT 1221 Life Study I 3 0 6 5

A study of body structure. Emphasis on proportioning masses and movement through graphic interpretation and response. Prerequisite: CAT 1110.

CAT 1222 Life Study II 3 0 6 5

Continuation of Life Study I using the figure as our environmental element in daily activities. Distortion of the figure in the form of cartoon, illustrations and other experimental use. Prerequisite: CAT 1221.

CAT 1231 Advertising Illustration I 4 4 0 6

Concentration on the illustrative aspect of graphic design. A comprehensive approach to tools, equipment, materials and utilization of illustration. Prerequisite: CAT 1201 and CAT 1211.

CAT 1232 Advertising Illustration II 4 4 0 6

Assigned problems in advanced illustration. Emphasis placed on originality and readiness of student. Prerequisite: CAT 1231.

CAT 1251 Advertising Principles 5 0 0 5

A comprehensive survey of the history and development of advertising including economic and social values. An introduction to advertising media and current publications in the field. Prerequisite: None.

CAT 1260 Resume and Portfolio Production 3 2 3 5

Preparation of the student for employment including portfolio, resume, speech, self-presentation and professional procedures. Prerequisites: CAT 1203, CAT 1213, CAT 1232.

Chemistry Courses

CHM 93 Chemistry, Level I 4 0 0 4

Introduction of the physical and chemical properties of substances, chemical changes, elements, compounds, chemical bonds, the periodic law, atomic structure, chemical formulae and equations, the gas laws and molecular composition of gases and the concentration of solutions. This course should meet the various curricular requirements for an introductory course in chemistry. Prerequisite: None. Corequisite: Algebra or equivalent.

CHM 96X Chemistry, Level 2 3 0 0 5

A continuation of Chemistry 93 with special emphasis placed upon solutions, concentrations of solutions, influence of concentrations on the freezing-point depression and the boiling-point elevation, ionization, strong and weak electrolytes, hydrolysis of salts, calculations involving the pH of acids, bases and salts, buffer solutions, titrations, ionization constants, solubility of weak acids, colloidal suspensions and absorption. A brief introduction to the types of organic compound's suspensions and absorption. A brief introduction to the types of organic compounds and the nomenclature of the important compounds. Laboratory experiments selected will correspond to the material covered during this course. Prerequisite: CHM 93. Corequisite: CHM 96Y.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

CHM 96Y Chemistry Level 2 Lab 0 4 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in CHM 96X. Prerequisite: CHM 93. Corequisite: CHM 96X.

CHM 101X Chemistry I 3 0 0 4

An introduction to chemical principles of inorganic compounds. Emphasis is on atomic structure and bonding, properties of gases, chemical reactions, stoichiometric calculations and the chemistry of the elements in terms of the periodic table. Prerequisite: Algebra. Corequisite: CHM 101Y.

CHM 101Y Chemistry I, Laboratory 0 2 0 0

An introductory laboratory program such as: presentation of certain chemical principles in the form of concrete examples; illustration of the methods of an experimental science; development of skills in laboratory techniques; and training in scientific observation and systematic recording of data. Prerequisite: None. Corequisite: CHM 101X.

CHM 102X Chemistry II 3 0 0 4

Inorganic chemistry, elementary, physical and chemical properties of liquids and solids, ionization, solutions, acids and bases, pH, oxidation and reduction, chemical equilibrium and ionic equations. A brief introduction to the tyes of aliphatic, aromatic, and substituted hydrocarbons and the nomenclature of some of the important compounds. Laboratory work will consist of various inorganic test and experiments. Prerequisite: CHM 101 or equivalent. Corequisite: CHM 102Y.

CHM 102Y Chemistry II Lab 0 2 0 0

The laboratory exercises selected in this course are continuations of the laboratory work done in CHM 101Y. The objectives of the laboratory exercises selected are to develop: (a) an appreciation of precision, accuracy and error in scientific measurement, (b) an understanding in the derivation of conclusions from experimental observations, (c) both confidence and skepticism concerning the observation. Prerequisite: CHM 101 or equivalent. Corequisite: CHM 102X.

CHM 103X Chemistry III 3 0 0 4

Topics such as ionic equilibrium, electrochemistry, solubility product, common ion effect, radioactive isotopes and chemical kinetics are studied. Qualitative analysis is introduced with a brief study of the separation and identification of some cations and anions. Methods and techniques of quantitative analysis are introduced using volumetric titrations. Prerequisite: CHM 102. Corequisite: CHM 103Y.

CHM 103Y Chemistry III Lab 0 2 0 0

Laboratory work in this course will include a selection of exercises such as determination of an unknown chloride, determination of the solubility product constant, determination of an ionization constant, determination of an ionization constant of an acid, and the determination of the half-life of a radioactive isotope. The students will synthesize organic compounds, measure voltaic cells in oxidation — reduction reactions and identify cations and anions. Prerequisite: CHM 102. Corequisite: CHM 103X.

CHM 110X Fundamentals of Biology 4 0 0 5

The course deals with the chemical and molecular basis of life and endeavors to explain the structure and function of cells with emphasis on the physiochemical processes taking place in the body during normal metabolism. Prerequisite: BIO 93 or BIO 202 and CHM 96 or CHM 102. Corequisite: CHM 110Y.

CHM 110Y Fundamentals of Biology Lab 0 2 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to supporting instruction taking material of CHM 110X. Prerequisite: BIO 93 or BIO 202 and CHM 96 or CHM 102. Corequisite: CHM 110X.

CHM 1101X Chemistry 3 0 0 4

An introductory course for beginning students covering topics such as: scientific methods, metric system, states of matter, elements, mixtures, compounds physical and chemical properties of matter and atomic theory with special emphasis on electronic configuration, periodic table, stoichometry, formula writing, balancing chemical reactions by trial and error, and oxidation-reduction equations, general gas laws, study of acids, bases and salts. Laboratory experiments selected to meet the needs of the subject matter and students. Prerequisite: None. Corequisite: CHM 1101Y.

CHM 1101Y Chemistry Lab 0 2 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in CHM 1101X. Prerequisite: None. Corequisite: CHM 1101X.

Civil Engineering Technology Courses

CIV 93 Introduction to Technology 2 2 0 3

A course designed to acquaint the student with various technologies. This survey course will help the student to understand the role of the technician in these fields of engineering. The instruction time will be divided with class and lab time spent in the major subject areas of Civil Engineering and Environmental Engineering Technology. Prerequisite: None.

CIV 101 Surveying I 2 6 0 4

Care and use of instruments; theory and practice of plane surveying including taping, differential and profile leveling, transit, stadia, and transit-tape surveys. Prerequisite: None. Corequisite: MAT 121 or MAT 101.

CIV 102 Surveying II 2 6 0 4

Triangulation of ordinary precision; use of plane table; calculation of areas of land; land surveying; topographic surveys and mapping. Prerequisite: CIV 101. Corequisite: MAT 122 or MAT 102.

CIV 103 Route Surveying 2 6 0 4

Route surveys by ground and aerial methods; simple, compound, reverse, parabolic and spiral curves; geometric design of highway; highway surveys and plans including mass diagrams. Prerequisite: CIV 101. Corequisite: MAT 123

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

CIV 107 Civil Engineering Computations 2 2 0 3

The use and manipulation of portable electronic calculators and the set-up and programming of "mini" computers (Monroe Surveyor, Wang, and HP 9100) for solving civil engineering problems. Computer programming logic using FORTRAN IV as the programming language will be introduced by practical application through writing programs to solve engineering problems. The school computer facilities and the NCR Century computer will be visited to observe procedures and equipment. Prerequisite: CIV 103.

CIV 108 Hydraulics 4 3 0 5

A basic study of closed conduit and open channel flow, including stream flow, subterranean flow, runoff, pump head and wave action. Prerequisites: MAT 123 or MAT 103 and PHY 102.

CIV 114 Statics 5 0 0 5

Forces, resultants, and types of force systems; moments, equilibrium of coplanar forces by analytical methods; stresses and reactions in simple structures; equilibrium of forces in space, static and kinetic friction. Prerequisite: PHY 102. Corequisite: MAT 123 or MAT 103.

CIV 202 Properties of Soils 4 3 0 5

Study of soil types and their physical properties; classification of soils and testing methods; soil structure; compressibility and shearing strength; soil stress analysis; earth slopes and embankments; spread foundations; pile and caisson foundations; highway subgrade and pavement design; soil compaction and consolidation; subsurface investigation. Prerequisites: PHY 101 and MAT 123 or MAT 103.

CIV 204 Surveying IV 2 6 0 4

Applications of aerial surveys; building and road construction surveying; lines and grades for foundation layout, building construction, bridge layout, sewer and pipe line surveys; solar and stellar observations; and electronic distance measuring devices; study and application of State plane grid coordinate systems. Prerequisite: CIV 102.

CIV 217 Construction Planning Methods and Equipment 3 2 0 4

Excavating methods and equipment used in building and highway construction; pile driving; construction safety; operation analyses; construction scheduling; project control and supervision; and practical application of Critical Path Method (CPM) for planning and scheduling. Prerequisite: None.

CIV 219 Strength of Materials 4 3 0 5

Fundamental stress and strain relationships, torsion; shear and bending moments; flexural unit stresses in beams; connections-welded joints, riveted and bolted joints; shear and bending moment diagrams; beam design and selection of commercial available beams; beam deflection. Testing of the properties of ferrous and nonferrous metals, load and strain measurements; behavior of materials under load; nondestructive test. Prerequisites: MAT 123 or MAT 103 and PHY 102.

CIV 221 Reinforced Concrete 5 0 0 5

Analysis and design of reinforced concrete beams, floor systems, and columns. Introduction to ultimate strength design. Field inspection trips. Prerequisite: CIV 219.

CIV 223 Codes, Contracts, and Specifications 2 0 0 2

Basic principles and methods most significant in contract relationships; appreciation of the legal considerations in construction work; study of the local building codes; interpreting and outlining specifications. Prerequisite: None.

CIV 225 Construction Estimates and Costs 3 6 0 5

Interpretaion of working drawings of timber, structural steel, and reinforced concrete structures, and highways; preparation of material and labor quantity surveys from plans and specifications; approximate and detailed estimates of costs; bidding procedures and preparation of bids. Prerequisite: CIV 217.

CIV 228 Highway and Structural Drafting 1 6 0 3

Interpretation of field notes into formal drawings; basic site planning, working plans for highways and subdivisions, reinforced concrete structural details. Prerequisites: DFT 101 and CIV 107.

CIV 229 Municipal Engineering 3 3 0 4

The application of basic hydraulic principles to engineering problems in the collection, distribution and disposal of water wastes, flood control and water supply. An introduction into the organization of municipal services. Prerequisites: CIV 108 and CIV 228.

CIV 230 Design of Roads and Pavements 3 0 0 3

The study and evaluation of modern highway and pavement design practices with emphasis on: highway planning and design; including the practices of the AASHO, highway surveys, plans and computations; geometric design, traffic engineering and highway safety; highway drainage; highway economy; in addition, the usual topics of construction and maintenance are integrated when necessary to enhance the practice of design. Prerequisites: CIV 103 and CIV 228.

CIV 231 Portland Cement and Asphalt Concretes 3 3 0 4

Study and testing of the composition and properties of cement and asphalt concretes, including cement, ashpalt, admixtures and air-entrainment; design and proportioning of cement concrete mixes; design and proportioning of asphalt concrete mixes; methods of placing and curing; standard control tests. Prerequisite: MAT 121 or MAT 101.

CIV 271 City & Regional Planning 3 0 0 3

A course to provide a framework for better understanding of current urban and regional problems, as well as to train the student and practicing engineer to solve the complex, ever changing problems through the art and science of city planning. Prerequisite: None.

Cosmetology Courses

COS 1101 Cosmetology Law and Ethics 5 8 0 7

Designed as a study of the law as pertains to the practice of Cosmetology in the State of North Carolina, with accent on requirements, examinations, licensing, apprenticeships, sanitation; and the proper conduct and business dealings of cosmetologists in relation to their employer, patrons, and co-workers. A course in personal hygiene is also included. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

COS 1102 Hairstyling I 5 8 0 7

The theory and practical application on manikins of basic hairstyling including use of tools, materials and equipments; parting technique, directional mouldings, finger waving, and the proper structure of sculpture curls. Basic roller patterns and correct pin placement are stressed. Also a study of bacteriology, sterilization, and sanitation is covered. Prerequisite: COS 1101.

COS 1103 Permanent Waving I 5 9 0 8

An introduction to the various methods of permanent waving, including its history as compared with modern technique. Course covers an in-depth study of chemicals used and their ultimate effect on the hair; safety precautions; basic cutting, sectioning, wrapping and processing of permanent waves. Chemical hair relaxing, thermal pressing and curling are also covered. Prerequisites: COS 1101 and COS 1102.

COS 1104 Permanent Waving II 3 12 0 7

The practical application of permanent waving and hair relaxing on live models including supervised haircutting, wrapping, processing, hair coloring and the ultimate styling of the hair. Prerequisites: COS 1101, COS 1102, and COS 1103.

COS 1105 Hairstyling II 2 12 0 6

The cutting, styling and combing of unique hairstyle effects, using various combinations of sculpture curls and roller placements. Included are the studies of facial shapes, special haircuts, various combing techniques, and the care and styling of wigs. Prerequisites: COS 1101, COS 1102, COS 1103, and COS 1104.

COS 1106 Anatomy-Skin-Hair-Nails 4 7 0 6

A basic study of the anatomy of the human body, with special emphasis on the structure, diseases, and care of the skin, hair and nails. Course includes technique in facials, scalp and hair treatments, and manicuring. Superfluous hair removal and facial makeup are covered. Prerequisites: COS 1101, COS 1102, COS 1103, COS 1104, and COS 1105.

COS 1107 Permanent Waving III 2 12 0 6

The advanced practical application of permanent waving on live models with strong accent on special haircuttings, choice of appropriate chemical products, advanced wrapping technique, individual processing, and special effects in finished styling. Prerequisites: COS 1101, COS 1102, COS 1103, COS 1104, COS 1105, and COS 1106.

COS 1108 Hair Coloring 4 9 0 7

This course is an in-depth study of hair structure and the ultimate effect on it of hair coloring chemicals. Course includes hair lightening materials and methods, hair coloring materials and methods, individual allergy and safety precautions, as well as the coloring of brows and lashes. Hair coloring will be taught in three categories; temporary, semi-permanent and permanent colors. Prerequisites: COS 1101, COS 1102, COS 1103, COS 1104, COS 1105, COS 1106, and COS 1107.

COS 1109 Shop Management 5 8 0 7

This course is a study of beauty shop management and salesmanship. How to cope with the day-to-day problems of the salon, the location of the salon, leases, physical layout, check list for structural limitations, color schemes, insurance, business laws, health regulations, customer reception, management, operator relationships, financial control, record keeping, salesmanship, merchandising, advertising, budget and professional ethics. Prerequisites: COS 1101, COS 1102, COS 1103, COS 1104, COS 1105, COS 1106, COS 1107, and COS 1108.

COS 1110 Shop Management — Salesmanship II 2 0 3 3

This course continues the study of Shop-Management including the preparation of local, federal and State reports, work assignments appointment making, operator relationship, financial control, advertising, budgeting, laws and regulatons relating to the cosmetology profession. Prerequisite: COS 1109.

COS 1111 Customer Psychology 2 0 0 2

A study of the customer and how the profession of cosmetology affects the psychological make-up of the customer. The psychology of meeting and handling customers, the psychology of selling and psychology as it applies to public activities. Prerequisite: None.

COS 1112 Special Cosmetology Problems 4 0 6 6

A study of special problems affecting the customer. How to cope with special types of hair, skin, bone structure, etc. A review of the latest styles and a study of the latest cosmetics, the application and use thereof. Prerequisite: Consent of Instructor/Advisor.

Dental Courses

DEN 101 Dental Anatomy and Physiology 5 2 0 6

An introduction to anatomy of the head and neck, physiology of occlusion with special emphasis on anatomy of the individual teeth and surrounding tissues. The laboratory portion includes drawings of each tooth, from central incisors through the second molar on one side of the upper and lower arches. Fourteen teeth are carved in wax, with special emphasis on reproducing natural tooth anatomy. Prerequisite: None.

DEN 102 Physical Science of Dental Materials 5 2 0 6

A study of the basic physical and chemical principles encountered in work with dental materials. Included are introductory inorganic and organic chemistry with special emphasis on the metallic elements and those compounds with physical properties advantageous to dental work. Physical principles include those which cause stress, strain, distortion, or potential stability or instability in dental materials. Prerequisite: None.

DEN 104 Dental Materials 2 2 0 3

A study of the composition, properties, and uses of nonmetallic dental materials such as gypsum products, impression materials, plastics, waxes and duplicating materials. The laboratory exercises are designed to illustrate the properties and uses of the materials studied and the results of proper and improper manipulation. Prerequisite: None.

DEN 106 Complete Denture Techniques 2 0 0 2

A study of the basic techniques for complete denture construction. Laboratory phase includes construction of base plates and occlusion rims, and mounting complete denture casts on an adjustable articulator. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clnic Hrs.	Qtr. Hours Credit

DEN 107 Complete Denture Techniques 3 2 0 4

A continuing study of the fabrication of complete dentures using anatomic teeth on an adjustable articulator. Emphasis is placed on balanced articulation. Prerequisites: DEN 101, DEN 104, and DEN 106.

DEN 108 Partial Denture Techniques 3 4 0 5

A study of basic techniques used in fabrication of cast removable partial dentures frameworks. Laboratory phases include fundamentals of survey and design, constructing refractory casts, forming the wax pattern, investing and casting the frameworks utilizing chrome-nickel alloy. Prerequisites: DEN 101, DEN, 104, and DEN 110.

DEN 109 Partial Denture Technique 3 2 0 4

A continuing study of the fabrication of various types of temporary removable appliances including wrought-metal. Laboratory procedures including bending and assembling wrought clasps, and the fabrication of combination wrought and cast metal frame-works. Prerequisite: DEN 108.

DEN 110 Dental Metallurgy 2 2 0 3

A study of gold and base metal alloys and their application to dentistry. Course content will include physical and mechanical properties, crystalline and wrought structures, solidification process, investments, methods of casting, soldering, heat treatment, metallurgical testing and specific brands of alloys used in dentistry. Prerequisite: DEN 104.

DEN 111 Clinical Dental Hygiene I 6 3 0 7

An orientation to dental terminology, history and organization of the profession of Hygiene. Introduction to the roles and relationships of the members of the dental health team. Study of professionalism as it relates to personal appearance, attire, and attitude. A comprehensive study of the care and maintenance of the dental equipment and operatory; sterilization techniques; reception, positioning & dismissal of patients, obtaining a complete and accurate medical/dental history; obtaining and recording vital signs; rationale for the technique of performing a thorough extra and intra-oral inspection; importance of occlusion; the definitions, etiology & appearance of all stains, soft and hard deposits in the mouth; and the necessity and value of patient education. During laboratory hours the student studies and demonstrates the ability to chart oral conditions, performs an oral inspection, classifies occlusion & lists deviations from normal; completes all personal, dental and medical records; demonstrates proper care of equipment and sterilization techniques; and teaches toothbrushing techniques and adequate home care procedures. Prerequisite: None.

DEN 112 Dental Anatomy & Physiology 4 0 0 4

Study of the anatomy of the teeth and their supporting tissues. Lectures on nomenclature, morphology, structure, function and occlusion of the teeth. Identifying extracted teeth as well as carving and drawing some of both the primary and the permanent teeth. Prerequisite: None.

DEN 113 Histology and Embryology 3 0 0 3

Study of the embryonic development of the face and oral cavity, the structures and functions of the primary tissues, and the histology of the teeth and supporting tissues. Emphasis is given throughout to clinical considerations as related to dental hygiene practice. Prerequisites: High school biology and chemistry.

DEN 114 Cast Inlay and Crown Techniques **4 4 0 6**

A study of techniques for fabricating cast restorations and an introduction to terminology specific to inlays and crowns. Casts and dies are prepared from impressions on which simple and complex inlays, full and three quarter cast crowns are constructed. Prerequisites: DEN 101, and DEN 104.

DEN 116 Dental Office Emergencies **2 0 0 2**

A basic study of the symptoms and treatment of the more common emergencies which can occur in a dental environment. Components of an adequate dental office management kit are discussed and student learns when and how each item in the kit is used. Students demonstrate the use of the oxygen and CPR. Prerequisite: DEN 131.

DEN 117 Crown and Bridge Techniques **1 6 0 4**

A study of techniques for the construction of acrylic jacket crowns, acrylic veneer crowns, and fixed bridges of various designs utilizing metal with veneer facings. Prerequisite: DEN 114.

DEN 118 Crown and Bridge Techniques **1 6 0 4**

A continuing study of the physical properties of veneering materials including techniques for construction of fixed bridges in the anterior and posterior regions utilizing flatback facings. Prerequisite: DEN 117.

DEN 121 Dental Hygiene II **2 3 0 3**

A continuation of DEN 111. Students study flourides and the various techniques for the topical application of flouride; the technique for the effectiveness of pit and fissure sealants; the classifications and usage of basic scaling instruments; procedure for sharpening instruments; the rationale for and the procedure for applying topical anesthesia; the care of hypersensitive teeth; and polishing techniques. During laboratory hours the students demonstrate the ability to combine all techniques learned in DEN 111 & DEN 121 as they perform a complete oral prophylaxis on a manikin, a student/patient, and a patient. Prerequisite: DEN 111.

DEN 122 Head and Neck Anatomy **2 0 0 2**

A detailed study of the musculature, blood and nerve supply of the head and neck, reviewing the bones, landmarks, sinuses and foramina of the skill. Prerequisites: BIO 106 and BIO 107.

DEN 131 Dental Hygiene III **2 0 9 5**

A continuation of DEN 121. Students study the variations in technique with special needs such as gerodontic patient, epileptic, cardiac, mentally and physically handicapped, etc. Students learn to use the phase/contrast microscope as they teach plaque control. Table clinics are prepared and presented by each student. Clinic hours are utilized as students perform a complete and thorough oral prophylaxis on a number of patients. Prerequisites: DEN 121 and DEN 133.

DEN 133 Radiology **3 3 0 4**

A study of the nature, properties and use of x-rays. Film placement, tube angulation, processing and mounting of films is practiced during laboratory sessions. The interpretation and recognition of oral anatomy landmarks and abnormalities on x-ray films are part of the training. Prerequisite: DEN 112.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

DEN 141 Dental Hygiene-Summer 0 6 0 2

A continuation of DEN 111, DEN 121, and DEN 131. All previously learned skills are applied in this course. Prerequisites: DEN 111, DEN 121, and DEN 131.

DEN 201 Advanced Complete Denture Techniques 2 6 0 5

A study of complete denture techniques that include utilization of the facebow transfer and central bearing devices. Included in this phase are the principles and procedures for immediate denture construction and refitting of complete dentures. Prerequisite: DEN 107.

DEN 202 Ceramic Techniques 3 4 0 5

A study of the physical properties and manipulation of porcelain jacket crowns. Laboratory phase includes the preparation of dies, adaption of platinum matrix, firing, glazing, and personalization. Prerequisites: DEN 101, DEN 104, DEN 110, and DEN 207.

DEN 203 Dental Laboratory Practice 0 4 0 2

The fabrication of appliances from cast and prescriptions supplied by dentists and Schools of Dentistry with whom we may affiliate. The dentist-laboratory technician relationship is fostered. Prerequisites: DEN 201, DEN 204, and DEN 207.

DEN 204 Partial Denture Techniques 1 4 0 3

A continuing study of partial denture techniques that includes construction of all metal removable partial dentures using tube teeth and flatback facings. Tooth selection, set-up flasking, processing, and finishing and polishing are included. Prerequisite: DEN 109.

DEN 205 Advanced Partial Denture Techniques 2 6 0 5

A study of advanced techniques in removable partial denture design. Laboratory exercises include the use of precision attachments, and advanced clasping techniques. Prerequisite: DEN 204.

DEN 206 Advanced Ceramic Techniques 2 8 0 6

The study of advanced techniques for bonding porcelain to precious metal and various methods of personalizing porcelain used in bridge construction Prerequisite: DEN 202.

DEN 207 Advanced Crown & Bridge Techniques 1 4 0 3

A study of techniques for the construction of bridges combining resins and gold framework using the plastic build-up veneering material. Prerequisite: DEN 118.

DEN 208 Advanced Dental Laboratory Practice 1 4 0 3

Further practice in fabrication of advanced appliances from casts and prescriptions supplied by dentists and Schools of Dentistry with whom we may affiliate. Continued emphasis on ethical dentist-laboratory relations. Prerequisite: DEN 203.

DEN 209 Jurisprudence and Ethics Seminar 3 0 0 3

A study of the legal and ethical aspects of dental laboratory practice, dentist-laboratory relationship, and business aspects of operation and managing a dental laboratory. Guest speakers and field trips are utilized. Prerequisite: None.

DEN 210 Periodontology I 2 0 0 2

The study of the diseases of the periodontium and methods of treatment of these diseases. Prerequisites: DEN 113 and DEN 131.

DEN 211 Dental Hygiene IV 2 12 0 6

A complete and thorough oral prophylaxis is performed on each patient. Patient load will increase to two patients per clinic session. Proper use of the ultrasonic scaling device is expected throughout these three courses. Prerequisite: DEN 131.

DEN 212 Community Dental Health 4 0 0 4

A study of the factual information and methods of instruction employed in the teaching of oral hygiene in the dental office, community and school. Also, a survey of methods used to determine the dental health status of the community and of preventive measures used to improve the dental health of the population. Topics include epidemiological indexes and studies; evaluation of scientific reports and fluoridaiton. Prerequisites: DEN 112, DEN 113, and DEN 121.

DEN 213 General/Oral Pathology 6 0 0 6

Study of the basic pathological processes, physical manifestations of selected diseases, their association with the oral cavity, and common pathological conditions of the teeth and oral cavity. Visual differentiation between normal and abnormal tissues. Prerequisite: BIO 113.

DEN 214 Periodontology II 2 0 0 2

The study of the diseases of the periodontium and methods of treatment of these diseases. Prerequisites: DEN 113 and DEN 131.

DEN 215 Dental Health Education 2 3 0 3

A study of preventive dentistry which will include oral hygiene instructions; motivation and teaching methods; use of media material; nutritional counseling; and a case presentation. Prerequisite: Satisfactory completion of the basic science, dental science, and dental hygiene courses offered through the third quarter.

DEN 216 Community Dentistry Seminar 0 3 0 1

In this course, students will be planning and participating in community dental health projects. The projects may either be designated by the instructor or selected by the students. Students will be working with various community groups, such as the public health dentist, elementary schools, and elderly groups. Students' responsibilities will include writing behavorial objectives of the project, obtaining materials needed, co-ordinating activities during implementation of project, and some type of evaluation of their activities. Prerequisite: DEN 212.

DEN 221 Dental Hygiene V 2 0 16 7

A complete and thorough oral prophylaxis is performed on each patient. Patient load will increase to two patients per clinic session. Proper use of the ultrasonic scaling device is expected. Prerequisite: DEN 211.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
DEN 222 Dental Materials In Dental Hygiene Practice	**3**	**2**	**0**	**4**

Physical properties and sources of various materials used in dentistry. The dental hygiene student learns to manipulate these materials for any of the routine procedures performed in the dental office. Prerequisites: DEN 112 and DEN 122.

DEN 223 Dental Pharmacology & Anesthesiology **2 0 0 2**

Lecture coverage of the properties, dosage and effects of therapeutic drugs, palliative preparations and anesthetics. Emphasis is placed on pharmacological agents used in dentistry. Prerequisite: CHM 110.

DEN 224 Office Management **1 0 0 1**

Introduction to all phases of dental office administration including appointment control, patient records, inventory control, billing, filing and banking. Prerequisite: DEN 211.

DEN 225 Chairside Assisting **0 3 0 1**

Chairside Assisting serves as a basis for the dental hygienist to be competent when necessary to assume the role of a chairside dental assistant. The course content follows the principles and procedures of chairside dental assisting with emphasis on four-handed dentistry. The course will specifically cover positioning in the dental operatory, operatory equipment, rotary instruments, high velocity oral evacuation, instrument transfer, anesthetis syringe, rubber dam, tofflemire matrix bands, and handcutting and surgical instruments. Prerequisite: DEN 222.

DEN 231 Dental Hygiene VI **1 0 16 6**

A complete and thorough oral prophylaxis is performed on each patient. Patient load will increase to two patients per clinic session. Proper use of the ultrasonic scaling device is expected. Prerequisite: DEN 221.

DEN 232 Ethics & Jurisprudence **1 0 0 1**

Lecture coverage of professional ethics, laws and regulations related to the practice of dentistry and dental hygiene. Includes a study of the present role and possible future role of dental hygienists in dentistry. Prerequisite: DEN 221.

DEN 233 Dental Specialties **3 0 0 3**

Discussions with students by dental specialists of the scope of specialty practices and the utilization of dental hygienists in such practices. Includes the methodology of rendering dental and dental hygiene services to groups with special needs. Prerequisite: DEN 221.

DEN 298 Dental Hygiene Seminar **2 0 0 2**

This course will help prepare Dental Hygiene students to take their National Board Examination. Each course the students have taken will be carefully and thoroughly reviewed. Prerequisite: DEN 211.

DEN 1001 Introduction to Dental Assisting **2 0 0 2**

This course is designed to acquaint the dental assisting student with his/her chosen profession. Topics to be covered include the dental health team, responsibilities of the dental assistant, professional associations, history, conduct, ethics and jurisprudence. Prerequisite: None.

DEN 1002 Dental Materials I 1 3 0 2

Designed to provide opportunities for the student to learn about dental materials and to develop beginning skills in manipulating various types of dental materials commonly used in the dental office. Prerequisite: None.

DEN 1003 Preclinical Sciences I 2 2 0 3

Unit one is a survey of general anatomy and physiology to acquaint the student with basic body structure and function, particularly as it relates to the general and oral health of the patient. Unit two is a study of the classification and characteristics of microorganisms. Aspects of host-parasite relationships and control of microorganisms by physical and chemical agents. Prerequisite: None.

DEN 1004 Dental Anatomy 4 0 0 4

The study of the anatomy, physiology, histology, embryology and morphology of the human dentition and its supporting structures and environment. Laboratory sessions are structured to facilitate the learning of form, function, and identification of oral structures with special emphasis on the identification of the primary and permanent dentition. The study of bones, muscles, blood, lymph and nerve supplies of the head and neck region. Landmarks of the skull will be identified and the relationship of head and neck anatomy to dental assisting will be emphasized. Prerequisite: None.

DEN 1011 Clinical Procedures I 3 0 6 5

Principles and procedures related to dental operatory equipment, instruments, sterilization, and chairside dental assisting techniques with emphasis on four-handed dentistry. Clinical experiences are designed to prepare the student to anticipate the needs of the dentist and assist him in all procedures. Patient management skills are involved. Prerequisite: DEN 1001.

DEN 1012 Dental Materials II 2 2 0 3

A continuation of DEN 1002. Identification of dental restorative materials characteristics of each, evaluation of quality and principles and procedures related to manipulation and storage of these materials. Prerequisite: DEN 1002.

DEN 1013 Preclinical Sciences II 4 0 0 4

Unit one is a study of the basic principles of general and oral pathology, causes and treatment. Unit two is a basic study of classification of drugs commonly used in dentistry, prescribing and administering drugs, therapeutic and deleterious effects of drugs. Special consideration will be given to nitrous oxide. The role and responsibility of the dental assistant will be emphasized. Prerequisites: DEN 1004 and DEN 1003.

DEN 1014 Dental Roentgenology 2 0 6 4

The principles and techniques of exposing, processing, mounting, storing, and evaluating intraoral and extraoral radiographic film. Characteristics of film, film selection for various techniques and care of equipment and facilities are included. Radiation safety for protection of patient, operator, and others is emphasized and will be practiced according to current legal requirements. Prerequisite: DEN 1004.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

DEN 1021 Clinical Procedures II 4 2 0 5

A continuation of Clinical Procedures I to further prepare the student in chairside dental assisting procedures with major emphasis on the role of the dental assistant in various dental specialties including endodontics, periodontics, orthodontics, prosthodontics, pedodontics, and oral surgery. Clinical experience will allow the student to increase level of proficiency in chairside assisting skills including patient management techniques and dental specialty procedures. Prerequisite: DEN 1011.

DEN 1022 Dental Office Management I 3 0 0 3

A study of the principles and procedures related to management of the dental office. Included is charting, maintaining patient and financial records, banking and tax record keeping are introduced with exercises in the use of these records in the dental practice. Prerequisite: DEN 1001.

DEN 1023 Oral Health Education 1 2 0 2

A study of the etiology, prevention and control of dental caries and periodontal disease with emphasis on the dental assistant's role in oral health education. Clinical experiences provide opportunities for patient education utilizing the most current oral hygiene techniques. Prerequisite: DEN 1004.

DEN 1024 Preclinical Sciences III 2 0 0 2

Unit I is a study of fundamental nutrition with emphasis on the relevance of nutrition to dental health. Unit II is designed to prepare the dental assisting student to function effectively, as a member of the dental team, in a variety of medical and dental emergency situations. Emphasis is placed on the prevention of emergencies in the dental office, as well as the treatment of emergencies when they occur. Role playing and group exercises will be utilized to simulate actual dental office emergencies. Prerequisite: DEN 1013.

DEN 1031 Dental Office Practice I 0 2 20 8

Introduction to practice in the dental office or clinic. Emphasis is on the dental assistant's role in chairside procedures. Prerequisite: DEN 1021.

DEN 1032 Dental Office Management II 2 0 3 3

Principles and procedures related to management of the dental office, includes maintaining inventories, ordering supplies, making appointments, dental insurance, telephone technique, business record filing, interpersonal communications in the dental office, management, and decision making. Prerequisite: DEN 1022.

DEN 1033 Dental Assistant Seminar 2 0 0 2

Study of personal responsibilities as a member of the dental health team, including employee-employer relations, opportunities for continued personal and professional development, job interviews and resume. Prerequisite: None.

DEN 1041 Dental Office Practice II 0 0 18 6

Practice in the dental office or clinic; rotation of assignments to encompass experience in office management, the dental laboratory, and the operatory. Emphasis on chairside assisting in a variety of clinical procedures. Prerequisite: DEN 1031.

Drafting Courses

DFT 90 Mechanical Drawing I 2 3 0 3

Fundamental principles of orthographic projection, working drawings and sections, with emphasis on visualizing. This course includes further study in orthographic projection, dimensioning and various other phases of working drawings. Also included is an introduction to isometric drawings, oblique projection, and blueprinting. Prerequisite: None.

DFT 92 Mechanical Drawing II 2 3 0 3

This course includes further study in orthographic projection, sectioning, and various other phases of working drawings. Also included are isometric drawings, oblique projection, and blueprinting. Prerequisite: DFT 90.

DFT 93 Elementary Drawing 2 3 0 3

This is an introductory course in drawing and sketching for students needing a knowledge of drawing principles for reading blueprints, schematics and describing objects in the graphic language. Prerequisite: None.

DFT 101 Technical Drafting I 1 5 0 3

The field of drafting is introduced as the student begins study of drawing principles and practices for print reading and describing objects in the graphic language. Basic skills and techniques of drafting included are: use of drafting equipment, lettering, free-hand orthographic and pictorial sketching, geometric construction, orthographic instrument drawing of principal views, and standards and practices of dimensioning. The principles of isometric, oblique, and perspective are introduced. Prerequisite: None.

DFT 102 Technical Drafting II 1 5 0 3

The 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. Most important is the 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 for "details" and "working drawings," approved by the American Standards Association will also be included. Introduction is given to intersections and developments of various types of geometrical objects. Prerequisite: DFT 101.

DFT 285 Drafting 0 6 0 2

Interpretation of field notes, comprehensive study of State mapping laws, basic site construction layout, working plans for highways and airports, reinforced concrete details, structural steel detailing, and pipe drawing. Prerequisite: DFT 101.

DFT 1104 Blueprint Reading: Mechanical 1 2 0 2

Interpretation and reading of blueprints. Information on the basic principles of the blueprint; lines, views, dimensioning procedures and notes. Introducing the student to the welding symbols and abbreviations. Prerequisite: None.

DFT 1110 Building Trades Blueprint Reading and Sketching 1 2 0 2

Principles of interpreting blueprints and trade specifications common to the building trades. Development of proficiency in making three view and pictorial sketches. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

DFT 1111 Blueprint Reading and Sketching 1 2 0 2

Principles of interpreting blueprints and specifications common to the building trades. Practice in reading details for grades, foundations, floor plans, elevations, walls, doors and windows and roofs of buildings. Development of proficiency in making three view and pictorial sketches. Prerequisite: DFT 1110 or equivalent.

DFT 1113 Blueprint Reading: Electrical 1 2 0 2

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 are part of this course. Prerequisite: DFT 1110.

DFT 1114 Blueprint Reading and Sketching 1 2 0 2

Designed to develop abilities in reading complex drawings in the masonry field. Blueprints of residential and commercial buildings are studied with emphasis on the plot plan, floor plan, basement, and/or foundation plan, walls and various detailed drawings of masonry work. Prerequisite: DFT 1111.

DFT 1115 Blueprint Reading: Plumbing 1 2 0 2

Sketching diagrams and schematics and interpretation of blueprints applicable to the plumbing trades. Emphasis is on plumbing plans for domestic and commercial buildings. Piping symbols, diagrams and notes are studied in detail. Applicable building and plumbing codes are used for reference. Prerequisite: DFT 1110.

DFT 1117 Blueprint Reading and Sketching: Welders 1 2 0 2

The first ideas which come into the mind are in pictorial form, and this phase of the welding curriculum is to teach the student how to put his ideas on paper. Sketching is the common means of conveying his ideas to his associates. Prerequisite: None.

DFT 1118 Pattern Development and Layout 3 0 0 3

This course is designed for the student who has basic knowledge of blueprint reading. It presents the practical shop or field layout methods used by pipe welders. Beginning with the simple pan layout to the most complex lateral connections used in industrial pipings, the student learns how to make a pattern to fit the particular job. Prerequisites: DFT 1104 and DFT 1117.

DFT 1125 Descriptive Geometry 2 3 0 3

Graphical analysis of space problems. The problems deal with practical design elements involving points, lines, planes, connectors, and a combination of these. Included are problems dealing with solid geometry theorems. Where applicable, each graphical solution shall be accompanied by the analytical solution. Prerequisite: DFT 1170.

DFT 1170 Basic Drafting 1 0 6 3

An introduction to drafting and the study of drafting practices. Instruction is given in the selection, use and care of instruments: single stroke lettering, applied geometry, freehand sketching consisting of orthographic and pictorial drawings. Orthographic projection, reading, and instrument drawing of principle view. Prerequisite: None.

DFT 1171 Basic Industrial Drafting **2 0 3 3**

Drafting instruction and experience in the preparation and interpretation of shop drawings. The student draws elementary machine parts both in detail and assembly drawings. Special emphasis is given to notes and other material related to machine shop and other manufacturing processes. This course is correlated with the machine shop experience of the student whenever possible. Prerequisite: None.

DFT 1172 Technical Sketching **2 0 3 3**

Study and practice in freehand sketching of machine parts with pencil. Sketches are made in orthographic, isometric, and oblique projection, as well as in true perspective. Dimensioning and shading of sketches are included. Prerequisite: DFT 1170 or equivalent.

DFT 1173 Industrial Drafting I **1 0 6 3**

The trainee will study simple and successive revolutions and their applications to practical problems. Sections are studied and both detail and assembly sections are drawn. Intersections and developments are studied by relating the drawing to the sheet metal trades. Models of the assigned drawings are made from construction paper, cardboard, or similar material as a proof of the solution to the problems drawn. Basic pipe drafting is introduced. Prerequisite: DFT 1170 and/or DFT 1171.

DFT 1180 Trade Drafting I **2 4 0 4**

Fundamental drafting principles with instruction and practice in lettering, orthographic projection, working drawings. Introduction to the principles of sectioning, dimensioning, use of drawing instruments and the solution of geometrical problems are covered. This is an introductory course in drafting for students needing a knowledge of drawing principles for reading and describing objects in the graphic language. Prerequisite: None.

DFT 1181 Trade Drafting II **2 0 3 3**

The student continues the study of orthographic projection with applications to orthographic instrument drawing of an advanced nature. Methods of describing complex objects with auxiliary views and/or sections and conventions are taught. Dimensioning procedures and practices are emphasized and the student is introduced to the "working drawing." Working drawings are made in one of several fields according to the student's curriculum interest. Prerequisite: DFT 1180 or similar course in basic drafting.

DFT 1190 Industrial Drafting II **1 0 6 3**

An introduction to mechanical drafting beginning with problems concerning precision and limit dimensioning. Methods of fastening materials, and fasterners: keys, rivets, springs, and welding. Symbols will be studied and drawings will be made involving these items. Principles of design will be introduced with the study of basic mechanisms of motion transfer; gears cams, power trains, pulleys, belting and methods of specifying and calculating dimensions will be studied. Drawings will be made involving these mechanisms. The plant layout drawing is introduced. Prerequisite: DFT 1173.

DFT 1191 Machine and Tool Drafting I **1 0 6 3**

Introduction to tool drafting, as it relates to manufacturing processes and machine tools. Basic drafting and design problems involving jigs and fixtures. Also covered are standard parts, and an introduction to various other elements of tool design. Prerequisite: DFT 1173.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
DFT 1192 Design Drafting and Tolerances	2	0	3	3

Advanced machine shop operations involving production operations such as staddle milling, indexing, special fixtures, grinders, automation, transfer and special machines. Demonstrations of numerical control applications. Gaging, measuring, and inspection. Selected other manufacturing processes such as casting, metal fabrication, welding and related processes are covered by demonstration, films, and other media. An analysis of dimensioning practices for complete and precise specifications of functional features required for a component or assembly. Standards are studied and explained. Applications in the form of drawings of components and gages. Applications of metric units are included. Prerequisites: MEC 1110 and DFT 1173.

DFT 1193 Industrial Drafting III 1 0 6 3

Principles of design sketching, design drawings, layout drafting, detailing from layout drawings, production drawings and simplified drafting practices constitute areas of study. Forging and casting drawings will be made from layouts. Specifications, parts list and bill of materials are emphasized in this course. The student will develop a complete set of working drawings of a simple machine, redesign problem or a component sub-assembly of moderate difficulty. Basic pipe drafting is introduced. Prerequisite: DFT 1173.

DFT 1194 Machine and Tool Drafting II 1 0 6 3

Drawings of machine details and assembly drawings are made from industrial specification. Basic design principles are introduced with the study of tool design for production. Tool design drawings are made involving standard parts, handbook usage and economic factors in tooling. Also included is a brief introduction of the construction of punch and dies. Prerequisites: DFT 1173 and DFT 1191.

DFT 1195 Steel Fabrication Drafting 1 0 3 2

Introduction to shop drawings related to the welding, riveting, bolting, or other joining methods of steel plates, bars and structural shapes. Emphasis is upon student preparation of working drawings for shop purposes. Prerequisite: DFT 1170 and/or DFT 1172.

DFT 1281 Jig and Fixture Design 2 4 0 4

Commercial standards, principles, practices and tools of jig and fixture design. Individual project and design work to acquaint students with the types of jigs and fixtures and their design. Prerequisite: DFT 1181.

Economics Courses

ECO 102 Economics I 2 2 0 3

Macroeconomics is concerned with obtaining an overview, or general outline, of the structure of the economy and the relationships between the major aggregates — such as government, households, and businesses — which constitute the economy. It includes such areas of study as total employment, total production, and the general price level. Prerequisite: None.

ECO 104 Economics II 2 2 0 3

An introductory course concerned with the specific units or parts that make up an economic system and the relationships between these parts. Emphasis is placed on understanding the behavior of individual firms and households and the ways in which such entities interact. Prerequisite: ECO 102.

ECO 201 Labor Economics 3 2 0 4

An advanced Economics course which is heavily engrossed in labor relations. The approach is highly interdisciplinary with history, sociology, political science, and economics all playing a major part. The history of labor economics is traced from its beginning through modern times and flavored with legislative acts and modern trends. Topics covered include the U.S. labor force, organized labor, collective bargaining, wage analysis, labor law, and unemployment. Prerequisite: ECO 104.

ECO 205 Applied Economics 3 0 0 3

A practical course that exposes the student to the main economic principles as they apply to everyday life and the problems that surround us. Topics of current interest such as the problems of poverty, inflation, discrimination, taxes, and the balance of payments are discussed. Prerequisite: None.

ECO 1105 Applied Economics 3 0 0 3

An introductory course designed to help the student understand present day economic problems as well as provide them with a usable working knowledge of economic principles. Topics include: What economics is all about; the consumer; kinds of business organizations; labor; the role of government in our economy; money, banking, and government policy; international trade and comparing economic systems. Prerequisite: None.

Electronic Data Processing Courses

EDP 103 Introduction to Programming 3 0 0 3

A study of programming logic including input, output, arithmetic and decision-making functions which can be performed on the computer. Flowcharting and programming will be studied with example programs executed in a basic computer language. Prerequisite: None.

EDP 104 Introduction to Electronic Data Processing 3 0 0 3

Fundamental principles and concepts of business data processing systems are examined. General business applications are studied with somewhat more detailed attention given to electronic data processing procedures associated with business accounting. Prerequisite: None.

EDP 105 Introduction to Programming — FORTRAN I 4 3 0 5

An introductory course on computer programming logic using FORTRAN as the programming language. Designed for the student who plans to pursue the degree in Electronic Data Processing. Flowcharting language structure, statements, and programming methods for a logical approach to computer programming. The student will develop program logic and write FORTRAN programs for solving both technical and commercial type problems. Prerequisite: None.

EDP 107 Compiler Language — FORTRAN II 2 5 0 4

An extension of EDP 105, the student develops additional programming skills in writing FORTRAN programs using the more complex logic techniques and methods learned concurrently. Prerequisite: EDP 105 or EDP 117.

EDP 109 Compiler Language — COBOL I 4 3 0 5

A course in the COBOL Programming Language both theory (fundamentals) and application, including a study of the language rules and programming methods. The student will develop program logic and wirte COBOL programs. Prerequisite: None, EDP 112 desirable.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

EDP 110 COBOL II 3 4 0 5

A course in the COBOL Programming Language including fundamentals and application within a Disc Operating System (DOS) environment. The student will develop logic and write advanced COBOL programs. Prerequisite: EDP 109 — COBOL I or equivalent.

EDP 114 Operating Systems 3 0 0 3

A detailed study of operating systems from the level of monitor control systems to large executive systems. Job control languages, supervisor programs, program libraries and data sets will be included. Prerequisite: EDP 104.

EDP 198 Keypunch I 1 6 0 3

A practical course in the basics of keypunch operations for computers and automatic data processing equipment. The course gives realistic approaches to the keypunch machine operations, to individual jobs, to the most commonly used codes for program cards, to the punched card by colors and cuts, to the terminology used in data processing, to the fact that keypunching is the initial and very important step in the data processing job. Prerequisite: Basic typing ability.

EDP 204 Compiler Language — COBOL III 3 4 0 5

A course designed especially for the Electronic Data Processing student which requires him/her to discern fact from opinion, good business judgement from prejudice, and sound procedures from tradition. The material provided in the Case Study are deliberately designed to stress the need for assessment of information while applying the basic techniques of systems design in a business environment. Prerequisite: EDP 201 — COBOL II or equivalent.

EDP 207 Compiler Language — ASSEMBLER I 4 3 0 5

A study of symbolic computer language technique with emphasis on a particular example of such a language, developing program logic and writing programs using assembly language. Prerequisites: EDP 103, EDP 104, and EDP 109.

EDP 208 Compiler Language — ASSEMBLER II 3 4 0 5

An advanced study of a symbolic computer language. It is an extension of EDP 207. More sophisticated techniques of computer programming are studied in detail with associated development of program logic. A complex business problem in the form of a case study is solved by each student using assembly language techniques and coding. Prerequisite: EDP 207 or equivalent.

EDP 216 Data Processing Project 3 12 0 7

A study of basic RPG programming methods and an in-depth project in which the student completely automates an existing manual system presently in use by a source outside the classroom and using the concepts of systems analysis, design and implementation that were learned in previous courses. Prerequisite: 6th Quarter standing.

EDP 221 Computer Systems I 4 3 0 5

An advanced study of systems analysis with emphasis upon data systems and file organization techniques, the design of forms and methods used by the systems analyst beginning with the feasibility study. Prerequisite: EDP 104.

EDP 223 Computer Systems II 4 3 0 5

A continuation of EDP 221 with further development of design techniques through conversion and implementation. Points of emphasis will include software, hardware, documentation, control, maintenance and the economics of date processing systems. Prerequisite: EDP 221.

EDP 229 Keypunch II 1 6 0 3

Emphasis is placed on production key punching and accurate speed building. Attention is directed toward developing the student's ability to function as an expert. The production units are essentially punched cards on the IBM Model 029 Key Punch Machine. However, IBM Model 129 machines and key-to-tape-machines will be used as available. The minimum speed acceptable for satisfactory course completion will depend on the machine used. A speed comparable to a typist's speed of 50 words per minute for five minutes without error will be the acceptable minimum. Prerequisite: EDP 198 or permission of the instructor.

EDP 230 Compiler Language RPG II-I 4 3 0 5

A course in the Report Program Generator (RPG II) language theory, fundamentals, applications, including a study of the language rules and programming methods. The student will develop problem solutions and write several RPG II programs. Prerequisites: EDP 103 and EDP 104 or consent of instructor.

EDP 231 Complier Language RPG II-II 3 4 0 5

An advanced course in the Report Program Generator-RPG II Programming Language developed for the student who has completed EDP 230 or its equivalent in RPG II experience. The student develops additional programming skills in writing RPG II programs or more complex commercial business programs. Techniques learned for card systems are extended to disc operating systems. The student will code several programs using these more advanced techniques. Prerequisite: EDP 230 RPG II-I or equivalent.

EDP 299 EDP Cooperative Training 1 15 0 6

Provides the student with an opportunity to pursue work experience in a specialized field under faculty supervision. Periodic conferences will be held with each student and employer while the student is receiving training. This course offers valuable experience and training which is incorporated into the student's education from the standpoint of ON-THE-JOB-EXPERIENCE. It provides realism and motivation to his academic and technical program of studies. Prerequisite: Completion of First and Second Quarter Academic Courses.

Education Courses

EDU 80 Basic Skills 3 2 0 4

To develop or enhance the ability of students in using successful study skills thereby improving performance in mastering academic work. Prerequisite: None.

EDU 100 Principles of Learning 3 0 0 3

This course is a study of techniques of teaching which will be of assistance to students who plan to become teachers, teacher's aides, or day-care aides. Some of the major topics to be studied are the socialization of the young child, development through the early school years, principles of learning and teaching (as they apply to the classroom), uses and methods of evaluation and introduction to standardized ability and achievement tests. Successful practices in teaching will be stressed. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

EDU 102 Introduction to Library Science 0 2 0 1

This course is designed to introduce the General Education student to the various aspects of the library. The student will be required to spend two periods per week in practical work, hand-on work in the main library under the supervision of a General Education instructor and/or a member of the library staff. Prerequisite: None.

EDU 103 Foundations of American Education 3 0 0 3

This course is a study of the historical development of Western education from early Greece, through Rome, the Dark Ages, and the Reformation to the Twentieth Century. The course is designed to introduce the student to the historical development of the educational systems which exist today in the United States. The roles of private and public institutions at the elementary and secondary levels will be considered. Prerequisite: None.

EDU 104 Teacher's Aide Methods 3 0 0 3

This course deals with teaching methods that can be utilized by the teacher's aide. It exposes the learner to a broad overview of the areas in which he/she will work. Prerequisite: None.

EDU 202 Child Growth and Development 3 0 0 3

This course is a comprehensive introduction to the cognitive, affective and psychomotor domains of childhood, from birth to puberty. Attention is given to the social, biological and cultural aspects of the child's socialization. Major emphases are on the role of the teacher and teacher-aide in contributing in positive, meaningful ways to the child's continuing development. Prerequisite: None.

EDU 204 Parenting Skills 3 0 0 3

The study of ways to involve parents in a preschool center. Topics discussed include: the purposes and value of home visitation, and other programs for parents including techniques of working with parents for the total development of the child. Prerequisite: None.

EDU 205 Basic Reading Skills: Grades K-3 3 0 0 3

This course is a study of the basic reading skills with a concentration in kindergarten through grade three. It includes activities that the teacher's aide may use to reinforce and enrich those skills taught by the classroom teacher. Prerequisite: None.

EDU 206 Basic Reading Skills: Grades 4-12 3 0 0 3

This course focuses on the sequence of basic skills necessary to teach one to read with a concentration in grades four through twelve. It includes activities that the teacher's aide may use to reinforce and enrich those skills taught by the classroom teacher. Prerequisite: None.

EDU 207 Reading Readiness and Development 3 0 0 3

This course is a study of reading readiness and methods of teaching reading on the preschool and primary levels. It includes activities that the teacher's aide uses to reinforce and enrich those skills taught by the classroom teacher. Prerequisite: None.

EDU 208 Creative Writing and Speaking 3 0 0 3

This course is a study of the communication skills: listening, speaking, reading, writing, spelling, and a comparison of current methods and materials. Special emphasis is placed on the language arts as the core of the elementary curriculum. Prerequisite: None.

EDU 210 Art in Early Childhood Programs 3 0 0 3

This course presents cultural arts as an integral part of a well-balanced recreation program. Singing, rhythms, and appreciation of music are included with emphasis on developing appreciation and promotion of music and art rather than mastering of performance skills. This course also focuses on drama and dance in the recreational setting and the fundamentals of locomotor movement before attempting to master individual dances. Prerequisite: None.

EDU 211 Social Studies and Primary Children 3 0 0 3

This course emphasizes the study of experiences used to meet goals of early education in areas of socialization, intellectual competency, language, creativity, and aesthetic appreciation. Prerequisite: None.

EDU 212 Basic Math Skills 3 0 0 3

This course is designed to assist teacher aides, parents, and other adults who will be teaching basic mathematics skills to elementary school children. The course focuses on the teaching of addition, including carrying; subtraction, including borrowing; multiplication and division. Also included are the metric system, fractions, percentages, decimals and the computation of areas and volumes. Prerequisite: None.

EDU 213 Methods and Materials: Exceptional Children 3 0 0 3

This course focuses on the methods and materials used to teach the exceptional child. It includes activities that the teacher's aide may use to reinforce and enrich those skills taught by the classroom teacher. Prerequisite: None.

EDU 215 The Exceptional Child 3 0 0 3

This course is the study of children with developmental variations. Consideration is given to recognition of problems, community resources, and selection of appropriate activities for the child with exceptional mental or physical development. Prerequisite: None.

EDU 216 Working with the Problem Child and Family 3 0 0 3

An analysis of the characteristics, ramifications, and appropriate teaching methods for the problem child and the establishment and maintenance of rapport between the student, his/her family, and the school. Prerequisite: None.

EDU 234 Methods and Materials in Early Childhood 3 0 0 3

This course emphasizes the communicative and social skills through the exploration of four basic approaches to language arts. It explores means of selecting, planning, and utilizing materials suitable for the early learner. It includes activities that the teacher's aide may use to reinforce and enrich those skills taught by the classroom teacher. Prerequisite: None.

Electrical Technology and Trades Courses

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
ELC 101 Fundamentals of Electricity	4	6	0	6

Elementary principles of electricity including: basic units, Ohm's Law, Kirchhoff's Law; resistance, inductance, capacitance; series, parallel, and series-parallel networks; superposition and the Thevenin's Theorem; sources of various waveforms (including DC and AC); complex algebra. Prerequisite: None. Corequisite: MAT 101.

ELC 103 Fundamentals of Electricity	2	3	0	3

A continuation of ELC 101 with emphasis on alternating current systems including additional network theorems, power, power factor, loop and nodal analysis, transformers, and resonance. Prerequisite: ELC 101. Corequisite: MAT 102.

ELC 205 Applied Electricity	2	4	0	4

A course designed to apply fundamental electric and magnetic concepts to circuits used in single and three phase distribution and utilization of electric energy as applied with transformers and motors. Prerequisite: PHY 102.

ELC 1104 Introduction to Electricity	3	0	3	4

An introduction to electrical structure of matter and electron theory, the relationship between voltage, current and resistance in series, parallel and series-parallel circuits. Provides fundamental concepts in single and polyphase alternating current circuits, voltages, currents, power measurements, transformers and motors. The basic concepts of AC and DC machines and simple controls. Prerequisite: None.

ELC 1105 Introduction to Industrial Wiring	2	0	6	4

Provides instruction and application in the fundamentals of blueprint reading, layout, planning, installation and maintenance of wiring systems in commercial and industrial complexes. Introduction to National Electric Code regulations in actual building mockups. Prerequisite: None.

ELC 1106 Industrial Electrical Maintenance	2	0	6	4

Introduction and application of industrial electrical maintenance practices. Instruction in the use of electrical test instruments and controls used throughout the industrial complex. Emphasis will be placed on routine maintenance, repair servicing and trouble-shooting. Practice in the use of appropriate hand tools. Industrial safety procedures will be stressed. Prerequisite: None.

ELC 1112 Direct and Alternating Current	5	0	15	10

A study of the structure of matter and the electron theory, the relationship between voltage, current and resistance in series, parallel and series-parallel circuits. Analysis of direct current circuits by Ohm's law and Kirchhoff's law; sources of direct current potentials. Fundamental concepts of alternating current flow; a study of reactance, impedance, phase angle, power and resonance and alternating current circuit analysis. Prerequisite: None.

ELC 1113 Alternating Current & Direct Current 5 0 15 10

Provides fundamental concepts in single and polyphase alternating current circuits, voltages, currents, power measurements, transformers and motors. Instruction in the use of electrical test instruments in circuit analysis. The basic concepts of AC and DC machines and simple system controls. An introduction to the type control used in small appliances such as thermostats, times, or sequencing switches. Prerequisites: MAT 1110 and ELC 1112.

ELC 1124 Residential Wiring 5 0 9 8

Provides instruction and application in the fundamentals of blueprint reading, planning, layout, and installation of wiring in residential applications such as services, switchboards, lighting, fusing, wire sizes, branch circuits, conduits, National Electrical Code regulations in actual building mock-ups. Prerequisites: ELC 1113 and DFT 1110.

ELC 1125 Commercial and Industrial Wiring 5 0 10 9

Layout, planning, and installation of wiring systems in commercial and industrial complexes, with emphasis upon blueprint reading and symbols, the related National Electrical Codes, and the application of the fundamentals to practical experience in wiring, conduit preparation, and installation of simple systems. Prerequisites: DFT 1110, DFT 1113, ELC 1112, ELC 1113, and ELC 1124.

ELC 1180 Basic Electricity 3 0 0 3

This course includes the following topics: electron theory, production of electricity by chemical action, friction and magnetism, induction, voltage, amperage, horsepower and wattage, transformers, wiring and resistance. Some emphasis placed on connecting arc welders and electric motors. Prerequisite: None.

ELN 102 Basic Logic Circuits 2 2 0 3

A study of base-two mathematics, basic Boolean algebra, and binary codes as applied to computer circuits. Intergrate circuit logic gates are used in the laboratory with military specifications, symbols and truth-tables. Prerequisites: ELC 101 and MAT 101.

ELN 103 Fundamentals of Active Devices 2 2 0 3

A basic study of solid-state concepts stressing the P-N junction. The approach is more descriptive than mathematical. Prerequisite: ELC 101.

ELN 104 Active Devices 4 3 0 5

An in-depth study of the characteristics and applications of the bipolar junction and field-effect transistors. The approach is more mathematical than descriptive. Prerequisite: ELN 103.

ELN 106 Passive Networks I 2 2 0 3

Analysis of passive networks with sources of varying frequency and voltage and variable parameters. Prerequisites: ELC 103 and MAT 102.

ELN 206 Active Network Analysis I 2 3 0 3

A design approach for transistor applications to discrete and integraded linear amplifiers. Prerequisite: ELN 104.

ELN 207 Active Network Analysis II 2 3 0 3

A study of integrated operational amplifier internal circuit and application of the operational amplifier. Prerequisite: ELN 206.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

ELN 209 Passive Networks II 3 0 0 3

A study of sophisticated resonant circuits and their behavior in coupling and impedance-matching networks. Prerequisite: ELN 106.

ELN 211 Active Network Analysis III 4 5 0 6

A study of selected communication electronic circuits to provide a circuit foundation for ELN 220 Electronic Systems. Prerequisite: ELN 207.

ELN 214 Pulse Circuits I 2 4 0 4

A philosophical approach to the circuit detail of simple integrated logic circuits, leading to more complex circuits and systems. All devices discussed are commercially available integrated circuits. Prerequisites: ELN 106 and ELN 206.

ELN 215 Pulse Circuits II 2 3 0 3

A mathematical and philosophical approach to the design and analysis of small logical systems using complex integrated circuits and discrete components. Prerequisite: ELN 214.

ELN 220 Electronic Systems 5 6 0 7

An investigation of electronic systems from the block diagram concept with emphasis on communication systems such as amplitude, frequency and single-side band modulated transmitters and receivers. The transmission of signals on lines and in space are studied along with the coupling devices. Prerequisites; MAT 286, ELN 209, and ELN 214.

ELN 235 Industrial Mechanisms and Instrumentation 4 4 0 6

Broad introduction to use of electro-mechanical and electronic circuits in industrial control systems. Provides an understanding of the methods, techniques, and skills required for installation, service and operation of a variety of industrial control systems. Analysis of sensing devices for detecting changes in pressure, temperature, humidity, sound, light, electricity, the indicating and recording devices, and the associated circuitry. Prerequisites: ELN 103, PHY 102, and PHY 104.

ELN 240 Digital Computers 3 2 0 4

A philosophical approach to the design and analysis of computer systems with heavy emphasis on microcomputer systems and assembly languages. Prerequisite: ELN 215.

ELN 245 Electronic Design Project 0 4 0 2

Individual assignment of electronic design project of special interest to the student with the approval of the instructor. Design, analysis, construction, and evaluation are required. A written report of the work will be made. Frequent conferences between student and the advisor will guide the student and his/her progress. Prerequisite: ELN 215.

ELN 1118 Industrial Electronics I 3 6 0 5

Basic theory, operating characteristics, and application of vacuum tubes, such as: diodes, triodes, tetrodes, pentodes, and gaseous control tubes. An introduction to amplifiers using triodes, power supplies using diodes, and other basic applications. Prerequisites: ELC 1112 and MAT 1110.

ELN 1119 Industrial Electronics II 3 6 0 5

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. Prerequisites: ELC 1112, ELC 1125, ELN 1118, and MAT 1110.

English Courses

ENG 50 Usage & Reading 6 4 0 8

This course is designed for high school graduates who can benefit from instruction in basic language usage skills (oral and written). It includes techniques, practical exercises, and extensive application to increase reading rates, comprehension, and spelling. Vocabulary development and reading are combined with grammar to give the student a better understanding of English as a communication tool. Study skills and self-concept development are included in the course. Prerequisite: None.

ENG 91 Vocabulary and Reading 3 2 0 4

English 91 is a remedial reading and vocabulary development course devoted primarily to developing good reading skills and habits. Emphasis is placed on dictionary skills, work attack, and reading speed and comprehension. Particular attention is given to developing independent reading habits that would promote success in the student's curriculum courses. Instruciton is individualized in the lab segment of the course. Prerequisite: None.

ENG 92 Grammar and Composition 3 2 0 4

This course is designed to aid the student in his/her understanding and proper utilization of standard English usage through the study of grammar, sentence structure, and punctuation. The course is intended to prepare the student for his entrance into a regular curriculum. Prerequisite: None.

ENG 93 Vocabulary and Composition 3 2 0 4

English 93 is a remedial writing and vocabulary course devoted primarily to developing good writing skills and habits. The course includes an investigation of the principles of rhetoric through the reading of selected essays and the application of those principles in the writing of student themes. Particular attention is also given to vocabulary enrichment through drills and usage. In addition, independent reading assignments are required of each student. Prerequisite: None.

ENG 100 Reading Efficiency 0 3 0 1

This course is designed to assist students in improving both their reading rate and comprehension. Reading machines and programmed materials are utilized to increase the span of recognition, to increase eye coordination and word group recognition, and to train for comprehension in larger units. Prerequisite: None.

ENG 101 Grammar 3 0 0 3

This course is designed to aid the student in the improvement of self-expression, It is intended to stimulate students in applying the basic principles of English grammar in their day-to-day situations in industry and social life. Prerequisite: None.

ENG 102 Composition 3 0 0 3

This course is designed to aid the student in the improvement of self-expression in expository writing. Emphasis is on the paragraph and the whole composition. Prerequisite: ENG 101.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

ENG 103 Report Writing 3 0 0 3

The fundamentals of English are utilized as a background for the organizaiton and techniques of modern report writing. Exercises in developing typical reports, using writing techniques and graphic devices are completed by the students. Prerequisites: ENG 101 and 102.

ENG 104 Usage and Composition I 3 0 0 3

This is a course in standard usage of the English language and a study of the rhetoric of expository writing. Emphasis is placed on the reading and the writing of essays. Prerequisite: None.

ENG 105 Usage and Composition II 3 0 0 3

This course involves introduction to basic elements of fiction and an introduction to research techniques. Emphasis is placed on reading and writing about short fiction and on creating a research paper related to that reading. Prerequisite: ENG 104.

ENG 106 World Literature I 3 0 0 3

World Literature I is a study of major literary works of Western culture from the Ancient World through the Middle Ages. Prerequisites: ENG 101 and ENG 102, or ENG 104, ENG 105 and ENG 108.

ENG 107 World Literature II 3 0 0 3

World Literature II involves the study of the important literary movements and works of the Renaissance and the eighteenth century. Prerequisites: ENG 101, and ENG 102, or ENG 104, ENG 105 and ENG 108.

ENG 108 Usage and Composition III 3 0 0 3

Designed as a continuation of ENG 105, with functional emphasis upon promoting the students' understanding of prosody and drama. Approach is geared toward stimulating the students' examination and reflection upon chosen literary works and provoking increased writing proficiency through the application of the critical essay. Prerequisites: ENG 104 and ENG 105.

ENG 110 Business English 3 0 0 3

A course for general office and secretarial science students emphasizing the use of the dictionary and the application of the rules for punctuation, capitalization, the expression of numbers, proofreading and spelling, word division, and the formation of plurals and possessives as they are applied constantly by the secretary, stenographer, and typist in producing mailable transcripts. Prerequisites: BUS 102 and BUS 106 for Secretarial Science students, BUS 104 for General Office students. Corequisite: BUS 107 for Secretarial Science students, BUS 261 for General Office students.

ENG 115 Medical Terminology and Vocabulary 3 0 0 3

An allied science related course which deals with the basic tools for building a medical vocabulary and mastering the identification of anatomical roots, prefixes, and suffixes of words. Anatomical body parts, diseases, operations, tumors, drugs, and descriptive terms are emphasized by analysis of the terms and structure of the words. Mental Health is included for special information in this health field. Prerequisite: None.

ENG 204 Oral Communications 3 0 0 3

This course is a study of basic concepts and principles of oral communication to enable the student to communicate with others verbally. Emphasis is placed on diction and voice and on applying particular techniques of theory to correct speaking habits and to produce effective oral presentation. Prerequisite: None.

ENG 206 Business Communications 3 0 0 3

Develops skills in the techniques of writing effective communications. Emphasis is placed on correct procedure in writing the inquiry, sales, credit, collection, adjustment, complaint, order, acknowledgement, and remittance and application letters and data sheets typical of the business office. Prerequisites: BUS 102 or equivalent, and ENG 101 or ENG 104.

ENG 209 World Literature III 3 0 0 3

World Literature III involves the study of the important literary movements and works of the nineteenth and twentieth centuries. Prerequisite: ENG 102, or ENG 105 and ENG 108.

ENG 210 American Literature I 3 0 0 3

The student will explore the American cultural atmosphere from Colonial times to ca. 1860 through cultural analysis of its literature and history. Prerequisites: ENG 102, or ENG 105 and ENG 108.

ENG 211 American Literature II 3 0 0 3

Students study the American literary and cultural milieu from 1860 to the present. Prerequisites: ENG 102, or ENG 105 and ENG 108.

ENG 212 Creative Writing Seminar 3 0 0 3

Designed as a discipline and forum of criticism for students who wish to write verse or short fiction. Prerequisite: ENG 105.

ENG 214 Classical Mythology 3 0 0 3

English 214 is a chronological and geneological study of the myths of ancient Greece and Rome. The study begins with the myths of creation, follows the careers of the major dieties, and concludes with legends from the family of man — up to and including the voyage of Aeneas. This course particularly emphasizes the influence of these tales on the creative intelligence and examines from the worlds of music, art, and literature, works that have been influenced by myth. Prerequisite: ENG 105.

ENG 216 Modern Drama 3 0 0 3

Designed as a study of the development of Modern Drama with emphasis on the major "dramatic schools." Twentieth Century American and European drama, beginning with Ibsen and continuing through the Theatre of the Absurd, will be examined. Prerequisite: None.

ENG 217 Children's Literature 3 0 0 3

The student will read and write about the various types of literature appropriate for young children and will learn to develop standards for judging literature for children. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

ENG 1100 Reading Improvement 0 3 0 1

This course is designed to improve the student's ability to read rapidly and accurately. Special machines are used for drill to broaden the span of recognition, to increase eye coordination and word group recognition, and to train for comprehension in larger units. Prerequisite: None.

ENG 1101 Communicative Skills: Grammar 3 0 0 3

This course is designed to aid the student in the improvement of self-expression in written composition and oral usage. Emphasis is on grammar, diction, sentence structure, punctuation, and spelling. This course is intended to stimulate students in applying the basic principles of English grammar in their day-to-day situations at work and in social life. Prerequisite: None.

ENG 1102 Industrial Communications 3 0 0 3

This course includes a review of the major grammatical principles introduced in English 1101. Emphasis is on the development of one's ability to communicate effectively with other individuals through the medium of good language usage in writing, to think more clearly, and to reason more forcefully. Prerequisite: ENG 1101.

ENG 1103 Report Writing 3 0 0 3

This course is designed to help the student develop competency in report writing. Emphasis is placed on writing letters, writing informal reports, and developing communications skills. Prerequisite: ENG 1102.

Environmental Courses

ENV 101 Environmental Resource Management 2 3 0 3

Environmental Resource Management is an introductory course concerning the many phases of the environment that have pleasant, chronic, or acute effects upon men. The phases of interest discussed in this study includes population and trends, epidemiological observations, water resources, wastewater treatment, air environment, management of solid wastes, vector control, food sanitation, radiology, and light, sound and heat. Prerequisite: None.

ENV 102 Applied Microbiology 2 3 0 3

Scope and history of microbiology, classification of microorganisms, protozoa, fungi, viruses, microscopy, bacterial physiology, saprophytic bacteria, culture media and methods, sterilization and disinfection, germicides, sources of infection, microbes and disease, skin infections. The study of several pathogenic bacteria associated with water and food, natural and acquired resistance to bacteria, and respiratory disease-producing microbes. Prerequisite: None.

ENV 104 Environmental Biology 2 3 0 3

A basic ecology course emphasizing the actions and interactions of organisms, populations, and communities found in natural habitations. Emphasis will be made on natural systems in stream and pond niches for both the relatively "clean" and "polluted" waters. A continuation and correlation study will be offered in reference to the "natural" habitats and the "man-made" habitats utilized by man for specific end results, i.e., waste treatment facilities, lagoons, sludge digestion, sedimentation basins, etc. Prerequisite: None.

ENV 105 Basic Environmental Chemistry 3 2 0 4

A beginning course in the utilization of chemical concepts as applied to the measurement and abatement of pollutants in the environment. Topics covered are formulae, solutions, stoichiometric equations, equilibrium, oxidation, reduction electro-chemistry, organic chemistry and chemical instrumentation. Laboratory problems to include gravimetric, colormeters, and electro-metric analysis. The principle purpose of the course is to better prepare the student for the ENV 204, ENV 205, ENV 206 series of courses. Prerequisite: None.

ENV 108 Basic Hydraulics 2 4 0 4

A beginning course in pressure, capacities, flow parameters and energy losses in open and closed conduits. Empirical equations for flow are substantiated by laboratory experiments. Mechanical and electrical energy for water transportation are illustrated by simulated water supply systems. Prerequisites: MAT 102 or MAT 122, and PHY 102.

ENV 109 Hydrology 3 2 0 4

A study of hydrologic cycle to include precipitation, percolation, transpiration, evaporation and transportation of water. Interpretation of rainfall record and run-off calculations as pertaining to adequate surface supplies will be included. Ground water systems will be covered to complete all phases of domestic water supplies. Prerequisites: MAT 102 or MAT 122, and PHY 102 and ENV 108.

ENV 112 Atmospheric Air Sampling 2 3 0 3

A basic course defining the air pollution problem, types and characteristics of pollutants, effects of air pollutants, sampling methods, control equipment and guidelines for the development of air quality standards and implementation plans. Prerequisite: ENV 108.

ENV 204 Sanitary Chemistry and Biology 2 6 0 5

Theory and laboratory techniques for all control tests of water purification including bacteriology, color, turbidity, pH, alkalinity, hardness, coagulation, chlorides, flourides, selected heavy metals, detergents, bactericides, and nitrogen. Basic in-plant studies at nearby plants. Prerequisites: ENV 102, ENV 104, and ENV 105.

ENV 205 Environmental Chemistry and Biology 2 6 0 5

A course designed to introduce students to theory and laboratory techniques of wastewater treatment plant operation control tests. These tests are presented to show the mechanics of the procedure, the steps used to attain the results, and how to apply the results to the proper operation of the wastewater treatment facility. Some of the tests presented are the following: solids or residue, chloride, dissolved oxygen, biochemical oxygen demand, chemical oxygen demand, nitrogen, phosphorus, detergents, grease and volatile acids. Prerequisites: ENV 105 and ENV 204.

ENV 206 Environmental Chemistry and Biology 2 6 0 5

A course designed to allow the student to practice the operations of chemical and biological analyses in an actual situation. The student utilizes the skills acquired in ENV 105, ENV 204, and ENV 205 to determine the efficiency of a waste treatment plant and the effect the plant effluence will have on the receiving body of water. Stream studies are included here to determine the assimilative capacities of receiving bodies of water, and calculations are made to determine if the receiving stream is capable of adequate recovery in a given period of time. Prerequisite: ENV 205.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

ENV 216 Water Purification 3 2 0 4

Basic principles of water purification including: aeration, sedimentation, rapid sand filtration, chlorination, treatment chemicals, taste and odor control, bacteriological control, mineral control, design criteria and operational problems. New processes and recent developments. Rules, regulations, forms and records. Prerequisite: ENV 108.

ENV 217 Liquid Waste Treatment 3 2 0 4

The course is designed to afford information concerning the composition of sewage, activity within the waste water, and treatment of waste water. Procedures for proper waste treatment are discussed in terms of equipment needed and operation of the equipment. Areas of concern include dilution, screening, degritting, measuring, sedimentation, aeration, digestion, filtration, air drying, biological purification, grease and oil removal, disinfection, chemical precipitation, sand filtration, filter fly control, field studies, and in-plant studies. The rules, regulations, forms and record-keeping duties of plant operators are discussed in terms of responsibilities associated with the properly operated facility. Prerequisites: ENV 108 and ENV 204.

ENV 218 Liguid Waste Treatment 3 2 0 4

This course is designed to introduce the student to the treatment of industrial wastes. A review of the basic treatment processes is presented, including equipment and loading parameters associated with presently operated facilities. Visits to area waste treatment facilities are made to observe operations and note efficiencies achieved by the various facilities. Receiving streams of waste outfalls are visited and related studies of the effects of the wastes on the streams are made. Various area industries are visited to enhance the students' comprehension of problems associated with the proper treatment and disposal of the particular waste. Stream classifications, both ecological and sanitary, are studied for some of the major river watersheds in the region. The rules and regulations for release of a waste into a watershed are studied and discussed. Prerequisites: ENV 205 and ENV 217.

ENV 219 Instruments 2 4 0 4

Hydraulic, pneumatic, mechanical, electrical and electronic control systems and components. Basic description, analysis and explanation of operation. Typical performance characteristics, limitations on performance, accuracy, applications and their utilization in industrial processes. Prerequisite: None.

ENV 226 Atmospheric Air Analysis 2 3 0 3

A laboratory course in the analysis of various air pollutants by gravimetric, calormetric and electrometric methods, utilizing laboratory prepared atmospheres for control and testing. Prerequisites: ENV 105 and ENV 112.

ENV 236 Codes, Contracts, Specifications and Estimates 2 3 0 3

Basic principles and methods most significant in contract relationships; appreciation of the legal considerations in construction work; study of the National Building Code and local building codes; intepreting and outlining specifications, preparation of material and labor quantities; approximate and detailed estimates of costs. Prerequisites: DFT 101 and DFT 285.

ENV 299 Cooperative Training 1 15 0 6

Provides the student with an opportunity to pursue, under staff supervision, work experience in a specialized field. Periodic conferences will be held with each student and employer while the student is receiving training. This course offers valuable experience and training which is incorporated into the student's education from the standpoint of ON-THE-JOB EXPERIENCE, and gives realism and motivation to his academic and technical program of studies. Prerequisite: Completion of first and second quarter academics..

ENV 1100 Biology & Microbiology 2 3 0 3

A basic course in biology with emphasis on biological organisms perculiar to water, wastewater treatment processes and stream sanitation. Collection methods, classification procedures and physiological systems are the area of interest. Prerequisite: None.

ENV 1101 Water Laboratory Control 2 6 0 4

Theory and laboratory technique for control tests of waste purification plant as follows: bacteriology, color, turbidity, hydrogen ion concentration, alkalinity, hardness, coagulation, flouride, iron, manganese and detergents. Interpretation and application of test results are stressed. Prerequisite: None.

ENV 1102 Water Plant Operations 3 2 0 4

Construction features and operational techniques of water purification processes and equipment. Emphasis is placed on continuity of operation and proper control of treatment chemical dosages for purification purposes. Public health aspects of the population as well as safety of plant operators is part of the instructional material. Prerequisite: None.

ENV 1103 Waste Laboratory Control 2 0 6 4

Theory and laboratory techniques for control tests in waste water treatment plant operation as follows: solid, dissolved oxygen consumed, hydrogen ion concentration, physical tests and bacterical enumeration. Interpretation and application of test results are stressed. Prerequisite: None.

ENV 1104 Waste Plant Operations 3 2 0 4

Construction features and operational techniques of purification processes and equipment. Emphasis is placed on operator responsibility in the successful operation of waste water treatment plants. Classroom instruction will be given on campus with several laboratories at local plants. Prerequisite: None.

ENV 1105 Maintenance 2 3 0 3

Preventive maintenance procedures and records for basic and specialized equipment in water and waste water plant. Equipment nomenclature is covered in classroom with actual experience in local plants. Prerequisite: None.

ENV 1107 Stream Studies 2 0 6 4

A study of the natural purification processes that occur in streams by chemical and biological tests. Emphasis is placed on methods of evaluating streams at various locations and determining the waste assimilating capacity of a stream. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

ENV 1108 Control Systems 3 0 3 4

Application and operation of hydraulic, pneumatic, mechanical, electrical and electronic control systems utilized in water and waste water treatment plants. Calibration and limitations of various types of equipment are presented. Prerequisite: None.

ENV 1109 Water and Waste Distribution 3 0 3 4

Methods of sizing, maintaining and constructing collection systems for waste water and distribution systems for potable water supplies. Purposes and construction details of appurtenances and special structures are included in the instructions. Prerequisite: None.

ENV 1110 Introduction to Ecology 2 3 0 3

An introductory course designed to demonstrate some of the many systems employed in connection with environmental manipulation and overall protection for the public's health. Some of the systems discussed concern methods of disease transmission, protection of ground water, insect and rodent control, liquid and solid waste disposal, swimming pool sanitation, and industrial hygiene. Prerequisite: None.

ENV 1111 Industrial Waste 2 0 3 3

Sources and effects of industrial waste on streams and on waste plants. Methods to reduce problems with particular wastes at industry treatment plants. Prerequisite: None.

Funeral Service Education Courses

FSE 101 Introduction to Funeral Service 3 0 0 3

The principles of funeral service and its history. A study of the ethical obligations and fundamental requirements involving skill, aptitudes, and qualifications of funeral service personnel. An introductory look at the practice of funeral service and an introduction to the principles of embalming. Prerequisite: None.

FSE 115 Funeral Law 3 0 0 3

The State Statutes, rules and regulatons and applicable statutes of other agencies regulating the funeral profession. Prerequisite: None.

FSE 121 Funeral Service Practices 2 2 0 3

The student is helped to develop a knowledge of funeral service procedure of various religions. A study of the customs and funeral practices that are evident in the United States today is presented, along with architectural differences in churches. Military and fraternal services are also stressed. Prerequisite: None.

FSE 206 Embalming Chemistry 3 2 0 4

Fundamentals of organic and biochemistry. Chemical changes in the human body during life, after death, and during chemical preservation, including disinfection, solutions, toxicology, and embalming fluids. Prerequisite: None.

FSE 209 Introduction to Embalming 0 3 0 1

The student learns basic procedures and skills utilized in the embalming of human remains with special emphasis on laboratory equipment, procedures, and techniques. Prerequisite: None.

FSE 210 Embalming Theory and Practice I 3 0 0 3

A study of the purpose and need for embalming, history of embalming from 4000 B.C., types of death, signs of death, tests for death, post-mortem change, ethics of embalming, laws of decomposition, anatomical guides, anatomical limits, and linear guides. Laboratory demonstrations will expose the student to the human body in autopsy and routine embalming situations. Prerequisite: None.

FSE 211 Embalming Theory and Practice II 3 0 0 3

The topics for study will be case analysis in lecture and task analysis in lab. The tasks or goals to be accomplished are sanitizing and positioning remains, positioning features, mixing of chemical solutions, and actual embalming. Prerequisite: FSE 210.

FSE 212 Embalming Practice I 0 3 0 1

The student participates in the embalming of human remains demonstrating proficiency in each procedure and skill of embalming. Prerequisite: None.

FSE 213 Embalming Practice II 0 3 0 1

The student analyzes each case with which he is involved to determine the embalming techniques to be employed in that particular case. He/She demonstrates proficiency in each procedure and skill of embalming. Prerequisite: FSE 212.

FSE 214 Restorative Arts I 2 4 0 4

Aspects of general art as applied to funeral services. Anatomical modeling; expression; familiarization with tools, materials and techniques of rebuilding human features. Color in cosmetics. Development of special laboratory skills. Prerequisite: None.

FSE 215 Restorative Arts II 2 4 0 4

Terminology of traumatic and pathological conditions frequently restored; recommended sequence for most restorations; legal aspects; the use of photographs; stains and their solvents; materials and techniques used in specific restorations. Prerequisite: FSE 214.

FSE 224 Funeral Home Operarion 3 2 0 4

Outlines all phases of funeral home operation, including but not limited to: choosing and financing a location; building, remodeling or purchasing a funeral home; recruitment and training of personnel; establishment of management policies; selection room planning; methods of merchandising; and general business procedures of a funeral home. Study of religious customs and conducting various types of funerals. Role of the director in communicating funeral values to the public. Prerequisite: None.

FSE 225 Research and Funeral Services 1 3 0 2

Research in a specific area of funeral service with a paper as the objective of the course. Such topics as clergy relations, child and death, medical examiner, vital statistics might be subjects for study. Prerequisite: Permission of Department Chairperson.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

FSE 257 Pathology 4 0 0 4

A general course in pathology to provide the student with a general knowledge of disease processes, with particular emphasis on those diseases that are the major causes of death, so the student will recognize the embalming problems which they present. To provide an understanding of pathological terminology so the student will be able to communicate with members of the medical profession and facilitate the interpretation of the certificates of death. Prerequisite: None.

FSE 268 Funeral Counseling 3 0 0 3

This course is a study of the principles of counseling that will be of assistance to nurses, funeral service directors and others whose work requires some form of formal or informal counseling ability. Objectives of the counseling process, the personality and role of the counselor, and techniques of counseling are studied in depth. Other topics investigated are philosophies of counseling, problems involved in the counseling process and the evaluation of counseling. **(The student should be aware of the fact that one course in counseling will not adequately prepare him or her as a professional counselor.)** Prerequisite: None.

FSE 280 Professional Practicum 1 27 0 10

Provides experience in funeral serviced under the direction of a licensed funeral director and college supervisor. The activities involve the normal professional duties performed in the operation of a funeral home. Students having fulfilled a minimum of one-year apprenticeship in a licensed funeral home may be excused from this phase of the program upon verification by a licensed funeral director. Prerequisite: Permission of Department Chairperson.

FSE 282 Seminar in Funeral Services 1 2 0 2

The student will review each course in the curriculum in preparation for state and national board examinations, and discuss current events in the practice of funeral service. Prerequisite: Permission of the Department Chairperson.

Food Service Courses

FSO 101 Introduction to Food Service 1 0 0 1

Introduction to and history of food service and the outlook for the food service industry including broad objectives and specific goals of training with an investigation of job opportunities and personal qualifications. Prerequisite. None.

FSO 102 Food Preparation I 3 0 6 5

A study of the scientific principles of food preparation and cooking procedures. Included are preparation of salads, stocks, soups, sauces, gravies, and beverages. Prerequisite: None.

FSO 103 Equipment Layout and Design 3 2 0 4

Designed to teach methods of simplifying work through the effective use and care of large and small equipment with emphasis on time and motion economy. Prerequisite: None.

FSO 104 Sanitation and Safety 3 0 0 3

A study of sanitation standards and safety precautions as related to food storage, preparation, and service. Prerequisite: None.

FSO 105 Accounting — Purchasing — Records 3 0 0 3

Basic mathematical skills studied in relation to food purchasing, preparation, accounting and records. Prerequisite: None.

FSO 106 Nutrition I 3 0 0 3

A study of the principles of nutrition using the basic four food groups and the application of these principles to the planning of nutritionally adequate diets; other factors influencing menu planning; refrigeration and storage facilities, availability of seasonal foods, equipment and facilities, employee skills, eye appealing food combinations type of clientele and food service. Prerequisite: None.

FSO 107 Baking I 2 0 6 4

An introduction to the principles of and development of skills in baking. Prerequisite: None.

FSO 108 Personnel Management 3 0 0 3

A study of the job responsibilities and duties of the food service worker; his/her relationship to his/her associates, with emphasis on understanding human behavior; labor policies and legislation; and the importance of self-development in relation to professional responsibility. Prerequisite: PSY 206.

FSO 109 Production Management 3 0 0 3

Use of standardized recipes and portion control, work sheets, score sheets for judging food products, plan of work to improve work methods, and further emphasis on motion economy. Prerequisite: FSO 105.

FSO 110 Controlled Work Experience I 1 0 36 5

Provides a practical introduction to the broad field of food service. Students are evaluated by the instructor as to their performance and abilities with the cooperation of the dietitian, manager, and/or the owner of the food service establishment in their area of specialty. Prerequisite: None.

FSO 111 Seminar I 3 0 0 3

The purpose of this seminar is two-fold: job orientation and evaluation of job experience. Prerequisite: None.

FSO 112 Food Preparation II 2 0 9 5

Emphasis placed on meat analysis and cutting, and on meat, poultry, fish, and shellfish cookery. Prerequisite: FSO 102.

FSO 114 Mixology 3 0 0 3

A course designed to equip a student with the knowledge and ability to prepare drinks served at the beverage bar of hotels, motels, restaurants and resorts. Prerequisites: None.

FSO 117 Baking II 1 0 12 5

The development of artistic skills related to cooking and baking. Prerequisite: FSO 107.

FSO 122 Food Preparation III 1 0 9 4

Emphasis is on whole meal preparation; included are vegetable cookery, preparation of breakfast dishes, and appetizers. Prerequisite: FSO 112.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

FSO 202 Food Preparation IV 3 0 6 5

Emphasis on experimental cookery as related to quality control; study of food standards and specifications. Prerequisite: FSO 122.

FSO 203 Organization and Management 3 0 0 3

A study of the organization structure, the application of the principles of scientific management and the effectiveness of personnel as related to successful food service operation. Prerequisites: FSO 108 and FSO 109.

FSO 204 Food Purchasing 3 0 0 3

Fundamentals of sound food purchasing methods and procedures based on cost control, specifications, quantity, and storage. Prerequisite: FSO 105.

FSO 205 Nutrition II 3 0 0 3

Principles of nutrition as applied to institutional menu planning. Included are school food service (type A lunch), cycle menus, and modified diet planning. Prerequisite: FSO 106.

FSO 206 Financial Management 3 0 0 3

A comprehensive study of financial management related to food service operations to include food, labor and equipment costs, operating and overhead expenses, personnel policies, and records. Prerequisite: FSO 105.

FSO 207 Food Merchandising 2 0 6 4

Emphasis on the art of food preparation and service. Prerequisite: None.

FSO 210 Controlled Work Experience II 1 0 36 5

Students enter paid work experience in their choice of food services under the direction of the instructor and with the cooperation of the employer. Prerequisite: None.

FSO 211 Seminar II 3 0 0 3

Job orientation and overall evaluation of work experience. Prerequisite: None.

FSO 212 Food Preparation V 1 0 6 3

Planning and preparation of modified diets; type A lunch menus. Prerequisite: FSO 202.

History Courses

HIS 104 Western Civilization I 3 0 0 3

This course traces the development of Western Civilization from prehistoric periods to 1300 A.D. Emphasis is placed upon the legacies of ancient Greece and Rome to the world as well as upon the development of national monarchies in Western Europe. Prerequisite: None.

HIS 105 Western Civilization II 3 0 0 3

This course is a survey of Western Civilization from 1300 to 1815. Emphasis is given to the period of the Renaissance, the Protestant Reformation, and the Commercial Revolution. Enlightenment, and the French Revolution. Prerequisite: None.

HIS 106 Western Civilization III 3 0 0 3

This course is a study of Western Civilization from 1815 to the present. The social and economic development of the western world in the period between the Napoleonic Wars and World War I, the period between World War I and World II, and the period since World War II are emphasized. Prerequisite: None.

HIS 201 American History I 3 0 0 3

This course is a survey of American history from the discovery of American to the outbreak of the Civil War. Emphasis is given to the Colonial period, the American Revolution, the development of national institutions, the westward movement, the political economic, and social differences of North and South, and the Civil War. Prerequisite: None.

HIS 202 American History II 3 0 0 3

This course is a study of United States history from the outbreak of the Civil War through World War I. Emphasis is given to the periods of Reconstruction, Industrialization, Imperialism, and World War I. Developments in foreign policy are related to the domestic occurrences in the United States. Prerequisite: None.

HIS 203 American History III 3 0 0 3

This course is a survey of United States history from World War I to the present. Emphasis is given to the periods of the Great Depression, World War II, the Cold War and the social unrest of the 1960's. Developments in foreign policy are related to the domestic occurrences in the United States. Prerequisite: None.

HIS 210 North Carolina History I 3 0 0 3

This course is a study of geographical, political, economic and social conditions existing in North Carolina from the discovery of America through the Civil War period. Particular emphasis is placed on those aspects of development which tended to make North Carolina unique during the colonial period and in the development of basic institutions. Prerequisite: None.

HIS 211 North Carolina History II 3 0 0 3

This course is a study of geographical, political, economic and social conditions existing in North Carolina from the Civil War to the Present. Particular emphasis is placed on those aspects of development which tend to make North Carolina unique during this period. Prerequisite: None (Recommend HIS 210).

Horticulture Courses

HOR 150 General Plant Horticulture 3 2 0 4

A course dealing with horticulture principles and the application of plant science fundamentals to horticultural practices. Prerequisite: None.

HOR 151 Plant Materials 4 2 0 5

A study of a variety of horticultural plants normally produced in greenhouse and nursery operations with emphasis upon the identification of the plant by their characteristics, by common and scientific names, their adaptations to various landscape uses, and their cultural requirements. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

HOR 153 Greenhouse Management 3 2 0 4

A study of the principles involved in the operation of a greenhouse on a commercial basis. Class instruction will be supplemented by student assignments in greenhouse operation and by field trips to observe successful greenhouse operations. Prerequisites: BUS 185, AGR 185, and AGR 170.

HOR 190 Greenhouse Production of Plants and Crops 3 2 0 4

A course dealing with the application of the principles of plant science in the production of plants and crops in the greenhouse. Emphases are placed upon the methods of plant propagation, specific plant requirements, scheduling production operations, and the application of marketing principles and practices. Prerequisite: None.

HOR 200 Landscape Horticulture I 3 4 0 5

A study of basic principles and practices utilized in landscaping in order to better understand the importance of basic planning in development of residential and commercial properties. Prerequisite: HOR 151.

HOR 201 Landscape Horticulture II 3 4 0 5

A study of the principles and practices utilized in landscaping residential and commercial properties. Landscape planning will include the development, cost analysis, and installation of a landscape design. Prerequisites: HOR 151 and HOR 200.

HOR 204 Plant Management Practices 4 2 0 5

A course designed to identify the general principles and practices involved in turf and nursery establishment and management. Emphasis will be given to the appropriate methods available and their use in each type of operation. Prerequisite: BUS 185.

HOR 205 Horticultural Retail Marketing 3 2 0 4

A study of the basic marketing principles with emphasis upon how to operate a small business such as a garden center involved in selling horticultural plants and garden supplies. Students are provided experience in selling as a part of the course, and field trips to observe successful operations. Prerequisite: None.

HOR 228 Plant Diseases & Parasites 3 2 0 4

A study of hoticultural plant pests that occur in nurseries, greenhouses, and garden centers with major emphasis on identificaiton of the pest and determination of the best and most economical control. Prerequisite: None.

HOR 254 Plant Progagation 3 2 0 4

A study of the fundamental principles involved in the production of plants from seed, leaves, stems and other plant parts, including the various techniques that are useful in the propagation of plants. This course includes techniques of production for nursery and greenhouse propagation operations. Prerequisites: HOR 185 and AGR 170.

HOR 258 Horticultural Enterprises 5 2 0 6

A study of selected types of production enterprises as a specialty, such as greenhouse production of vegetable plants, tomatoes or other crops, bedding or pot plants and ornamental plants. The student will be provided experience in analyzing one or more production enterprises to determine what is required for a successful operation. Prerequisite: AGR 170 or HOR 150.

HOR 299 Cooperative Training 1 15 0 6

This course is designed to provide the student with an opportunity to pursue and be involved in, under faculty supervision, work experience in a specialty field. The student may choose employment involving either or a combination of production, processing, manufacturing, distributing, marketing, or inspecting horticultural products, or the provision of a type of horticultural service. Conferences will be held with each student and employer in order to plan a realistic training program and to evaluate the progress the student is making. An objective is to incorporate the student's education into his on-the-job experience program so that he will be better prepared to be successful upon entrance into a job after graduation. Emphasis will be placed upon assuring that the student will be permitted to participate in a variety of job situations, occurring in sequence, which must be performed by an individual in a supervisory position in the particular type of operation. Prerequisite: Minimum of 35 quarter hours of horticulture instruction or permission of Department Chairperson.

Insurance Courses

INS 201 Economic Security and Individual Life Insurance 3 0 0 3

Economic security needs, human behavior, professionalism and ethics in life and health insurance. Individual life, health and annuity contracts. Life insurance programming. Types of insurers, investments, financial statements, risk selection, taxation, and the regulation of companies. Prerequisite: BUS 247.

INS 202 Life Insurance Law and Mathematics 3 0 0 3

Legal aspects of contract formation, policy provisions, assignments, ownership rights, creditor rights, beneficiary designations, and disposition of life insurance proceeds. Also covered is the mathematics of life insurance as related to premiums, reserves, nonforfeiture values, surplus, and dividends. Prerequisite: BUS 247.

INS 203 Group Insurance and Social Insurance 3 0 0 3

Analysis of group life and health insurance, including products, marketing, underwriting, reinsurance, premiums, and reserves. Also, various governmental programs related to the economic problems of death, old age, unemployment, and disability. Prerequisite: BUS 247.

INS 204 Insurance Economics 3 0 0 3

Economic principles, the governmental and banking institutions which have an effect on the national economy, national income, theory and application of price determination, business cycles, money and banking, monetary and fiscal policy, and international trade and finance. Prerequisite: BUS 247.

INS 205 Accounting and Finance 3 0 0 3

Basic accounting principles, including data accumulation systems, income measurement, valuation of assets and liabilities, and financial statement analysis. The accounting process from the recording of a business transaction in the books of account to the final preparation of financial statements. Various sources of short-term, intermediate-term and long-term funds available to business. Prerequisite: BUS 247.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

INS 206 Investments and Family Financial Management 3 0 0 3

Various aspects of investment principles and their application to family finance. Yields, limited income securities, investment markets, and valuation of common stock. Also family budgeting, property and liability insurance, mutual funds, variable annuities, and aspects of other investment media. Prerequisite: BUS 247.

INS 207 Income Taxation 3 0 0 3

The federal income tax system with particular reference to the taxation of life insurance and annuities. The income taxation of individuals, sole proprietorships, partnerships, corporations, trusts, and estates. Prerequisite: BUS 247.

INS 208 Pension Planning 3 0 0 3

Basic features of pension plans. Cost factors, funding instruments, and tax considerations involved in private pensions, profit-sharing plans, and tax-deferred annuities. Also, thrift and savings plans and plans for the self-employed. Effect of Employees Retirement Income Security Act of 1974 on covered areas. Prerequisite: BUS 247.

INS 209 Business Insurance 3 0 0 3

Business uses of life and health insurance, including proprietorship, partnership, and corporation continuation problems and their solutions through the use of buy-sell agreements properly funded to preserve and distribute business values. Other business uses of life and health insurance, such as key man insurance, non-qualified deferred compensation plans, and split-dollar plans. Also covered are corporate recapitalizations, professional and business uses of property and liability insurance. Prerequisite: BUS 247.

INS 210 Estate Planning and Taxation 3 0 0 3

Estate and tax planning, emphasizing the nature, valuation, disposition, administration, and taxation of property. The use of revocable and irrevocable trusts, testamentary trusts, life insurance, powers of appointment, wills, lifetime gifts, and the marital deduction. Also, the role of life insurance in minimizing the financial problems of the estate owner. Prerequisite: BUS 247.

Industrial Management Courses

ISC 102 Industrial Safety 2 2 0 3

Problems of accidents and fire in industry. Management and supervisory responsibility for fire and accident prevention. Additional topics cover accident reports and the supervisor; good housekeeping and fire prevention; machine guarding and personnel protective equipment; State industrial accident code and fire regulations; the first aid department and the line of supervisory responsibility; job instruction and safety instruction; company rules and enforcement; use of safety committees; workman's compensation; and advertising and promoting a good safety and fire prevention program. Special topics of current interest relating to safety legislation will be reviewed. Prerequisite: None.

ISC 120 Principles of Industrial Management 3 2 0 4

A study in depth of the organizational and functional aspects of line and line-staff organizations with emphasis on relationships, delegation of authority and assigned responsibilities. Specific emphasis is placed on line-staff relationships, functional authority, methods of control, problem solving, and the establishment of management goals and controls. Each student will be required to develop an organizational structure (under a single manager concept) for a hypothetical business of their choosing. Prerequisite: None.

ISC 202 Quality Control 3 2 0 4

Principles and techniques of quality control and cost saving. Organization and procedure for efficient quality control. Functions, responsibilities, structure, costs, reports, records, personnel and vendor-customer relationships in quality control. Sampling inspections, process control and tests for significance. Prerequisite: None.

ISC 204 Value Analysis 3 0 0 3

The modern concept of value and value applications. This course will provide the student an opportunity to study products, processes, and systems with the purpose of identifying function and unnecessary costs. The objective of the concepts and techniques of value analysis is to develop effectiveness in identifying and removing unnecessary cost by use of sound decision criteria. Prerequisite: None.

ISC 210 Job Analysis & Evaluation 2 2 0 3

This study is based on product studies as well as personnel and wage programs. The course utilizes the study of product design, value analysis, materials, and processes as an intricate part of productive procedures. Prerequisite: ISC 240.

ISC 211 Work Measurement 5 0 0 5

This course is designed to give students a broad concept of work measurement as a management tool. It includes a study of methods and techniques utilizing flow and process charts, multiple activity charts, operations charts, flow diagrams, work sampling, personnel and work scheduling, standards development, and time and motion data utilization. Students will be afforded laboratory experiences to develop proficiency in the application of the aforementioned management tools. The preparation of written analyses, based on the findings during laboratory periods, will be an integral part of the course. Prerequisite: ISC 210.

ISC 220 Management Problems 3 0 0 3

A study of social conflict between corporations and various segments of society. Includes dilemmas of management conflict in actual social issues of today's world. Areas of environmental conservation, government, owners, individuals, and special interest impact upon management are explored. Case studies are utilized. Prerequisite: BUS 234, second year standing or consent of instructor.

ISC 221 Introduction to Industrial Engineering 3 2 0 4

A practical study of the functions of the industrial engineer. Motion and time studies, predetermined time systems, and their bases for establishing remuneration and incentive are surveyed. Effective plant layout, material handling, and packaging are evaluated by motion and time study principles. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

ISC 231 Manufacturing Cycles 5 0 0 5

A study in depth of the following areas: purchasing and distribution, consumption patterns, channels of distribution, marketing of consumer goods, shopping, specialty, agricultural and industrial goods, service marketing, functional middlemen, speculation and hedging, wholesaling, shipping and warehousing, exporting and trade movements, standardization and grading, pricing, government regulation of competition, sales promotional activities, and merchandising practices. Prerequisite: None.

ISC 232 Industrial Dynamics 5 0 0 5

Organizational behavior examined by both theoretical and applicatory approaches. Theories applications and simulations of productivity, creativity, time efficiency, and motivation are examined emphasizing their effect upon the dynamics of the industrial environment. Prerequisite: ISC 120 or the consent of the curriculum advisor.

ISC 235 Industrial Management Practicum 1 9 0 4

A study of the problems facing local industry with plant visitations and interviews. The student will summarize his findings in written reports to include both problem areas and proposed solutions. Prerequisite: Completion of all work from the first through the fifth quarters or consent of Department Chairperson.

ISC 240 Industrial Relations 2 2 0 3

Study of the effective development and utilization of manpower by study of present day procurement, selection, training, employee maintenance functions and case studies of typical industrial situations. Application of material learned is a very important part of this course. Prerequisite: ISC 120 or consent of instructor.

Law Enforcement – Criminal Justice Courses

LCJ 101 Introduction to Law Enforcement and Criminal Justice 5 0 0 5

A general couse designed to familiarize the student with a philosophy and history of law enforcement-criminal justice, including its legal limitations in a democratic republic, a survey of the primary duties and responsibilities of the various law enforcement-criminal justice agencies, a delineation of the basic processes of justice, and evaluation of law enforcement's current position, and an orientation relative to law enforcement-criminal justice as a profession. Prerequisite: None.

LCJ 102 Constitutional Law 5 0 0 5

Survey of the important developments relating to judicial review of legislative action, problems of federalism, safeguards to life, liberty and property, and protection of civil and political rights and their relationship to the criminal justice system. Prerequisite: None.

LCJ 103 Introduction to Criminology 5 0 0 5

Study of deviant behavior and current criminological theories, with emphasis on police applications, crime prevention, and the phenomena of crime as it relates to the community. Prerequisites: LCJ 101 and SOC 102 or permission of Advisor.

LCJ 104 Police Organization and Administration 5 0 0 5

An introduction to the principles of organization and administration including their application to field services such as vice control, traffic patrol, criminal investigation, and juvenile division. A discussion of the service functions: training communications, records, property maintenance and miscellaneous services. Prerequisite: LCJ 101 or consent of instructor.

LCJ 108 Police Patrol and Field Interrogation 3 0 0 3

The responsibilities, powers and duties of uniformed policemen; patrol procedure, field interrogation; mechanics of arrest; transportation of prisoners; crime prevention functions, etc.; training, communications, records, property maintenance and miscellaneous services. Prerequisite: LCJ 101 or consent of instructor.

LCJ 201 Traffic Planning and Management 4 2 0 5

A study which covers the history of the traffic enforcement problem as it exists today. Attention will be given to the 3 E's and legislation, the organization of the traffic unit, the responsibilities to the traffic function of the various units within the law enforcement agency, enforcement tactics, evaluation of the traffic program effectiveness, and the allocation of men and materials. Prerequisite: LCJ 101 or permission of instructor.

LCJ 202 Court Systems and Administration 4 2 0 5

A study of the organization, operation and administration of the American court systems to include state and federal courts of original and appellate jurisdiction. Court processes and administrative procedures will be thoroughly examined by the student. In addition, an examination will be made of the role of the court administrator in the judicial process, including juror selection, case calendaring, docket preparation, administrative procedures and records. During the course, the student will identify, analyze, and offer possible solutions to the various problems that preclude effective and efficient administration of the courts. Each student will attend actual court proceedings; observe various court personnel and judicial officials. Prerequisites: LCJ 101 and LCJ 102.

LCJ 203 Criminal Law 5 0 0 5

Designed to present a history of the development and philosophy of the criminal law, the theory and practice of the criminalization decision, the principles of liability, elements of crimes and a review of defenses. Special emphasis will be placed upon North Carolina General Statutes, specifically Chapter 14. Prerequisite: LCJ 102.

LCJ 205 Criminal Evidence and Procedure 5 0 0 5

A study of the nature and admissibility of evidence, its role in determining guilt or innocence in the prosecution of offenders, the kinds and degrees of evidence, principles of exclusion and selection, and burden of proof. Instruction is given in the identification, collection, preservation, and control of evidence. North Carolina pretrial criminal procedures are covered in depth and the judicial system of North Carolina is explained. Prerequisite: LCJ 102 or permission of instructor.

LCJ 206 Special Problems in Law Enforcement 3 0 0 3

An analysis of contemporary problems that affect the police in America today. Topics will include the police role in a democracy, ethnic tensions and the police, police unionization, police professionalization, police corruption, civil disturbances, organized crime, civil disobedience, and police misconduct. Prerequisite: LCJ 104 or permission of instructor.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
LCJ 207 Interview & Interrogation — Confessions and Admissions	3	0	0	3

Instruction will be given in the various sources of information available to law enforcement agencies and in the techniques used in interviewing and interrogating. Prerequisite: LCJ 101 or consent of instructor.

LCJ 208 Identification Techniques	4	2	0	5

The student will study various identification methods and how they evolved into the present-day systems. Techniques for lifting latent prints and taking rolled impressions will be developed through lab practice. Instruction will be given in the more popular ten finger and single finger-print classification systems. An introduction will be given to the process of comparing latent prints and rolled impressions, and in preparing them for courtroom presentation. Instruction will also be given in other methods of identificaiton, such as dental, voice, personal habits, physical characteristics, modus operandi, etc. Prerequisite: LCJ 210 or permission of Instructor.

LCJ 209 Juvenile Justice Planning and Administration	5	0	0	5

An introduction to the cause and treatment of juvenile delinquency. The organization, functions, and jurisdictions of juvenile agencies; the processing and detention of juveniles, juvenile case disposition, juvenile status and court procedures and evaluation of methods in delinquency control. Special attention will be given to forms of family, church and community resources bearing on juvenile adjustment and preventative measures. Prerequisite: LCJ 103 or permission of instructor.

LCJ 210 Criminal Investigations I	4	2	0	5

This course introduces the student to the fundamentals of investigation: crime scene search; crime scene recording; collection and preservation of evidence; case preparation and court presentation; and the investigation of specific offenses such as arson, narcotics, sex, larceny, burglary, robbery and homicide. Prerequisite: LCJ 101 or consent of instructor.

LCJ 211 Police Community Relations (PCR)	2	4	0	4

A course designed to create an awareness of the need for good police and community relations; problems confronting police personnel in achieving this goal; solutions to these problems, including a survey of non-police agencies dealing with police problems and how they can best work together to achieve their common goals. A community related project is initiated and completed during the period of this course. Prerequisite: LCJ 101 or permission of instructor.

LCJ 212 Corrections & Rehabilitation	3	0	0	3

A study of corrections and rehabilitation as functional aspects of the system of criminal justice, historical perspectives, contemporary philosophies and the treatment of offenders in all elements of a modern correctional system. Prerequisite: LCJ 103.

LCJ 213 Firearms & Defensive Tactics 4 2 0 5

The course is designed to help the student develop an understanding of the need, use, and respect for all types of firearms. Range practice is given in the familiarization and use of the handgun, rifle, shotgun, etc., with a special emphasis on the development of proficiency in the use of service revolvers. Instruction also is given in riot control use of non-lethal weapons and defensive methods used in handling arrested persons. Prerequisite: Permission of instructor.

LCJ 214 Criminal Investigations II 4 2 0 5

A general survey of the methods and techniques used in modern scientific investigation of crime with emphasis upon the practical use of these methods by the students. Laboratory techniques will be demonstrated and the student will participate in actual use of the scientific equipment. Prerequisite: LCJ 210 or consent of instructor.

LCJ 215 Law Enforcement Photography 3 2 0 4

A study of photographic equipment and its applications to the field of law enforcement. Instruction is given in all phases of the photographic process including crime scene, surveillance, macro and micro photography, including the development of negatives and prints. The student develops techniques in the use of different kinds of cameras and other photographic equipment through lab practice. Prerequisite: LCJ 210.

LCJ 216 Police Supervision 3 0 0 3

A study of the principles, concepts, and techniques employed in the supervision of police personnel and operations. Prerequisite: LCJ 104 or permission of instructor.

LCJ 217 Current Law Studies 3 0 0 3

An advanced study of criminal law with primary emphasis placed on those laws currently being used most frequently by law enforcement and criminal justice officials. The content of the course is flexible and is determined by the current needs. Prerequisite: LCJ 203.

LCJ 218 Vice Control and Investigation 3 0 0 3

Code and case law dealing with vice; detection and suppression; apprehension and prosecution of violators; special consideration of laws dealing with gambling, prostitution, liquor, narcotics and sex crimes. Prerequisites: LCJ 102 and LCJ 210 or permission of instructor.

LCJ 219 Introduction to Criminalistics 4 2 0 5

A survey of the various sciences and their application to the field of law enforcement. A study of the theory and techniques used in the more common forensic applications, such as blood grouping, blood alcohol, luminol, drug analysis, flammable accelerants, explosives, serial number restoration, firearms, primer residue tests, etc. Prerequisites: LCJ 210 and LCJ 214 or consent of instructor.

LCJ 220 Crime Prevention and Control 3 0 0 3

A comprehensive survey of theories and concepts of crime and delinquency causation, prevention, and control. Programs to prevent unlawful behavior from occurring or minimizing such behavior in both adult and juvenile circles are analyzed in depth, relative to evaluating their success in minimizing police intervention. Prerequisite: LCJ 209 or permission of instructor.

Paralegal Courses

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
LEG 101 Introduction to Paralegalism	3	0	0	3

An outline of the curriculum and objectives of the paralegal program; legal vocabulary; task descriptions of various paralegal jobs; professional ethics; licensing, certification, and accrediting in the profession; and professional organizations. The course requires one hour per week be spent observing at court. Prerequisite: None.

LEG 105 Partnership and Corporate Law	2	0	0	2

This course introduces the legal considerations relevant to the creation, organization, operation, and termination of the proprietary, partnership, and corporate forms of business enterprise; coverage of management's powers, duties and liabilities under each respective organization. Prerequisite: None.

LEG 108 Seminar in Administrative and Governmental Law	3	0	0	3

The law governing the operation of administrative officers, boards, bureaus and commissions; their procedure; their exercise of powers which are legislative and judicial in nature; their place in the legal system. Prerequisite: None.

LEG 113 Family Law	3	2	0	4

The purpose of this course is to train paralegals to handle competently separations, divorces, annulments, adoptions, and bastardy proceedings from initial interview, through data collection and drafting of instruments, giving notice, filing and serving documents, and setting hearing dates, to final disposition. The substantive law will be taught and then applied in the laboratory portion of the course. Prerequisite: None.

LEG 115 Poverty Law	3	0	0	3

A study of welfare regulations, social security eligibility and regulations, unemployment compensation, housing and the poor, racial discrimination in employment and consumerism and the poor. Prerequisite: None.

LEG 117 Seminar in Tort Law	3	0	0	3

This course will cover intentional torts, e.g. battery, assault, false imprisonment, torts to property; and defenses to intentional torts; negligence and the defenses to negligence; strict liability; nuisances; misrepresentation; defamation, wrongful death; and tort immunity. Prerequisite: None.

LEG 132 Legal Bibliography and Library Management	3	6	0	6

Instruction in the proper methods of utilizing legal research materials; proper citation of authority; shepardization; synthesis of decisions; sources of legal research; preparation of legal memoranda and trial briefs. The study of organizing and maintaining a current law library, including selecting, ordering, cataloging, filing and locating current literature and publications. Prerequisite: None.

LEG 135 Legal Systems and Litigation Preparation **5 0 0 5**

A study of jurisdiction of State and Federal Courts; acquisition of jurisdiction over parties and subject matter; venue; pleading and related problems under the North Carolina and Federal Civil Rules of Procedure, including real party in interest; splitting actions; joinder of parties and causes of action; special joinder devices; forms of pleadings and motions. Lab includes the mechanics of preparation of a lawsuit for trial, from the drafting and filing of the initial pleading to final judgment and appeal. Prerequisite: None.

LEG 140 Bankruptcy and Collections **2 0 0 2**

A study of the current laws and procedures governing bankruptcy (voluntary and involuntary), with attention to a creditor's rights and to trustee's duties and powers. Chapters VII and XIII of the Bankruptcy Act will be discussed and appropriate forms completed. Other collection procedures will be mentioned briefly. Prerequisite: None.

LEG 204 Investigation **5 0 0 5**

In-depth study of investigating civil and criminal cases, interviewing, taking statements, collecting data, and the orderly assemblage thereof for the attorney's use. This course includes a study of motions, bail and pre-trial release, locating and interviewing witnesses, including expert witnesses, investigating, crime scene sketching, evaluating evidence and determining its sufficiency and admissibility especially with regard to the 4th, 5th, and 6th Amendments. Prerequisite: None.

LEG 214 Property I **3 0 0 3**

This course is a study in ownership of and power over land; of land transfers, in whole and in part, absolute and conditional, present and future; of retained powers of ownerships; and of the documents and procedures necessary to establish an interest in land. Prerequisite: None.

LEG 215 Property II — Title Search **2 4 0 4**

Includes the study of the preparation of simple contracts for sale of real estate; ordering title search; examination of title and preparing simple titles; ordering title insurance; preparation of deeds, bonds, notes, mortgages, and affidavits of title; preparation of settlements sheets and holding the closing conference. Also, a study is made 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 for abstracting title information from public records and summaries thereof and various typical problems and errors which may render a title unmarketable are included. Prerequisite: LEG 214.

LEG 217 Criminal Law, Procedure and Evidence **4 0 0 4**

A study of the elements of crimes in North Carolina and defenses to these crimes. N.C. General Statutes Chapter 15A on criminal procedure will be studied and a case's progress through the courts traced with emphasis placed on the rules of evidence. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

LEG 224 Wills, Probate, and Estates 3 2 0 4

A study of topics including probate and administration of wills; the operation and revocation of wills; descent and distribution in case of intestacy; construction of both administrative and dispositive provisions of wills and trust agreements to facilitate the most advantageous transfer of estate assets. Prerequisites: None. Suggested LEG 135 and LEG 214.

LEG 225 Law Office Management 3 2 0 4

The study of types of law practice; setting up and maintaining systems within the office including tickler, timekeeping, client file, and bookkeeping systems; maintaining ethical standards and professional responsibility; selecting and supervising secretarial personnel; billing and upgrading practice. Lab experiences include setting up a tickler reminder system; surveying the distribution of types of law practice in this area, and equipment in typical law offices; using the **Safeguard** or **Sans-Copy** office system materials; drafting a resume; and preparing a major project on time-flow, case progress, and statutes of limitations. Prerequisite: None.

LEG 226 Consumer Protection 3 0 0 3

Government regulations of dangerous products; the consumer and experimentation, advertising and directions for use; economic pressures in regulation; civil action for harm from defective or dangerous products; burden of risk; injury and remedy. Prerequisite: None.

LEG 228 Seminar in Constitutional Law 3 0 0 3

A study of judicial, legislative and executive power as directed by the United States Constitution and its interpretation by the three branches of government; the federal system-intergovernmental relations; regulation and taxation of commerce; and protection of individual liberties: Limitations on the exercise of governmental power. Prerequisite: None.

LEG 230 Law of Trusts 2 0 0 2

The historical background, definition and classification of trusts, including inter vivos, testamentary, express, resulting, constructive, spendthrift and other prospective trusts; nature and operation of trusts whether written or oral, active or passive, voluntary or implied; the title, rights, powers, duties, and liabilities of trustees; administration of trusts, including management, deposits, investments, sales, transfers, and gifts of trust property. Prerequisite: None.

LEG 290 Internship and Seminar 2 24 0 10

Students work in law firms, in the Public Defender's or District Attorney's offices, and similar settings four full days per week "on-the-job" training (gratis) under close attorney supervision; they keep a log of activities attempted and of successes. The supervising teacher confers weekly with the supervising attorney, office staff, and the paralegal. The paralegal also returns to campus one day per week for a seminar to improve the curriculum in general and the internship in particular, and to pool common learning experiences of the past week. Prerequisite: All other law courses in Paralegal Curriculum (minimum 45 LEG hours).

Masonry Courses

MAS 1101 Bricklaying 5 0 15 10

This course is designed to study the origin, history and manufacture of brick. We study the development and use of bricks and also the various processes involved in the manufacture of them. Students are taught how to select and care for the mason tools that are required to be used. They are next introduced to the mortar-making equipment and how it is used, also the properties and proportions of mixing. Prerequisite: None.

MAS 1102 Bricklaying 5 0 15 10

The students learn the placing of materials in reference to the working areas, so as to conserve time and energy. The students learn by demonstrations to pick up and spread or 'string' mortar properly and to lay the brick in place in the proper position. Prerequisite: MAS 1101.

MAS 1103 General Masonry I 5 0 15 10

The students are instructed in bonds, patterns, types of walls and why they are used, also the purpose they serve. Prerequisite: MAS 1102.

MAS 1104 General Masonry II 5 0 15 10

The students layout their own work with minor instructions, recall and relate the things learned previously and develop the confidence to undertake some of the more complex assigned tasks, such as laying fireplaces, steps, etc. Prerequisite: MAS 1103.

MAS 1105 Concrete Masonry 1 0 3 2

This course gives the student more knowledge and skill in the construction industry and prepares him for more job opportunities in the field of the construction industry. Prerequisite: None.

MAS 1113 Masonry Estimating 3 0 3 4

This course teaches the student how to estimate the amount of material, the cost of the material, the labor cost, percentages of profit and loss, taxes, insurance, overhead expenses, etc. The basic requirement for this course is a good understanding of mathematical solutions to problems. Prerequisite: MAS 1103.

Mathematics Courses

MAT 50 General Mathematics 6 4 0 8

This course improves the mathematical background of those high school graduates who need either to learn or to review the basic facts and techniques that are normally covered in a general mathematics course. The course includes the fundamental mathematical operations of addition, subtraction, multiplication, and division using whole numbers. The meaning and use of both common fractions and decimal fractions, as well as the fundamental mathematical operations using both types of fractions, are included. Emphasis is on practical applications using fundamental mathematical principles. Prerequisite: None.

MAT 91 Basic Math I 3 2 0 4

The meaning of number and numerals. Reading numerals. Operations with whole numbers: addition, subtraction, multiplication, division. Prime and composite numbers. Factors and multiples of numbers. Common fractions. Decimal fractions. Relationship between whole numbers, common fractions, and decimal fractions. Practical problems illustrating each operation. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

MAT 92 Basic Math II 3 2 0 4

The meaning of per cent. Relationship between per cent, fractions, and decimals. Computing percentages, principal amounts and rates. Squares and square roots. Numbers in various bases — expanded notation. Basic geometry of lines. Measurements and scales. Planes and space — Right triangles — Indirect measurement. Numerical trigonometry of right triangles. Prerequisite: MAT 91 or equivalent.

MAT 93 Basic Math III 3 2 0 4

The meaning and measurements of angles. Reading and drawing angles. Application of angles. Measurement of areas, volumes, weight, time and speed. Metric system. Introduction to basic algebra. Prerequisite: MAT 92 or equivalent.

MAT 94 Pre-Algebra 3 2 0 4

A review of arithmetic, the number system, operations with whole numbers, addition, subtraction, multiplication, division, common fractions, decimal fractions, percentages, powers and roots, metric system, perimeters and areas, the right triangle, other triangles, the circle, areas and volumes of rectangular solids, cylinders, pyramids, cones, spheres, and signed numbers. Prerequisite: None.

MAT 95 Algebra I 3 2 0 4

Basic concepts and operations of algebra; linear equations and inequalities; graphing and linear systems; exponents and polynomials; factoring. Prerequisite: MAT 94 or equivalent arithmetic courses.

MAT 96 Algebra II 3 2 0 4

A continuation of MAT 95. Rational and radical expressions; quadratic equations; complex numbers; graphs of linear and quadratic functions; graphs of linear inequalities; graphs and inverse variation. Prerequisite: MAT 95 or equivalent Algebra I course.

MAT 97 Algebra III/Trigonometry 3 2 0 4

MAT 97 provides opportunity for the student to apply fundamental algebraic concepts to technical engineering problems. It permits the student to investigate and employ the concept of function and its applications to technical problems, and it introduces the student to the trigonometric functions and their applications. Prerequisites: MAT 95 and MAT 96 or two years of algebra.

MAT 98 Mathematics of Dosages and Solutions 3 0 0 3

This course is designed for the student entering the Associate Degree Nursing Program. It enables the student to review fundamental mathematical concepts and provides opportunity for the student to apply these concepts in the calculation of appropriate dosages. The course also provides opportunity for the student to develop skill in working with the metric and apothecary systems. Prerequisite: Permission of instructor.

MAT 101 Technical Mathematics I 5 0 0 5

The real number system is developed as an extension of natural numbers. Fundamental algebraic operations, the rectangular coordinate system, factoring, and fractions are introduced along with other methods of solving systems of equations in two and three unknowns. The fundamental trigonometric concepts and operations are introduced and used in the solution of right and oblique triangles. Vectors and complex numbers are introduced with special emphasis on the j-operator. Practical problems are used to apply the principles studied. Prerequisites: MAT 96 and MAT 97 or equivalent courses passed with average or better grade.

MAT 102 Technical Mathematics II 5 0 0 5

A continuation of MAT 101. Advanced algebraic and trigonometric topics to include determinants, logarithms, graphs of the trigonometric functions, quadratic equations, equations of higher degree, inequalities and variation. Prerequisite: MAT 101.

MAT 103 Technical Mathematics III 5 0 0 5

The fundamental concepts of analytical geometry, differential and integral calculus are introduced. Topics included are progressions and the binomial theorem, graphing techniques, geometric and algebraic interpretation of the derivative, differentials, rate of change, the integral and basic integration techniques. Application of these concepts to practical situations is stressed. Prerequisite: MAT 102.

MAT 105 Algebra and Trigonometry 5 0 0 5

Linear and quadratic equations and inequalities, linear and quadratic functions, graphics; trigonometric functions and their applications to triangles and vectors; polynomial and rational functions. Prerequisite: Two years of Algebra or equivalent. (MAT 95 and MAT 96).

MAT 106 Electronic Data Processing Math I 5 0 0 5

The real number system is developed. Characteristics of decimal numbers in other bases are examined. Binary arithmetic is studied. The fundamental operations of algebra, linear and nonlinear equations and functions, linear inequalities, and graphical solutions to linear programming problems are discussed. Emphasis throughout the course is placed on the orderly procedures in problem solving. Prerequisite: Two years of Algebra or equivalent (MAT 95 and MAT 96).

MAT 108 College Mathematics 5 0 0 5

Math 108 places emphasis on concepts and principles not on manipulative skills. The study of set concepts, set operations and mathematical logic is intended to provide the student with a conceptual basis for the subsequent investigation of the structure of mathematical systems with emphasis on the real number system. The introductions to Algebra and to probability theory provide opportunity for application of the concepts and principles developed earlier in the course. Prerequisite: One year of algebra or equivalent.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

MAT 109 College Algebra I 5 0 0 5

MAT 209 presents to the student opportunity to develop a conceptual approach to the principles of algebra while concurrently strengthening his manipulative skill in algebraic computation. A balance between abstract theory and manipulative drill is maintained. The course is equally suited for the student who intends it to be a terminal course in college mathematics and for the student who requires an understanding of the principles of algebra in order to succeed in more advanced mathematics courses. Prerequisite: Two years of algebra or equivalent (MAT 95 and MAT 96).

MAT 110 Business Mathematics 3 2 0 4

Business Mathematics is a course of study designed to introduce business students to the mathematics necessary for the understanding of American business. In addition to practical business applications, business forms and terminology are used extensively to provide a strong business background. Prerequisite: None.

MAT 111 College Trigonometry 5 0 0 5

Using the concept of function, this course aims to develop the analytical aspects of trigonometry and to apply trigonometric principles in the solution of problems. Prerequisite: Two years of algebra and permission of instructor, or MAT 109.

MAT 112 College Algebra II 5 0 0 5

MAT 112 is the second in a sequence of two college algebra courses, following MAT 109. Algebraic theory and concepts are developed concurrently with manipulative skill. The course is designed for the student who desires to extend his knowledge of algebra and is well suited for the student who intends to study calculus. Prerequisite: MAT 109.

MAT 121 Elementary Technical Mathematics for Civil and Environmental Engineering 5 0 0 5

Designed for the students in the Civil and Environmental Engineering Technology, MAT 121 presents the fundamental concepts of algebra and trigonometry which will enable the student to combine algebraic expressions, to solve and graph linear equations, to interpret and use vectors, to solve triangles, and to use radian measure. Prerequisites: MAT 95, MAT 96, and MAT 97 or equivalent courses passed with average or better grade.

MAT 122 Basic Technical Mathematics for Civil and Environmental Engineering 5 0 0 5

A continuation of MAT 121. Quadratic equations. Exponential and logarithmic functions. Variation and basic statistics. Emphasis is on applications to technical engineering problems. Prerequisite: MAT 121.

MAT 123 Intermediate Technical Mathematics for Civil and Environmental Engineering 5 0 0 5

A continuation of MAT 122. Systems of linear equations. Equations of higher degree. Plane analytic geometry. Emphasis on applications to technical engineering problems. Prerequisite: MAT 122.

MAT 201 Calculus I 5 0 0 5

A brief study is made of the real numbers along with an introduction to analytical geometry. The concept of a function is introduced and a thorough study is made of limits and continuity. A thorough study is made of the concept of the derivative and its applications. Prerequisites: Two years of algebra and one year of trigonometry and permission of instructor, or MAT 109 and MAT 111.

MAT 202 Calculus II 5 0 0 5

The definite integral is introduced and studied in detail. Particular attention is given to the Fundamental Theorem of calculus along with applications of the definite integral. The logarithmic and exponential functions are introduced and studied in relation to the derivative and the definite integral. Prerequisite: MAT 201.

MAT 203 Calculus III 5 0 0 5

A review is made of trigonometry and then the derivative and definite integral of the trigonometric functons are studied. Major emphasis is placed on the study of techniques of integration. Polar coordinates are introduced and studied. Prerequisite: MAT 202.

MAT 204 Calculus IV 5 0 0 5

The concept of the indefinite integral is introduced and studied and a study is made of indeterminate forms. Taylor's formula is studied and the concept of an infinite series is introduced and studied in detail. Prerequisite: MAT 203.

MAT 286 Technical Mathematics IV 3 0 0 3

A continuation of MAT 103 to include graphs and derivatives of the trigonometric functions, exponential and logarithmic differentiation and integration, polar and parametric equations, and mathematical series. Emphasis is placed on electronic problem solving. Prerequisite: MAT 103.

MAT 1101 Vocational Mathematics I 3 2 0 4

Basic mathematical concepts and principles are developed and used to compute required data necessary in the vocational fields. Solutions of practical problems. Prerequisite: None.

MAT 1102 Vocational Algebra 3 2 0 4

Basic concepts and operations of algebra: algebraic operations; addition, subtraction, multiplication and division; fractions, letter representation, grouping, factoring, ratio and proportions, variation; graphical and algebraic solution of first degree equations; solution of simultaneous equations by addition and subtraction, substitution, graphing, and exponents. Prerequisite: MAT 1101 or equivalent.

MAT 1103 Geometry 3 0 0 3

Fundamental properties and definitions; plane and solid geometric figures, selected general theorems, geometric construction of lines, angles and plane figures. Areas of plane figures, volumes of solids. Geometric principles as applied to shop and drafting work. Prerequisite: MAT 1101 or equivalent.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

MAT 1104 Vocational Trigonometry 3 2 0 4

MAT 1104 applies trigonometric concepts to practical drafting and shop problems. Concepts studied include definition and measurement of angles, the trigonometric functions with application to the angle as a central angle of a circle and as an angle of a triangle, the Pythagorean Theorem, the law of sines, and the law of cosines. These concepts are then used in the solution of right and oblique triangles, the graphs of the trigonometric functions, and in the solution of trigonometric equations. Prerequisite: MAT 1102.

MAT 1105 Mathematics for Nurses 3 0 0 3

Review of fundamental operations with numbers, whole numbers, common fractions, decimal fractions, roman numerals, percentage, proportion; applications to nursing procedures: Apothecaries' system, metric system, household systems, percentage strength, ratio strength, finding the amount of pure drugs and tablets, working with solutions, pediatric dosages, dosage by division of tablets, calculation of doses in minims not exact multiples of five. Prerequisite: None.

MAT 1110 Math For Building Trades 3 2 0 4

Basic concepts of arithmetric: addition, subtraction, multiplication, and division; fractions and decimals; percentage. Basic concepts of algebra: signs and symbols, addition, subtraction, multiplications, and division, equations; ratio and proportion; formulas. Basic concepts of geometry: principles of linear, angular, circular, surface and volume measurement. Application of these basic mathematical concepts of the carpentry, electrical, masonry, and plumbing trades. Prerequisite: None.

MAT 1116 Mathematics for Plumbers 3 2 0 4

To provide the student with a base of mathematical skills necessary for the layout, measurement, and computation of pipe lengths; and for the computation of volumes, pressures and capacities of water tanks and pipes. Prerequisite: None.

MAT 1123 Machinist Mathematics I 3 2 0 4

Fundamental geometric concepts and construction of plane and solid figures, surface and volume measurements, and related problems; introduction to trigonometry of the right triangle. Introduces gear ratios, lead screw and indexing problems with emphasis on application to the machine shop. Practical applications and problems furnish the trainee with experience in geometric propositions. Prerequisite: MAT 1102.

MAT 1151 Trigonometry I 3 0 0 3

Definitions of the trigonometric functions; functional relationships: use of tables, including interpolation; solutions of right triangles; solutions of oblique triangles; applications in depth. Prerequisite: MAT 1180 or equivalent.

MAT 1152 Trigonometry II 3 0 0 3

The fundamentals of solid geometry and the trigonometry of compound angles. Problems solving from pictoral and orthographic drawings of compound angles, angular holes, tilting angles, and angles of rotation. Prerequisite: MAT 1151.

MAT 1180 Machinist Mathematics II 3 2 0 4

Brief review of geometric concepts with practical applications related to shop problems. Trigonometry of the right triangle. Trigonometry of oblique triangles through the use of the Law of Sines and the Law of Cosines. Emphasis on problems and practical application using the trigonometric principles. Prerequisite: MAT 1123.

Mechanical/Machine Shop Courses

MEC 96 Shop Practice 2 0 3 3

Brief overview of machines that are used in the machine shop. Deals primarily with their identification, nomenclature of machine, elementary operation of the lathe, drill press, grinder, and milling machine. Simple project will be included using this equipment. Prerequisite: None.

MEC 1101 Machine Shop Theory and Practice 3 0 12 7

An introduction to the machinist trade and the potential it holds for the craftsman. Deals primarily with the identification, care and use of basic hand tools and precision measuring instruments. Elementary layout procedures and processes of lathe, drill press, grinding (off-hand) and milling machines will be introduced both in theory and in practice. Prerequisite: None.

MEC 1102 Machine Shop Theory and Practice 3 0 8 6

Advanced operations in layout tools and procedures, power sawing, drill press, surface grinder, milling machine and shaper. The student will be introduced to the basic operations on the cylindrical grinder and will select projects encompassing all the operations, tools and procedures thus far used and those to be stressed throughout the course. Prerequisite: MEC 1101.

MEC 1103 Machine Shop Theory and Practice 3 0 8 6

Advanced work on the engine lathe, turning, boring and threading machines, grinders, milling machine and shaper. Introduction to basic indexing and terminology with additional processes on calculating, cutting and measuring of spur, helical, and worn gears and wheels. The trainee will use precision tools and measuring instruments such as vernier height gages, protractors, comparators, etc. Basic exercises will be given on the turret lathe and on the tool and cutter grinder. Prerequisite: MEC 1102.

MEC 1104 Structure of Metals 3 2 0 4

A practical approach to metals, their structure, markings, manufacturing, classifications and uses. Interpretation of properties and specifications of metals by use of manuals, catalogs, charts, etc. The alloying in different metals. Prerequisite: None.

MEC 1105 Machine Shop Theory and Practice 3 0 9 6

Development of class projects using previously learned procedures in planning, blueprint reading, machine operations, final assembly and inspection. Additional processes on the turret lathe, tool and cutter grinder, cylindrical and surface grinder, advanced milling machine operations, etc. Special procedures and operations, processes and equipment, observing safety procedures faithfully and establishing good work habits and attitudes acceptable to the industry. Prerequisite: MEC 1103.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

MEC 1106 Heat Treating Practice 2 4 0 3

Working knowledge of the methods of treating ferrous and nonferrous metals. The effects of hardening, tempering, and annealing upon the structure and physical properties of metals. Trainees will be given the opportunity to acquaint themselves with the equipment and processes of heat treating. Prerequisite: MEC 1104.

MEC 1107 Numerical Control in Manufacturing 2 0 3 3

Numerical control using the slo-syn control unit with circular interpolation on the standard milling and drilling machine. An introduction to concepts in numerical control machining and the role it holds in modern manufacturing. Deals with point milling operations. The command language and programming procedures as they apply to this particular unit will be applied. Prerequisite: None.

MEC 1108 Industrial Materials 3 0 3 4

A study of modern industrial materials with emphasis on their physical properties and application. Methods by which they are produced and processed as well as use of catalog and reference data will be covered. Prerequisite: PHY 1101.

MEC 1110 Machine Processes I 2 0 3 3

An introduction to basic machine shop operations in relation to manufacturing processes and drafting. Lectures and shop practice in hand tools, measuring, terminology and introduction to engine lathe work. Basic milling machine operations are introduced with student lab exercises relating to lectures and textbook study. Prerequisite: None.

MEC 1111 Introduction to Manufacturing Processes 2 0 3 3

Manufacturing methods and processes will be studied from textbook material, discussions and shop demonstrations. Various manufacturing processes not previously covered will be introduced. Drafting will be integrated by study of the working drawing in conjunction with materials and processes. Field trips, films and lab work will supplement lectures and study. Prerequisite: MEC 1110.

MEC 1112 Machine Shop Processes 1 0 6 3

To acquaint the student with the procedures of layout work and the correct use of hand and machine tools. Experiences in the basic fundamentals of drill press and lathe operation; hand grinding of drill bits and lathe tools; set-up work applied to the trade. Prerequisite: None.

MEC 1151 Tool Making: Jigs and Fixtures 1 0 6 3

This course is designed to help the student become more proficient in working to very close tolerances. The student will learn the best methods of fastening parts together. Clamping, locating methods, and the application of jigs and fixtures to production machining are included. Emphasis is stressed throughout on the quality of workmanship and precision tolerances. Prerequisite: MEC 1112.

MEC 1152 Tool Making: Gages and Special Tools **2 0 2 3**

A study of precision gages will be made. Special tools and their application to production studied. The student will have practice in making plug gages, ring gages, snap gages, etc. The student will also have product work in the making of special slide tools, form tools, and fly cutters. Prerequisite: MEC 1112.

MEC 1153 Advanced Tool Making **3 0 6 5**

A continuation of tool making practices. Project work consisting of complicated jigs and fixtures, including prematic operated fixtures and power clamping methods. Further instructions given in form dressing procedures, surface finishes, precision tolerances, and general tool making practices. Prerequisite: MEC 1151.

MEC 1154 Die Making I **2 0 6 4**

This course is designed to introduce the student to the principles of dies and die making. Simple piercing and blanking dies will be studied and the student acquainted with terminology common to the trade. Accuracy, surface finish, importance of clearances, radii and the press cycle will be studied. Students will build and set up for production a simple die, working from blueprints and maintaining specified accuracy. Prerequisite: MEC 1112.

MEC 1155 Die Making II **2 0 9 5**

A continuation of the study of dies, the dangers of insufficient and excessive cutting clearances, and methods of providing angular clearances. Factors effecting stripping force will be discussed along with bending stresses, deformation due to bending and the bend allowance curve. Students will build a form and bending die. Development of correct working habits and close tolerance machining is stressed. Prerequisite: MEC 1154.

MEC 1156 Die Making III **2 0 6 4**

The theory and design of progressive dies will be studied. The student will be given instruction in the location of pilots, the progressive cam stages, grinding operations, and blank development. The student will machine, assemble, and set up a conventional progressive die involving three or more stages. Prerequisite: MEC 1155.

MEC 1158 Introduction to Plastic Molding **2 0 9 5**

This course will include types, uses, and the behavior of plastics. The injection molding machine, the standard mold base, nomenclature common to the trade, and the design and machining of mold components. Prerequisite: Four quarters of Machine Shop or equivalent.

MEC 1159 Tool Making III **2 0 6 4**

Advanced Tool making practices consisting of single and multi-point cutting tools of advanced design. Included will be design, machining, heat treating, and sharpening of form tools for automatic screw machines. Prerequisite: MEC 1153.

MEC 1160 Manufacturing Processes and Production I **3 0 0 3**

Introductory study of some manufacturing processes that have not been previously studied such as foundry processes, welding, powder metallurgy, press work, plastics, die casting, forging and other selected processes and materials. Also covered are automation and additional machine shop processes. Prerequisite: MEC 1111.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

MEC 1161 Manufacturing Processes and Production II 2 0 3 3

Manufacturing processes are further studied with emphasis placed on application to actual production situations. Economics of processes and redesign. Models, films, flowcharts, demonstrations in shop and field trips are utilized to provide realism. Prerequisite: MEC 1160.

MEC 1170 Mold Making I 2 0 9 5

The technique of producing optical finishes, gating, runner systems, ejection methods, methods, venting and cooling, and procedures of final assembly of the mold are the content of this course. Prerequisite: MEC 1158.

MEC 1171 Mold Making II 2 0 6 4

This course encompasses the molds, materials, and methods for molding thermoset plastics. Primary emphasis is placed on compression and transfer molding, but innovations now in practice are included. Prerequisite: MEC 1158.

MEC 1172 Mold Making III 2 2 0 3

Mold Making III is a continuation of the process and molds for molding thermoset plastics, utilizing the more recent in-line screw injection process. Also, the process and molds for blow molding comprise a part of this course. Prerequisite: MEC 1171.

MEC 1179 Materials Testing 2 0 3 3

Basic properties of selected engineering materials are studied. Course also involves operating principles of testing equipment. Determination of mechanical properties of materials, chemical analysis of metals and a limited number of other industrial materials is covered. Elements of heat treating, testing procedures and interpretation of test results and report writing. Prerequisite: MEC 1108 (or equivalent metallurgy course).

MEC 1180 Industrial Specifications 3 0 0 3

Organizing and studying machine tool and hand tool specifications, job sheets and procedure sheets. Catalogs, specification sheets, and manufacturer's handbooks serve as reference sources. Prerequisite: None.

MEC 1181 Precision Machining 3 0 9 6

This course is a forerunner to MEC 1182 — Jig and Fixture Making. The primary objective of this course is to make the student aware of the need, in many phases of industry, for the machinist to be capable of machining parts to very close tolerances, high surface finish and proficiency using precision measuring, and gaging instruments and to develop the skill and patience required to perform this type of work. To further develop his self-confidence and pride of workmanship and to prepare him for the Jig and Fixture Making course which requires this skill, patience, and self-confidence. Prerequisite: MEC 1105.

MEC 1182 Jig and Fixture Making 3 0 9 6

This course is designed to acquaint the student with the art of tool making and to develop skills to perform this work. To teach the student the principles of jigs and fixtures, their application to industry and the basic fabrication methods. To develop self-confidence in his ability to do high precision work, making him aware that the accuracy of perhaps thousands of parts depends on his skill and accuracy. Prerequisite: MEC 1181.

MEC 1183 Machine Repair 2 0 4 3

This course is designed to acquaint the student with the movable parts of machine tools, the basic methods of joining these parts together and adjustments necessary to obtain satisfactory service. To further acquaint him with the methods of hand scraping of ways and other bearing surfaces and to develop some skill in the performance of this type of work. To instruct the student in and develop a basic knowledge of hydraulic and electrical systems as they apply to machine tools. Prerequisite: MEC 1181.

MEC 1184 Advanced Machine Processes 3 0 6 5

To further acquaint the student with advanced set-ups and operation of machines for mass production. Instruction will be given on the turret lathe, milling machine, cylindrical grinder and other production machines. To motivate the student to apply himself to find ways and means of improving methods of production and manufacturing processes. Prerequisite: MEC 1181.

MEC 1198 Automotive Machine Shop 2 0 6 4

Review of the proper use of the basic machines taught in the first year; boring bar, honing machine, valve grinder, hydraulic press, etc. Application to the automotive trade. A basic instruction on lathe operation, drill-press work, use of the micrometer and other measuring devices peculiar to machine work. Prerequisites: PME 1101, PME 1102, and PME 1103.

MEC 1199 Cooperative Training 1 15 0 6

Provides the student with an opportunity to pursue, under staff supervision, work experience in a specialized field. Periodic conferences will be held with each student and employer while the student is receiving traning. This course offers valuable experience and training which is incorporated into the student's education from the standpoint of ON-THE-JOB EXPERIENCE, and gives realism and motivation to his academic and technical program of studies. Prerequisites: MEC 1101, MEC 1102, and MEC 1103.

Music Courses

MUS 101 Introduction to Music 3 0 0 3

This is a course designed to introduce students to the literature of music. Music and composers of all historical periods are heard and studied sufficiently to acquaint the student with the music of Western Civilization. Emphasis is on listening rather than reading, writing, or performing skills. Prerequisite: None.

MUS 102 Fundamentals of Music 3 0 0 3

This course is for all students beginning the study of music and is especially valuable for anyone who wishes to use music in his/her teaching. The student learns the written language and vocabulary of music, its correlation to the keyboard, and an introduction to the techniques of piano playing. The course is for those who have had no previous musical training in the characteristics of sound, notation, rhythm, scales and keys, formation of intervals and chords, cadence patterns and accomplishment figures. The basic melodic, rhythmic, and harmonic characteristics of music are presented to provide a skillful blending of theory and practice for thorough preparation of the student who wishes to proceed with an advanced study of music. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
MUS 104 Music Appreciation	**3**	**0**	**0**	**3**

The course is designed to further the development of knowledge, understanding, and the appreciation of all media of music. Emphasis is given to the historical development, forms and styles, and to the art of correct listening. Analysis is conducted through lectures, reports, and listening. Prerequisite: None.

Nursing Courses

NUR 101 Introduction to Nursing	**6**	**6**	**0**	**8**

Nursing I (Introduction to Nursing) is an introduction to the role of the nurse in meeting the needs common to all patients. Students are provided opportunities to acquire basic knowledges, skills, and attitudes necessary to the practitioner of nursing based on physical, biological, and behavioral scientific principles. Basic concepts of pharmacology, nutrition, growth and development from infancy to old age, mental health, and communication skills are included. Nursing I introduces the student to the Nursing Process. Experience in various community and health care facilities provide the student with opportunities for application of theory. Prerequisites: One unit of biology, algebra and chemistry, and MAT 98 (Dosages and Solutions) or equivalent. These courses should have been taken within five years of admission to the ADN Program. Corequisites: PSY 101, ENG 104, and BIO 106.

NUR 102 Nursing of Children and Adults, I	**6**	**6**	**0**	**8**

Nursing II (Nursing of Children and Adults, I) increases the students background in pharmacology and nutrition. Basic concepts relating to deviations from health are introduced, thus enabling the student to develop additional knowledge and skills in order to provide more complex nursing care to meet individual patient needs. Opportunities to begin studying some of the major health problems encountered in the clinic and hospital setting are provided. The study is designed to help the student begin utilizing the nursing process in administering nursing care to children and adults with specific health needs. Prerequisites: NUR 101, PSY 101, ENG 104 and BIO 106. Corequisites: SOC 101, BIO 107, and PSY 202.

NUR 103 Nursing of Children and Adults, II	**6**	**9**	**0**	**9**

Nursing III (Nursing of Children and Adults, II) gives the student the opportunity to study in depth selected major medical and surgical health problems. Emphasis of study will be placed on the needs of patients who require surgical intervention and who are experiencing nutritional problems and fluid and electrolyte imbalance. Included in the study are needs of patients with conditions of the reproduction system. Consideration is given to studying the nature, scope, clinical manifestations, and therapeutics of these conditions as well as emphasizing the patient as a person and the effect of his illness of his personality, his family and the community. The study provides a broad background of information that will assist the student to implement the nursing process at a more advanced level when caring for the hospitalized child or adult. Prerequisites: NUR 102, BIO 107, and PSY 202. Corequisites: BIO 108 and PSY 204.

NUR 104 Nursing of Mothers and Infants 3 6 0 5

Nursing IV (Nursing of Mothers and Infants) emphasizes the physiological, psychological, social, and spiritual factors involved in maternal and infant care and family health promotion. The family-centered approach is used, and the family unit serves as the framework for the nursing care of mothers during the maternity cycle and of their newborn infants. Normal aspects of maternal-infant care are stressed. Adaptations are made to include common complications occuring during the maternity cycle and in the neonatal period. Experience in giving nursing care to mothers and infants in provided in local clinics and hospital settings. Prerequisites: NUR 103, BIO 108, SOC 101, PSY 202. Corequisite: SOC 102.

NUR 205 Nursing of Children and Adults, III 6 12 0 10

Nursing V (Nursing of Children and Adults, III) focuses on those conditions which markedly affect the individual's emotional status and self concept. The course is divided into two segments, one of which introduces the student to various concepts regarding mental illness, communication and behavior. Learning experiences are provided which enables the student to acquire theoretical knowledge as well as to develop personal awareness of themselves. The focus of the other segment is on nursing care of patients with physical conditions that alter the patient's appearance and/or physical functioning to the extent that it also affects their self concept and their interpersonal relations. The student is given opportunities in the clinical setting to develop skills in planning, implementing and evaluating nursing interventions for patients with behavioral disorders and those patients experiencing changes in body image. Prerequisites: NUR 104, PHY 204. Corequisites: ENG 105, HIS 106.

NUR 206 Nursing of Children and Adults, VI 6 12 0 10

Nursing VI (Nursing of Children and Adults, VI) focuses on those health problems which involve supply and removal of gases, difficulty in chemical regulation and neurological conditions. The student is given the opportunity to further develop skills in planning nursing care. The focus of the planning will be according to the changing needs presented by the patient. Evidence of planning will be reflected in the nursing care plan as the nursing problem and objective are identified and realistic nursing interventions implemented. Emphasis is placed on increasing verbal and non-verbal communication skills. Opportunities will be provided for the student to identify teaching implications and initiate teaching plans which will assist the patient and his family in adjusting to the changes brought about by the health problems. Prerequisite: NUR 205. Corequisites: ENG 204, ENG 210, Social Science/Humanity elective.

NUR 207 Nursing of the Children and Adults IV 6 12 0 10

Nursing VII (Nursing of Children and Adults IV) is designed to assist the nursing student in caring for patients of all age groups with major health problems that require more complex technical skills and more comprehensively planned nursing care. The student continues to integrate theoretical principles and concepts obtained from all previous courses. The emphasis of discussion will be on those patients having difficulty maintaining oxygen and nutrition to the cells, emergency and disaster situations, orthopedic conditions, and disorders of the eye and ear. There is continued demonstration of ability to identify nursing needs and problems, write behavioral objectives, plan and implement nursing action, and evaluate effectiveness of nursing actions through formulation of nursing care plans to meet the physical and emotional needs of the patient with complex situations. The student is also given an introduction to team leadership and clarification of the roles of the various team members, family, and community in caring for the patient. Prerequisite: NUR 206. Corequisites: NUR 208 and ECO 102.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

NUR 208 Professional Development 3 0 0 3

Nursing VIII (Professional Development) is a brief study of the organizational structure of nursing, current trends, legal aspects, and career opportunities for the nurse who graduates with an Associate Degree. Prerequisite: NUR 206. Corequisites: NUR 207 and ECO 102.

NUR 298 Individual Study for Nurses 0 6 0 0

This independent study is a requirement for students to complete assigned study guides in courses NUR 101, NUR 102, NUR 103, and NUR 104. It includes work in the Skills Lab and use of assigned visual aids and other resource materials in the independent study lab. Prerequisite: None.

NUR 298 Individual Study for Nurses 0 3 0 0

This independent study is a requirement of students to complete assigned study guides in courses NUR 205, NUR 206 and NUR 207. There is less emphasis on work in the Skills Lab. Work continues with assigned visual aids and other resource materials in the independent study lab. Prerequisite: None.

Nutrition Course

NUT 101 Nutrition 3 0 0 3

A study of basic facts from the field of nutrition with emphasis on applications to the planning of balanced diets to meet the needs of individuals in various life stages. The responsibilities of health workers in promoting good nutrition is stressed. Prerequisite: BIO 107.

Physical Education Courses

PED 111 First Aid 2 2 0 3

A study of theory and practice in giving the immediate and temporary aid to a victim of sudden illness or the victim of an accident. Prerequisite: None.

PED 116 Physical Education 0 3 0 1

This course is a survey of physical education including swimming, physical conditioning, team sports, and individual sports. Prerequisite: None.

PED 120 Beginning Swimming 0 3 0 1

This is a course for non-swimmers or very weak swimmers designed to develop the fundamental skills of swimming and to overcome fears of water. It includes some water safety techniques and practices. Prerequisite: None.

PED 121 Intermediate Swimming 0 3 0 1

This is a course designed to give competence in four basic leg strokes and their corresponding arm strokes, safety practices, and other swimming including floating, sculling, treading and underwater swimming; includes two basic dives. Prerequisite: Must be able to swim 25 yds. (free style).

PED 122 Advanced Swimming 0 3 0 1

This is a course designed to develop skills and competence in swimming, diving, lifesaving, and water safety techniques, practices, and skills. Prerequisite: PED 121 or must be able to swim 300 yds. (free style, untimed).

PED 124 Water Sports 0 3 0 1

This is a course to teach improvement in stamina and water skills applied in all water sports. It includes introduction to water sports such as water polo and water basketball, etc. Prerequisite: PED 122 or equivalent to satisfaction of coach-instructor concerned.

PED 130 Angling 0 3 0 1

The course covers the history, values, safety, bait casting, fly casting, spinning, care of equipment, North Carolina fishing license and regulations, types of game fish and size limits. Prerequisite: None.

PED 131 Roller Skating 0 3 0 1

This course provides the student with the basic fundamentals and safety rules of recreational skating at a roller rink. Pattern and speed skating as well as free form are taught. Prerequisite: None.

PED 132 Bowling 0 3 0 1

The skills and techniques necessary for one to bowl with reasonable success are taught. Rules, methods of scoring, terminology, and etiquette associated with the sport are stressed also. Prerequisite: None.

PED 134 Cross Country 0 3 0 1

Training techniques for long distance running are taught and opportunities to utilize these techniques are provided. In addition proper diet and nutrition are discussed. Prerequisite: None.

PED 136 Archery 0 3 0 1

This course is designed to teach fundamental skills and establish correct habits of participation. Selection as well as care and maintenance of equipment will be covered. Prerequisite: None.

PED 137 Golf for Beginners 0 3 0 1

The purpose of the course is to teach the students the fundamentals of golf. The course teaches the rules by which the game is played, the history of the game, the terminology and definitions, etiquette, and instructions for the use of clubs and other golf equipment. Prerequisite: None.

PED 138 Golf — Intermediate 0 3 0 1

This course is designed for those who have passed beginning golf or its equivalent and have an established handicap. The why's and how's of the golf swing are stressed in order to improve handicap. Prerequisite: None.

PED 139 Golf — Advanced 0 3 0 1

For those who have an established handicap of 10 or less. Strategy of golf, both match and medal, is covered in the actual golf course setting. Prerequisite: None.

PED 140 Gymnastics 0 3 0 1

Exercise and basic fundamentals of body movement are stressed in this course. Safety rules and spotting techniques in a recreational setting are emphasized. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

PED 142 Handball 0 3 0 1

A fast moving game for the more energetic. The courses covers the history, rules, glossary, equipment, and fundamentals of the game. Prerequisite: None.

PED 143 Tennis 0 3 0 1

This course at the introductory level is designed to present the history, fundamentals, nomenclatures and terminologies, grips, stances, basic methods of achieving skills, and all rules, scoring, and safety practices of this individual sport, together with sufficient minimal practice under supervision of the instructor-coach, to permit a beginner to understand, discuss and participate in the sport at the beginner level. Prerequisites: Medical certificate and approval of instructor.

PED 146 Badminton 0 3 0 1

The course covers history, singles and doubles play, equipment, basic rules, the grip, backhand and forehand strokes, common shots, and strategy. Prerequisite: None.

PED 148 Physical Fitness — Ladies 0 3 0 1

This course emphasizes body toning and shaping. Exercises that stress flexibility, strength and coordination are stressed. Isotonic and isometric exercises plus use of weights are included. Prerequisite: None.

PED 151 Basketball 0 3 0 1

This course is to familiarize the student with the basic skills that are necessary to become a competent participant and spectator of the game of basketball. It is felt that a clearer conception of the growth and development of basketball enhance the actual play of the individual, and do much toward insuring proper interpretation and appreciation of the game. Prerequisite: None.

PED 161 Football 0 3 0 1

Fundamental skills used in playing the game are taught. Rules of play are stressed as well as formations and team strategies. Flag football games are played between class teams to utilize techniques taught in class. Prerequisite: None.

PED 166 Soccer 0 3 0 1

The course is designed to assist the student in the acquisition of fundamental skills used in playing the game. Techniques necessary for effective team and individual play are stressed, as well as a knowledge of the terminology associated with the sport. Prerequisite: None.

PED 171 Softball 0 3 0 1

The development of fundamental skills such as pitching, hitting, fielding, baserunning, and catching are stressed in this class. The class also provides for development & understanding of rules and team strategy. The development of an understanding of the terminology used in the sport are stressed also. Prerequisite: None.

PED 181 Volleyball 0 3 0 1

Basic rules and fundamentals in the game of volleyball are taught in this course. This includes skills in volleying, setting, spiking and game strategy. Prerequisite: None.

PED 190 Weight Training 0 3 0 1

It is the purpose of this course to provide practical weight training information that can be successfully applied to increase strength, improve physique and aid in conditioning for other physical activities, instill in the student a keener understanding of and appreciation for the human body with special emphasis directed to the importance of muscular development to health and personal well being as well as to encourage weight training as a carry-over activity that can be of benefit and enjoyment to the individual throughout his entire adult life. Prerequisite: None.

PED 195 Intramurals 0 3 0 1

Course is designed to acquaint the student with activities, both individual and team, that are offered in our intramural program. These activities can be used by the student throughout his entire adult life. Prerequisite: None.

PED 211 First Aid and Safety 3 2 0 4

This course is a standard First Aid & Safety course conducted according to the standards of the American Red Cross including basic lifesaving and water safety techniques and practices. Prerequisite: PED 122.

PED 212 First Aid and Safety 3 2 0 4

This is an advanced course; the American Red Cross Certificate is awarded upon completion of the course. Prerequisite: PED 211.

PED 223 Lifesaving 1 2 0 2

This is a course in the principles and techniques in American Red Cross methods in lifesaving and water safety. The American Red Cross Junior or Senior Red Cross Lifesaving Certificate is awarded to qualifying students. Prerequisite: PED 122. Must be able to demonstrate adequate ability, skills, and competency in swimming, diving, basic first aid and water safety to the satisfaction of instructor.

PED 224 Water Safety Instructors 1 2 0 2

This course is designed to qualify students for an American Red Cross Water Instructor's rating and certificate. Prerequisite: PED 223 or equivalent satisfaction of instructor.

Philosophy Courses

PHI 101 Introduction to Philosophy 3 0 0 3

This introductory course uses an historical approach to the understanding of philosophy. The basic concepts, themes, theories, and arguments of ancient, medieval, modern, and contemporary philosophers are examined. Prerequisite: None.

PHI 102 Introduction to Logic 3 0 0 3

This introductory course is designed to help one acquire the ability and habit of correct reasoning and sound thinking. It introduces the traditional logic of the syllogism and modern "symbolic" logic, finishing the inquiry with a brief glance at the classical fallacies in logic arguments. Prerequisite: None.

Pharmacy Technology Courses

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
PHM 101 Introduction to Pharmacy	5	0	0	5

This course includes a history of Pharmacy; orientation to hospital, institutional, and community pharmacies, duties of a pharmacy technician; legal and ethical aspects of the pharmacy technician; drug legislation; medical and pharmaceutical terminology; the position of pharmacy in total health care; and pharmacy literature and references. Prerequisite: None.

PHM 102 Pharmacology I	5	0	0	5

Description of drug receptor theory, structure activity relationships, and factors influencing drug effects; relating trade names to generic name and use; general anesthetics, sedatives and hypnotics; anti-convulsants; analgesia, anti-inflammatory agents and anti-gout agents; narcotics; locally acting drugs; local anesthetics, antihistamines; emetics, anti-emetics, expectorants, and anti-tussive; psycho-therapeutic agents; biologicals; medical terminology is also included. Prerequisite: None.

PHM 103 Pharmacology II	5	0	0	5

Identity of and relation of trade-names of drugs to generic names of adrenergic agents; central nervous system stimulants; adrenergic blocking agents; cholinergic agents and blocking agents; skeletal muscle relaxants; osytocics; cardiac drugs; vasodilator drugs; antihypertensive agents; drugs acting on the hematopoietic system; intravenous solutions; diuretic and antidiuretic agents; antineoplastic agents; anthelmintic agents; sulfonamide drugs; antibiotics; antiseptics and disinfectants; antifungal agents; antileprosy and antitubercular agents; chemotherapy of ambiasis; antimalarial agents; antacids and digestants; cathartics; vitamins and minerals in human nutrition; reproductive hormones and oral contraceptives; adrenocortical hormones; insulin and oral hypoglycemia agents; thyroid, antithyroid and parathyroid preparations, miscellaneous therapeutic agents; toxicology and poison control. Prerequisite: PHM 102.

PHM 104 Pharmaceutical Preparations I	3	3	0	4

The employment of the appropriate techniques to compound and to describe the characteristics of the completed prescriptions. Course includes; pharmaceutical Latin; dosage forms; tablets; solutions and syrups and Pharmacy Calculation I. Prerequisite: PHM 101.

PHM 105 Pharmaceutical Preparations II	3	3	0	4

A continuation of PHY 104 including; suspension lotions, ointments, pastes, and creams; powders, capsules and triturations; and suppositories and Pharmacy Calculations II. Prerequisite: PHM 104.

PHM 106 Pharmacy Management	5	0	0	5

General introduction to the distribution of pharmaceutical products including the channels of distribution for pharmaceutical products; the functions of the middleman; factors of income and wealth, consumer motivation and buying behavior, population; competition; drug development; and other marketing topics. Prerequisite: PHM 101.

PHM 107 Community Pharmacy 3 20 0 9

The receipt, interpretation, evaluation of, compounding, manufacture, filling, labeling and filing the valid prescription under the supervision of the registered pharmacist. Student learns to employ appropriate supply, storage, accounting and control procedures for pharmaceuticals as well as to effectively communicate with and interact with patients, staff members, and other persons. Course includes introduction to drug information, hazards medication, pharmex, drug distribution systems; boards and committees; sterile products; manufacturing and quality control; radiopharmaceuticals; and tours of pharmaceutical facilities. Prerequisite: PHM 101.

PHM 108 Pharmaceutical Law 3 0 0 3

Law affecting the profession of pharmacy and a limited study of selected laws effecting retailers. Prerequisite: PHM 110.

PHM 109 Hospital Pharmacy 3 15 0 8

Course acquaints students with the profession and the application of managerial principles as they exist. Special attention is given to actually working within various segments of the profession in realistic surroundings with professionals in the field. Prerequisite: PHM 106.

PHM 110 Federal and State Drug Regulations 2 0 0 2

This course includes a study of the Federal and State Drug Control regulations. Types of drugs, the differences in federal and State regulations and security of materials in the manufacturing and distribution process will be known. Prerequisite: PHM 101.

PHM 111 Pharmacy Seminar 2 0 0 2

Discuss current trends, concepts, and ideas which pertain to pharmacy. Prerequisite: PHM 110.

PHM 120 Principles of Pharmaceutical Manufacturing 5 0 0 5

The basic managerial decisions; organizational structure including plant location, building requirements, and internal factory organization; problems of operation and control, planning, scheduling, routing production, drug inventory control laws, labor control, purchasing, and cost control. Plant problems are utilized as lab experiments. Prerequisite: None.

PHM 202 Quality Control 3 2 0 4

Principles and techniques of quality control and cost saving. Organization and procedure for efficient quality control. Functions, responsibilities, cost reports, records, personnel and vendor-customer relationships in quality control. Sampling inspection, process control and tests for significance. Prerequisite: PHM 105.

Physical Science Courses

PHY 91X Physical Science I, Level I 3 0 0 4

This course presents laws of motion, power, energy, gravitation, atomic structure of matter and the properties of solids, liquids and gases. The approach is mainly inquiry approach with minor emphasis on mathematical derivation and calculations. Practical approach is emphasized by means of suitably chosen laboratory exercises, demonstration experiments and appropriate audiovisual aids. Prerequisite: None. Corerequisite: PHY 91Y.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

PHY 91Y Physical Science I, Level I Lab 0 2 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in PHY 91X. Prerequisite: None. Corequisite: PHY 91X.

PHY 92X Physical Science II, Level I 3 0 0 4

This course presents the basic concepts of heat, light and sound. The approach is mainly inquiry approach with minor emphasis on mathematical derivation and calculations. Practical approach is emphasized by means of suitably chosen laboratory exercises, demonstration experiments and appropriate audiovisual aids. Prerequisite: None; PHY 91 — preferable. Corequisite: PHY 92Y.

PHY 92Y Physical Science II, Level I Lab 0 2 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in PHY 92X. Prerequisite: None; PHY 91 — preferable. Corequisite: PHY 92X.

PHY 93X Physical Science III, Level I 3 0 0 4

This course presents the basic concepts of electricity and magnetism, atomic and nuclear physics, relativity and astrophysics. The approach is mainly inquiry with minor emphasis on mathematical derivation and calculations. Practical approach is emphasized by means of suitably chosen laboratory exercises, demonstration experiments and appropriate audiovisual aids. Prerequisite: None. Corequisite: PHY 93Y.

PHY 93Y Physical Science III, Level I Lab 0 2 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in PHY 93X. Prerequisite: None. Corequisite: PHY 93X.

PHY 94X Physical Science I, Level II 3 0 0 4

Introductory physics and its application in fundamental concepts, fluids, simple and compound machines, work, energy, power, heat. Selected experiments are performed by students in the laboratory. Prerequisite: None. Corequisite: PHY 94Y.

PHY 94Y Physical Science I, Level II Lab 0 2 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in PHY 94X. Prerequisite: None. Corequisite: PHY 94X.

PHY 95X Physical Science III, Level II 3 0 0 4

A study of sound, light, color, magnetism, static electricity, current and circuits, electromagnetism and alternating current. Demonstration and lab selected experiments will be conducted by the student. Prerequisite: None. Corequisite: PHY 95Y.

PHY 95Y Physical Science III, Level II Lab 0 2 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in PHY 95X. Prerequisite: None. Corequisite: PHY 95X.

PHY 101X Properties of Matter 3 0 0 4

Physics 101X is an introduction to some of the basic principles concerning the properties of matter in the universe as we know it today. This course deals specifically with the mechanical properties of matter such as density, elasticity, tension, and shear. Other topics include a discussion of fluids and the principles relating to the mechanics of those fluids. Finally a discussion of the thermal properties of matter, temperature and heat, and thermodynamics is included. Prerequisite: Algebra. Corequisite: PHY 101Y.

PHY 101Y Properties of Matter Lab 0 2 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in PHY 101X. Prerequisite: None. Corequisite: PHY 101X.

PHY 102X Work, Energy and Power 3 0 0 4

Major areas covered in this course are work, energy and power. Instruction includes such topics as statics, forces, center of gravity, and dynamics. Units of measurement and their applications are a vital part of this course. A practical approach is used in teaching students the use of essential mathematical formulas. Prerequisites: MAT 101 and PHY 101. Corequisite: PHY 102Y.

PHY 102Y Work, Energy and Power Lab 0 2 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in PHY 102X. Prerequisites: MAT 101 and PHY 101. Corequisite: PHY 102X.

PHY 103X Electricity 3 0 0 4

Basic theories of electricity, types of electricity, methods of production, and transmission and transforming of electricity. Electron theory, electricity by chemical action, electricity by friction, electricity by magnetism, induction voltage, amperage, resistance, horsepower, wattage, and transformers are major parts of this course. Prerequisites: PHY 101 and MAT 102. Corequisite: PHY 103Y.

PHY 103Y Electricity Lab 0 2 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in PHY 103X. Prerequisites: PHY 101 and MAT 102. Corequisite: PHY 103X.

PHY 104X Light and Sound 3 0 0 4

A study of sound and wave motion and its technical applications to industry and related fields. Light and illumination. Principles of optical instruments. Practical aspects are emphasized. Prerequisites: PHY 102 and MAT 103. Corequisite: PHY 104Y.

PHY 104Y Light and Sound Lab 0 2 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in PHY 104X. Prequisites: PHY 102 and MAT 103. Corequisite: PHY 104X.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

PHY 105X Alternate Energy Sources 3 2 0 4

An introduction to the primary sources of energy with an in-depth study of the fundamentals of heat energy as it relates to practical residential and commercial application. Specific topics of discussion include fossil fuel sources, hydroenergy sources, wind driven turbine energy sources, geothermal energy and solar energy sources. A brief section on structural aspects of solar heat collectors and the heat transfer methods employed are also presented in this course. Prerequisite: MAT 96 or equivalent. Corequisite: PHY 105Y.

PHY 105Y Alternate Energy Sources Lab 0 2 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in PHY 105X. Prerequisite: MAT 96 or equivalent. Corequisite: PHY 105X.

PHY 110 Radiographic Physics 3 0 0 3

This course covers fundamentals of mechanics, electricity, magnetism, and electronics required to understand basic operations in radiology. Emphasis is placed on the principles underlying the operation of radiographic equipment and auxiliary devices. Prerequisite: PHY 101.

PHY 111 Biomedical Instrumentation 3 0 0 3

This course is geared towards the health personnel who operate a variety of biomedical instruments; it presents basic electronics principles, various electronic instruments, their operation, function, tolerances, calibration, and safety precautions. The emphasis is placed on applications rather than design and maintenance. Prerequisite: None (Previous exposure to physical sciences and elementary algebra desirable).

PHY 1101X Properties of Matter 3 0 0 4

The basic concepts of physics as a science of energy and matter are stated. Standards of measurement for fundamental units of length, mass and time and their derived units are discussed to afford a background for the subsequent courses of the series. The topic of heat and its effect on matter is studied. These effects include expansion, transportation, measurement, freezing and boiling, and heat engines. Prerequisite: None. Corequisite: PHY 1101Y.

PHY 1101Y Properties of Matter 0 2 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in PHY 1101X. Prerequisite: None. Corequisite: PHY 1101X.

PHY 1102X Electricity 3 0 0 4

Basic principles of electricity: circuits, electrical meters, dry cells, storage batteries, magnets, electrical production of magnetism, use and manufacture of electromagnets, electric motors, Ohm's law, electric power and cost of electric power, alternating current theory, generators, transformers, electrical devices, telephone, electron tube, diode, rectifier, radio, photo-electron cell, television and radar. Prerequisite: None. Corequisite: PHY 1102Y.

PHY 1102Y Electricity Lab 0 2 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in PHY 1102X. Prerequisite: None. Corequisite: PHY 1102X.

PHY 1103X Work, Energy, and Power 3 0 0 4

Physical principles of force, energy, work and power; equilibrium and the laws of motion; principles of machines, mechanical advantage, and transmission of power in practical applications, pulleys systems, levers, inclined planes, and the wheel and axle; and the use of vectors and graphical presentations. Prerequisites: PHY 1101 and MAT 1101. Corequisite: PHY 1103Y.

PHY 1103Y Work, Energy and Power Lab 0 2 0 0

Primary purpose is to develop an understanding of laboratory methods and techniques as they relate to the supporting instructional materials in PHY 1103X. Prerequisites: PHY 1101 and MAT 1101. Corequisite: PHY 1103X.

Plumbing Courses

PLU 1105 Plumbing Maintenance 1 2 3 3

The course introduces the student to the plumbing trade and to the use of tools and materials necessary to repair or replace fixtures and piping. Planning new additions is also stressed. Prerequisite: None.

PLU 1110 Plumbing Pipework 5 0 15 10

A brief history of plumbing and why rules, or codes, are necessary in the trade. The course introduces the student to the use of equipment, tools, pipe and fittings used by plumbers. Safety and care of tools are also stressed. Drainage and venting fundamentals are developed in the lecture period and applied in the shop. Prerequisite: None.

PLU 1111 Domestic Water System 2 0 9 5

The installation of water distribution systems beginning with the sources of supply and including the location of pipes, valves, and pumps in both single and multi-story buildings are studied. Private and public sewage and drainage systems, including their ventilation is a part of this course. Heating devices and hot water circulation also are studied. Prerequisite: PLU 1110.

PLU 1112 Installation of Plumbing Fixtures 3 0 9 6

The student becomes acquainted with the major manufacturers of plumbing fixtures and their products. The many different styles and materials of plumbing fixtures are studied, as well as their ways of installation, and service. Installations are made. Prerequisite: PLU 1111.

PLU 1120 Low Pressure Steam Systems 2 0 6 4

This is an introductory course into the hydronic heating field. The course involves different types of boilers and burners, also types of radiation. Piping systems, component parts, and insulation are studied and installed. Prerequisite: PLU 1110.

PLU 1121 High Pressure Steam Systems 3 0 9 6

Applications of low pressure steam are continued. Principles of operation of low pressure and high pressure steam and their utilization in industry are studied. Prerequisite: PLU 1120.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

PLU 1123 Hot Water and Panel Heating 3 0 6 5

This phase of hydronic heat will be studied as it applies mainly to residential heating. The many different systems and their advantages and disadvantages will be studied. Practical applications will be made in the shop. Prerequisites: PLU 1111 and PLU 1120.

PLU 1125 Industrial Piping 3 0 6 5

Piping systems of commercial and industrial buildings as well as process piping such as used in chemical industries will be studied. Boilers and steam engine systems will also be included. Valves, faucets, meters, hangers, area drains, and other materials pertaining to industry will also be studied. Prerequisites: PLU 1112 and WLD 1101.

PLU 1126 Hydraulic Systems Plumbing 2 0 3 3

Hydraulic principles, circuits, control valves, pumps, fluids, and various other accessories as they apply to plumbing systems will be studied. Installation and servicing of equipment will be undertaken. Prerequisite: PLU 1110.

Power, Mechanics, and Engine Courses

PME 93 Introduction to Auto Mechanics 2 0 3 3

To introduce the student to the varied duties of the auto mechanic.

PME 1011 Electrical Systems I 3 0 3 4

This course develops a thorough knowledge of and the ability to use and maintain test equipment used in electrical equipment diagnoses and repairs: Study of the construction and operation of components of the electrical system and testing of electrical systems, components for proper performance; servicing and maintenance of batteries, generators, alternators, starters and accessory circuits in the electrical system, methods of troubleshooting, diagnosing and repairs. Prerequisite: None.

PME 1018 Motorcycles 1 0 9 4

This course develops a thorough knowledge of and ability to use, maintain and store the various hand tools, test equipment and measuring devices needed in the repair of motorcycles. Students will study the construction and operation of the components of motorcycle engines, clutches, transmissions, drive train and electrical components to insure proper operation and the methods of troubleshooting, diagnosing and repairing. Prerequisites: PME 1104 or PME 1101 and PME 1011.

PME 1101 Automotive Engines 3 0 12 7

This course develops a thorough knowledge of and ability to use, maintain, and store the various hand tools and measuring devices needed in automotive repair work. Students study the construction and operation of components of automotive engines, testing of engine performance; servicing and maintenance of pistons, valves, cams and camshafts, fuel and exhaust systems, cooling systems; proper lubrication; and methods of testing, diagnosing and repairing. Prerequisite: None.

PME 1102 Engine Electrical Systems **6 0 9 9**

This course teaches the student how the concepts of basic electricity are applied as he/she studies the fundamentals of the engine related electrical devices and the repair and service procedures of those devices. The students are encouraged to develop skills in testing and trouble-shooting the charging systems, starting systems and ignition systems and they become familiar with the concept of electronics. Prerequisite: PME 1101.

PME 1104 Basic Small Engine Repairs **3 0 12 7**

This course develops a thorough knowledge of and ability to use, maintain and store the various hand tools, test equipment and measuring devices needed in Recreation Vehicle and Equipment Repairs. It includes a study of the construction and operation of components of gasoline engines both four-stroke cycle and two-stroke cycle, and testing of engine performance, servicing and maintenance systems involved with engine performance, methods of testing, diagnosing and repairing. Prerequisite: None.

PME 1109 Small Engine Diagnosis **0 0 9 3**

This course emphasizes the shop procedures necessary for swift and accurate diagnosis of problems in the electrical, mechanical, and fuel systems of small engines. All shop equipment previously studied will be utilized. A full range of experiences in testing, adjusting, repairing, and replacing will be utilized. Major emphasis will be placed upon developing a logical sequence of diagnostic procedures utilizing skills developed in prior courses. Prerequisite: PME 1104.

PME 1111 Automotive Body Repair **3 0 18 9**

This course introduces the student to the basic fundamentals of auto body repair and teaches the basic skills of auto body refinishing. Prerequisite: None.

PME 1123 Automotive Chassis and Suspensions **6 0 9 9**

This course covers principles and functions of the components of automotive chassis, practical job instruction in adjusting and repairing of suspension, steering and braking systems. Units to be studied will be shock absorbers, springs, steering systems, steering linkage, front suspensions, and drum and disc brakes. Prerequisite: PME 1102.

PME 1124 Power Train Systems **3 0 9 6**

This course includes the principles and functions of automotive power train systems: clutches, transmission gears, torque converters, drive shaft assemblies, rear axles and differentials and the identification of troubles, servicing, and repair. Prerequisites: PME 1123, PHY 1102, and PHY 1103.

PME 1125 Automotive Servicing II **3 0 9 6**

Emphasis is on the shop procedures necessary in determining the nature of troubles developed in the various component systems of the automobile. Troubleshooting of automotive systems, providing a full range of testing, adjusting, repairing and replacing experiences. Each student is given an opportunity to be service manager or shop foreman during this course. Prerequisite: PME 1123.

PME 1132 Fuel Systems **2 0 4 3**

This course is designed to teach the fundamentals of fuel systems, especially those systems using gasoline for fuel. This course includes characteristics of fuels, types of fuel systems including fuel injection, fuel pumps, carburetors and types of testing procedures and equipment used to service said systems. Prerequisites: PME 1101 and PME 1102.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

PME 1133 Emission Controls 1 0 3 2

This is a training program to give the student an in-depth look at the introduction, description, operation, maintenance and servicing of engine emission controls. This course will help the students learn how to apply the fundamentals of these controls as they go about their work as a mechanic making them aware of the part the automobile engine plays in contributing to air pollution and the mechanic's role in keeping down these pollutants. Prerequisite: PME 1181.

PME 1135 Automotive Air Conditioning 3 0 3 4

General introduction to the principles of refrigeration; study of the assembly of the components and connections necessary in the mechanisms, the methods of operation and control; proper handling of refrigerants in charging the system. Prerequisite: PHY 1102.

PME 1151 Electrical and Fuel Systems 3 0 12 7

Development of a thorough knowledge and ability to diagnose and repair Electrical and Fuel Systems for Recreational Vehicles and Equipment. Study of the construction and operation of the fuel systems components. Testing the electrical systems and fuel systems components. Testing the electrical systems and fuel systems components for proper operation. Servicing and maintaining electrical and fuel systems components. Methods of trouble-shooting, diagnosing and repairs. Prerequisites: PME 1104 and PME 1011.

PME 1158 Equipment Repair 2 0 6 4

Development of a thorough knowledge and ability in using, maintaining, and storing various hands tools, measuring devices, and test equipment needed in recreational vehicles and equipment repair. Study of the construction and operation of components of recreational equipment. Testing of equipment performance, servicing, and maintenance of engines, clutches, transmissions, differentials and drive train, electrical system, brake systems, both hydraulic and mechanical, cooling system, fuel and exhaust systems; proper lubrication and methods of testing, diagnosing, and repairing. Prerequisites: PME 1104 and PME 1011.

PME 1160 Marine Outboard Engines 5 0 15 10

Development of a thorough knowledge and ability to diagnose, test, service and repair marine outboard engines. Study of the construction and function of each of the components of outboard engines to include the power head, lower end unit, fuel and electrical systems and cooling system. Prerequisites: PME 1104, PME 1011, and PME 1151.

PME 1170 Power Plant Trouble-Shooting 3 0 6 5

This course is designed to tie together all the facts and techniques involved in performing trouble-shooting and diagnosing procedures on the total automotive powerplant. These procedures are built around all phases of the powerplant operation; fuel systems, ignition systems, starting and charging systems; cooling and lubrication systems and mechanical troubles that may occur. Prerequisite: None.

PME 1181 Automotive Tune-Up 3 0 3 4

This practical course, coming at the end of the second year, is designed to help the student develop his work experience with the more technical aspects of engine tune-up. Much stress is placed on the use of test equipment and the student is encouraged to use his knowledge of fundamentals by applying it to practical problems which arise. Special emphasis is placed on review of fundamentals and work experience. Prerequisite: PME 1102.

PME 1182 Automatic Transmissions 6 0 6 8

This course was designed to supplement the Power Train course in order to give the student a better background, both in fundamentals and in servicing of automatic transmissions. Repair procedures, proper testing and diagnosing are stressed in this course. Prerequisite: PME 1124.

PME 1183 Chassis Electrical Circuits 5 0 4 6

This course will acquaint the student with the principles of operation, the repair and servicing procedures, test equipment used in trouble-shooting and repairing the vehicle chassis electrical circuits. Prerequisite: PME 1102.

PME 1188 Small Gas Engines 3 0 3 4

Develops basic skills and knowledge in operation, maintenance and repair of small gasoline engines. Trouble-shooting is also emphasized. Prerequisite: None.

Nursing Assistant and Surgical Technician Courses

PML 1001 Nursing Assistant 9 6 15 17

A study in broad perspective of the field of nursing, with emphasis on current trends related to division of responsibility among various types and levels of health workers. To help the student develop awareness of the scope of the health field and beginning understanding of health facilities, modern nursing, and the role of the nurses' facilities. Prerequisite: None.

PML 1080 Nursing Procedures 3 2 3 5

Designed to acquaint the student with the total needs of the patient; physical, social, phychological and spiritual. This will include safe patient care in transporting, positioning, skin preparation, and basic needs through simple nursing care, observation and reporting. Prerequisite: None.

PML 1085 Pharmacology 3 0 0 3

This course is to provide a basic foundation and serve as a useful guide to increase the students understanding of drug therapy, toxic reaction, and their implications in the operating rom. This will include a study of various types of anesthesia, method of administration and their general or local effects on the body. Prerequisites: PML 1091, PML 1080, and PML 1090.

PML 1090 Principles of Operating Room Technique 2 0 3 3

A course designed to help the student acquire a basic knowledge of surgical aseptic technique and develop skills in its application in the operating room. It deals with the role of the operative procedure and its relation to other aspects of patient care including ethical, moral and legal responsibilities. It is designed to develop an increased awareness and understanding of the function of each member of the operating team. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

PML 1091 Anatomy and Physiology I 3 2 0 4

This is a study of the structure and function of the general plan of the body and systems. It includes a study of more common disorders and the surgical procedures involving the various systems. Prerequisite: None.

PML 1092 Microbiology 3 2 0 4

A course designed to provide the student with a basic understanding in microbiology. Instruction includes a study in bacterial anatomy, physiology, growth requirements, modes of transmission and sterilization. Prerequisite: None.

PML 1093 Theory of Surgical Procedures 4 4 0 6

This course includes a thorough study of the most commmon surgical procedures and why they are performed. Instruction also includes special instruments and equipment as they relate to each procedure. Prerequisite: None.

PML 1094 Clinical Practice I 0 0 15 5

This course is designed to assist the student in improving dexterity, to anticipate the needs of other members of the operating team and to improve organization for economy of time, motion and priority of needs. Prerequisite: None.

PML 1095 Clinical Practice II 0 0 24 8

Continuation of Clinical Practice I — PML 1094. Prerequisite: PML 1094.

PML 1096 Anatomy and Physiology II 3 2 0 4

A continuation of PML 1091 — Anatomy and Physiology I. Prerequisite: PML 1091.

PML 1097 Theory Surgical Procedures II 4 4 0 6

Continuation of Theory of Surgical Procedures I — PML 1093. Prerequisite: PML 1093.

PML 1098 Seminar I 0 2 0 2

This seminar time will be used in review of experiences received in Theory of Surgical Procedures I and Clinical Practice I. Prerequisite: None.

PML 1099 Seminar II 0 2 0 1

This seminar time will be used in review of experience received in Theory of Surgical Procedures II and Clinical Practice II. Prerequisite: None.

Practical Nursing Education Courses

PNE 93 Introduction to Nursing 2 7 0 5

This course is designed to introduce and promote a basic understanding and appreciation of nursing as a service to others; to introduce a concept of health and disease; to observe skills and abilities to apply knowledge in the clinical situation. Prerequisite: None.

PNE 1101 Vocational Adjustments I 3 0 0 3

A study of the principles of good personal and vocational behavior of the Practical Nurse student to enable her/him to work and communicate with ease and intelligence with the doctor, professional nurse, patient and allied hospital employees. It is also designed to stimulate the interest of the student in public relations promoting the health of the community. Prerequisite: None.

PNE 1102 Anatomy & Physiology 5 0 0 5

The course consists of a study of the general plan of the body and the 10 systems: Nervous, skeleton, muscular, circulatory, digestive, respiratory, endocrine, integumentary, urinary, male and female reproductive systems — designed for understanding the cooperative functions of the total human body. This course also includes a study of microorganisms and their relationship to disease. Prerequisite: None.

PNE 1103 Nursing Skills I 4 6 6 8

This course is designed to teach the Practical Nurse student the principles involved in giving good nursing care. It is felt that if principles are understood, they can be adapted to many situations. Insofar as possible clinical nursing coincides with classroom activity at the affiliating hospital in medical and surgical areas. Prerequisite: None.

PNE 1104 Emergency & Disaster Nursing 2 0 0 2

This course is designed to acquaint the Practical Nurse student with measures of first aid and emergencies so she/he is able to function efficiently until completing the course in medical-surgical nursing. Prerequisite: None.

PNE 1105 Nutrition and Diet 3 0 0 3

This course is designed to give the Practical Nurse student an understanding of good nutrition and some knowledge of the diet therapy. He/She learnes to apply the understanding to the dietary treatment of the more common diseases. Prerequisite: None.

PNE 1106 Nursing Skills II 3 0 4 5

This course is designed as a continuation of Nursing Skills I in which the student has more practice with the skills and principles in the techniques needed in the nursing care of the patient. Prerequisite: PNE 1103.

PNE 1107 Medical & Surgical Nursing I 5 0 15 10

A course of study to help the Practical Nurse student acquire a basic knowledge of medical and surgical nursing. This course deals with the cause of disease, treatment and prevention of disease, with diseases and disorders of the various systems in the body, with the major emphasis on nursing care. The clinical period deals with continued nursing care given at the affiliating hospital in the medical and surgical areas with continued depth training. Prerequisites: PNE 1102 and PNE 1103.

PNE 1108 Pediatrics 3 0 7 6

The purpose of this course is to consider the patterns of normal growth and development. Insofar as possible, the classroom activity centers around discussions of normal growth and development and certain deviations. This is designed to help the student recognize the nursing needs of the sick child as well as the needs of the well child. Prerequisites: PNE 1102 and PNE 1106.

PNE 1109 Obstetrics & Newborn 3 0 7 6

A study of the child-bearing woman, dealing with conception, pregnancy, labor, and the puerperium, and the care of the newborn child with nursing care experience in the obstetrical and nursery areas of the affiliation clinical areas. Prerequisites: PNE 1102 and PNE 1106.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

PNE 1110 Medical & Surgical Nursing II 5 0 0 5

This course is designed to help the Practical Nurse student to acquire knowledge for safely caring for the medical and surgical patient. This course deals with a continuance of Medical and Surgical Nursing I. Prerequisite: PNE 1107.

PNE 1111 Drugs & Administration 3 0 0 3

This course is designed to give the Practical Nurse student a knowledge of drugs, the dangers involved in handling, laws regarding the use of drugs, side effects, and skills in administering drugs intelligently and safely. Prerequisite: MAT 1105.

PNE 1112 Medical & Surgical Nursing III 0 0 21 7

This course is designed so the student continues to integrate principles and concepts from all principles and concepts from all previous courses. The student develops further skills in recognizing and meeting the needs of patients with complex nursing problems, and assisting the registered nurse in more complex nursing. Prerequisites: PNE 1106, PNE 1110, and PNE 1111.

PNE 1113 Geriatrics 3 0 4 5

This course is designed to give the Practical Nurse student a general background of information of the geriatric patient upon which may be built with experiences in nursing care. This information may be adapted for use in the home, the hospital, or other agencies. Prerequisite: None.

PNE 1115 Mental Health 3 0 0 3

This course is designed to help the Practical Nurse student acquire knowledge of ethics that are appropriate to the practical nurse in obtaining and holding a position; to give her/him an added insight into the moral and legal aspects associated with nursing activities. Prerequisite: PNE 1110.

PNE 1116 Vocational Adjustments II 2 0 0 2

This course is designed to help the Practical Nurse student acquire knowledge of ethics that are appropriate to the practical nurse in obtaining and holding a positive; and to give an added insight into the moral and legal aspects associated with nursing activities. Prerequisite: PNE 1101.

PNE 1298 Special Problems 0 5 0 0

Self-study students, on their own time, may spend time in the lab to reinforce learning procedures either by observing visual aids or by practice. Prerequisite: None.

Political Science Courses

POL 102 State and Local Government 3 0 0 3

This course is a general study of local and state governments with a certain emphasis placed on the government of the State of North Carolina. Emphasis is also given to the theory and practical application of operating non-national governments. The functions, duties and divisions in government are examined in regard to their effects on the community. Prerequisite: None.

POL 103 National Government 3 0 0 3

This course is a study of the federal government. Emphasis is given to the Constitution, the concept of Federalism and the three branches of government. The interaction of pressure and special interest groups and the media on the national government is examined and evaluated. Prerequisite: None.

Postal Courses

POS 101 Postal History and Organization 3 0 0 3

This course is designed to trace the delivery of written communication and merchandise through to present day modes. In so doing, the course will depict, and compare the private, corporate, and governmental agencies which have been and are responsible for mail service throughout the world, as well as the United States. The current postal organization will be studied to present its structure and functional relationships between divisions and other federal agencies. Policies and procedures, rules and regulations, will also be traced to and studied under the current organization. The history of an operations of the Postal Inspection Service will be presented as an integral but separate function of the above. Prerequisite: None.

POS 103 Postal Service Mail Processing I 3 0 0 3

This course is designed to provide the participant with an awareness of the interrelated factors necessary to achieve rapid separation of large amounts of mail within specified time and error parameters, and on a cost effective basis. Prerequisite: None.

POS 105 Postal Mail Processing II 3 0 0 3

This course is designed to provide the student with an in-depth view of revenue determination procedures and flow characteristics involved in receipt, processing, and dispatch of second, third, and fourth class mail. Prerequisite: POS 103.

POS 201 Postal Service Labor Relations 3 0 0 3

Overview of laws and practices as related to labor-management in the Postal Service. Current status and current problems and/or issues. The National and Local Agreement; the various bargaining units and associations in the USPS: the grievance policy and procedure, the disciplinary action policy and procedure, and the National Labor Relations Board. Prerequisite: None.

POS 202 Postal Service Finance 3 0 0 3

This course covers the ancillary functions of the support area such as office services, administrative services and bulk accountable paper, accounting, storage and distribution. Prerequisite: None.

POS 203 Postal Customer Service 3 0 0 3

This course is designed to provide the student with an in-depth knowledge of all services provided to postal customers. Includes customer relations, retailing postal services and non-postal services. Prerequisite: None.

POS 205 Postal Service Delivery & Collections 3 0 0 3

The purpose of this course is to introduce the student to the problems, and solutions to the problems, encountered in collecting mail from multiple, diverse points and transporting it in a time and cost effective manner to collection centers for processing and, coversely, in distributing mail from one or more processing points to multiple, diverse recipients. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

POS 207 Employee Relations 3 0 0 3

The objective is to introduce the student to the maintenance organizational structures of the Postal Service. The student will be able to describe the three primary areas of maintenance and will be knowledgeable in the responsibilities of each element. Prerequisite: None.

POS 208 Postal Problems Analysis 3 0 0 3

Presents postal problems for which the student must use system analysis, problem-solving grids, and decisions by objectives to analyze and specify the dimensions of the problems; identify and test possible causes; assess adverse consequences of possible causes, objectives, and solutions; and analyze and test alternatives decided upon as possible objective solutions. Prerequisites: POS 101, 103, and 105.

Psychology Courses

PSY 101 Introduction to Psychology 3 0 0 3

This course is an introductory survey of the field of psychology, wherein the student becomes better acquainted with a human as a biological-social organism. Topics covered include history of the development of psychology, the scientific method in psychology, theory of statistical concepts, intelligence, motivation, emotions and learning. Prerequisite: None.

PSY 104 Dynamics of Human Behavior 3 2 0 4

Human behavior is studied in this course with emphasis on developmental aspects, motivations, common behavioral patterns, and the role of defense mechanisms in human behavior. Prerequisite: PSY 101.

PSY 116 Perspectives on Death 2 0 0 2

This course is designed to create an understanding of death as a biological reality, as a cultural phenomenon, as a spiritual event, as an economic reality, and as a psychological process. The course is also designed to develop an objective and realistic point of view of death based on information and understanding. Prerequisite: PSY 101.

PSY 202 Human Growth & Development 3 0 0 3

In this course human physical and psychological growth and development from infancy to adulthood are studied. Consideration of the social, biological, and cultural influences upon growth are explored in depth. Prerequisite: PSY 101.

PSY 204 Abnormal Psychology 3 0 0 3

This course is a study of the principal abnormal phases of behavior and the ways by which the individual develops abnormal habits of thinking and acting. A survey of the signs of beginning maladjustment and procedures which may be followed to correct these tendencies is made. Special attention is given to the prevention and treatment of behavior disorders. Prerequisite: PSY 101.

PSY 206 Applied Psychology 3 0 0 3

This course is a study of the principles of psychology that assist in the understanding of interpersonal relations on the job. Motivation, feelings, and emotions are considered with particular reference to on-the-job problems. Other topics investigated are employee selection, supervision, job satisfaction, and industrial conflict. Attention is also given to personal and group dynamics so that the student may learn to apply the principles of mental hygiene to his/her adjustment problems as a worker and a member of the general community. Prerequisite: None.

PSY 208 Grief Psychology 3 0 0 3

This course consists of a study of the role of the funeral director in grief counseling. The purpose of the course is to make the aspiring funeral director more understanding and aware of the impact of death on the bereaved. The concepts of dying, death, immortality, grief management, religion and the funeral as a medium in resolving grief are examined from a psychological standpoint. Prerequisite: PSY 101.

PSY 210 Human Relations 3 0 0 3

This course consists of a study of basic principles of human behavior, beginning with an explanation of the biological and cultural roots of human behavior and social drive, and continuing through the many problems of the individual in relationship with others in society. Topics covered include the elements of social behavior, perception during interaction, two-person interaction, small social groups and social organization, the self and interaction, and training for social competence especially within varied work situations. Prerequisite: PSY 101.

PSY 216 Applied Police Psychology 3 0 0 3

A study which builds upon the principles of psychology taught in PSY 101. It is designed to assist law enforcement officers in a better understanding of relationships on the job, at home, and in the community as members of the law enforcement team. Prerequisite: PSY 101.

PSY 230 Personality 2 2 0 3

This course involves the study of the major theories, methods of measurement, and means of modifying personality. Prerequisite: PSY 101.

PSY 250 Industrial Psychology 3 0 0 3

This course consists of a study of the effects of business and organizational structure on the behavior of individuals. Prerequisite: PSY 101.

PSY 252 Organizational Psychology 3 0 0 3

This course is an introductory survey of the area of organizational psychology and introduces the student to the personal relevance and conceptual bases of the phenomena of organizational psychology. Because the course focuses on exercises, games, and role playing to make the insights of behavioral science meaningful and relevant to practicing managers and students of organizational behavior, regular class attendance and student participation is necessary for student success. Prerequisite: PSY 101 or PSY 206.

PSY 260 Social Psychology 3 0 0 3

This course is a study of the effects of groups on the individual. Opinion, attitude change, and surveys are also studied. Prerequisite: PSY 101.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
PSY 270 Motivation	3	0	0	3

In this course an examination is made of the major theories of motivation and the application of techniques that effect motivation. Prerequisite: PSY 101.

PSY 280 Forensic Psychology	5	0	0	5

This course covers a study of the causes of crime, the corrections, trends, and the human personality, adaptive and defensive psychological devices employed by humans involved in crime from a legal standpoint. Abnormal psychological personality traits involved in crimes such as drug abuse, alcoholism, rape and other sexual abberant criminal activities are emphasized. Prerequisite: PSY 101.

PSY 1101 Human Relations	3	0	0	3

This course is a study of basic principles of human behavior. The problems of the individual are studied in relation to society, group membership, and the relations within the work situation. Prerequisite: None.

PSY 1106 Applied Psychology	3	0	0	3

This course presents the procedures for building an efficient, enthusiastic business team and deals with the nature of the interpersonal problems which arise in business organizations. The individual and his behavior are discussed, as well as the problems of influence and authority. Prerequisite: None.

Physical Therapy Courses

PTH 101 Introduction to Physical Therapy	3	3	0	4

Historical background, philosophy, and professional ethics of Physical Therapy; interprofessional relationships between members of the health care team; trends in the development of formal educational programs for a skilled technical assistant, including professional and legal implications; overview of total medical spectrum; concepts of health disease; modalities used in physical therapy; basic principles and techniques of aseptic care, patient handling, and vital signs; orientation to clinical service departments and their administration. Prerequisite: None.

PTH 102 Physical Therapy Procedures I	3	6	0	5

Physical and physiological principles and techniques of selected physical therapy treatment methods; modalities and procedures include patient preparation for treatment, application of hot packs, and massage techniques for the back and upper extremities. Laboratory and classroom practice is followed by clinic practice under supervision in direct patient care service. Prerequisite: PTH 101.

PTH 103 Physical Therapy Procedures II	3	6	0	5

A continuation of the study of the physical and physiological principles and techniques of selected physical therapy treatment measures; low frequency and high frequency currents, including the use of galvanic and faradic currents, short wave and microwave diathermy and ultrasound; massage of the lower extremities. Previously learned skills are reinforced by combining them with the newly learned skills. Laboratory and classroom practice are followed by assignment to a clinical facility for supervised experience in direct patient care service. Prerequisite: PTH 102.

PTH 104 Physical Therapy Procedures III 3 9 0 6

The third of a four-quarter sequence of physical and physiological principles and techniques of application of selected physical therapy measures. Uses of light radiation sources, infra-red and ultraviolet; therapeutic use of paraffin; selected hydrotherapy measures; continuing reinforcement of previously learned skills in conjunction with measures learned in this course. Following classroom and laboratory practice, the student is assigned to a clinical facility to practice all learned skills under supervision in direct patient-care service. Prerequisite: PTH 103.

PTH 105 Physical Therapy Procedures IV 3 12 0 7

This course completes a four-quarter sequence of physical and physiological principles and techniques of applications of basic physical therapy measures. Therapeutic use of cold; uses and techniques of cervical and pelvic tracation are included. All previously learned skills are reviewed thoroughly. The student is introduced to home bound physical therapy provided by a public health or home service agency. Introduction to record keeping and patient care documentation procedures including Problem Oriented Medical Record system will be given. Following classroom and laboratory practice, the student is assigned to a clinical facility to practice under supervision in direct patient care service. Prerequisite: PTH 104.

PTH 106 Seminar in Physical Therapy Procedures 3 0 0 3

A one-quarter course paralleling the clinical affiliations, students present case studies and progress notes on patients treated in their clinical assignments. The rationale for a specific treatment in view of a given diagnosis is discussed in depth. Prerequisite: PTH 105.

PTH 110 Therapeutic Exercise 3 6 0 5

Introduction to basic principles of therapeutic exercise; techniques of manual joint range of motion, ambulation activities, and activities of daily living as they apply to a variety of pathological conditions; uses of assistive and resistive exercise equipment. Thorough review of joint structure, muscle origins and insertions, innervations, actions, and physiology. Orientation to highly specialized exercise techniques is offered, but competence is required only in the more routine therapeutic exercise and ambulation techniques. Prerequisites: BIO 106 and BIO 107.

PTH 201 Pathology/Physiology for Physical Therapist Assistants 4 0 0 4

This survey course is designed to present the causes, disease or trauma processes, and general principles involved in the diagnostic entities most frequently seen and treated with physical therapy. In addition, those physical therapy procedures that are appropriate and most widely used will be discussed in-depth for each of the diagnostic categories covered. Prerequisites: BIO 106, BIO 107, and ENG 115.

PTH 202 Functional Anatomy 2 2 0 3

This course provides the study of applied anatomy and kinesiology. In addition, emphasis is given to the comprehension of joint function and dysfunction as seen in a rehabilitation facility. It consists of two parts: anatomy and kinesiology. The anatomy part consists of coordinated lectures and laboratory sessions in the study of the musculoskeletal system. The kinesiology part consist of coordinated lectures and laboratory sessions in the study of the biomechanics of the musculoskeletal system. Prerequisites: PTH 103 and PTH 110.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

PTH 210 Psychology of Adjustment 3 0 0 3

Explanation of basis for and methods of achieving effective interaction with the patient by student's enhancing one's understanding of one's self, helping the student to understand the dynamics of the health worker-patient relationship and to develop awareness of the complementary roles of other health workers. The emotional reactions to disease, physical impairment and/or handicap by persons with varying basic personality characteristics are explored in-depth. Special problems of working with the elderly and/or terminal patient are also introduced. Prerequisites: PSY 101 and SOC 101.

PTH 215 Community Health and Welfare 3 0 0 3

A one-quarter survey course of various health and welfare resources within a community and the coordination between these agencies. Governmental and social influences in health care, the distinction between the public, voluntary, and private sectors of health and welfare, and the implications of the present system upon possible future changes in the delivery of services are explored. The referral mechanism for total patient care is stressed. Prerequisite: Consent of Instructor.

PTH 298 Clinical Education 4 30 0 14

The student is assigned to a variety of clinical settings for planned learning experiences and practice under supervision for eleven weeks. All learned skills are reinforced during direct patient care service in a general hospital or private clinical area. Prerequisite: PTH 105.

Radiologic Technology Courses

RDT 101 Radiologic Technology I 4 3 0 5

The student is given an orientation to the field of Radiologic Technology, is taught darkroom chemistry and film processing, the basic principles of radiographic exposure, elementary patient care procedures and basic medical terminology and is introduced to radiographic positioning as applied to the appendicular skeleton, primarily upper and lower extremities. Prerequisite: None.

RDT 102 Radiologic Technology II 4 3 0 5

The student is taught the radiographic principles and basic radiographic positioning necessary to perform diagnostic studies of the axial skeleton. Further patient care procedures and medical terminology are included. Radiation protection and topographical anatomy will be stressed. Prerequisite: RDT 101.

RDT 103 Radiologic Technology III 4 3 0 5

The student will learn the techniques for basic views of the thoracic and abdominal viscera, soft tissue radiography and fluorography; how to prepare the patient and the contrast media for these studies. Radiation protection and topographical anatomy will be stressed. Prerequisite: RDT 102.

RDT 111 Clinical Education I 0 12 0 4

Practical experience in a clinical setting including processing of radiographs, practice in ethical and attitudinal situations during patient contact, patient care and basic patient positioning for studies of upper and lower limbs, shoulder and pelvic girdles. The student also applies some of the simpler principles of radiographic exposure. There are regular sessions of film critique. Prerequisite: None.

RDT 112 Clinical Education II **0 12 0 4**

The student will receive practical experience in the actual clinical area. The students will continue to practice and improve their skills in darkroom technique, film processing, and proper care of the automatic processor. They will practice positioning for the routine studies of the upper and lower extremities, the shoulder girdle, and the pelvic girdle and will actually make radiographs of these areas under the supervision of a registered radiologic technologist. There will be regular sessions of film critique; and radiation protection will be observed. Prerequisite: RDT 102.

RDT 113 Clinical Education III **0 0 15 5**

Practical experience 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. The student works in fluoroscopy and makes radiographs of the abdominal and thoracic viscera without the use of contrast media. Soft tissue radiography (exclusive of mammography) and location of foreign bodies are touched upon. Prerequisite: RDT 103.

RDT 114 Clinical Education IV **1 0 39 14**

The student spends the entire summer quarter gaining clinical experience and developing skill in the techniques of diagnostic radiography. He/She reviews film processing and developing, patient positioning and exposure factors. Practice covers radiography of the skeleton, the thoracic and abdominal viscera, and examinations of the abdominal viscera using contrast media and fluoroscopy. Prerequisites: RDT 103 and RDT 113.

RDT 204 Radiologic Technology IV **4 3 0 5**

This course is a continuation of the radiologic technology series. The content covered in this quarter concerns radiation protection, equipment maintenance, more advanced work in the radiography of the skeleton and the art of pediatric radiology. Special views and techniques for diagnostic radiology of the skeleton are emphasized. Prerequisite: RDT 103.

RDT 205 Radiologic Technology V **4 3 0 5**

The study is confined to special radiographic procedures and the mechanics and uses of photofluorography. The student becomes acquainted with the specialized and highly technical procedures used in these studies, the equipment and the general indications and contraindications for each examination. Prerequisite: RDT 204.

RDT 206 Radiologic Technology VI **4 0 0 4**

The student is familiarized with the procedures involved in radiation therapy and nuclear medicine. Office routine is considered. Time is spent reviewing anatomy, positioning, X-ray circuitry and exposure factors in preparation for taking the registry examination. Prerequisite: RDT 205.

RDT 215 Clinical Education V **0 0 27 9**

Practical experience in a clinical setting with emphasis on working with children. The student also practices techniques for special views of the skeleton. Radiation protection practices and routine equipment maintenance are observed and used. Prerequisite: RDT 114.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

RDT 216 Clinical Education VI 0 0 27 9

Practical experience in a clinical setting with emphasis on special radiographic procedures; use of photofluorographic unit, if available; cineradiography; and use of a portable x-ray machine. Radiation protection measures are emphasized and observed. Prerequisites: RDT 204 and RDT 215.

RDT 217 Clinical Education VII 0 0 27 9

Practical experience in a clinical setting with emphasis on special procedures, ultrasound and nuclear medicine. Prerequisite: RDT 216.

RDT 218 Clinical Education VIII 1 0 39 14

The student spends the summer quarter improving his skills in the techniques of general diagnostic radiography and fluoroscopy with both adults and children and has the opportunity to work in the areas of special procedures, ultrasound and nuclear medicine on a limited basis. Prerequisite: RDT 217.

Recreational Courses

REC 109 Facility Management 3 0 0 3

This course is designed to provide information regarding detail in respect to a playground, a community center, playground leadership techniques, activities equipment, supplies and other information conductive to a successful playground and/or community center program. Prerequisite: None.

REC 110 Introduction to Natural and Economic Resources 2 2 0 3

This course is designed to provide information on the various types of plants and animals that might be found in hiking or camping trips. Field trips and projects are emphasized. Prerequisite: None.

REC 111 Introduction to Recreation 5 0 0 5

This course is designed to provide a complete overview of all aspects of organizing and managing a comprehensive recreation program. The focus will be on providing insight into the planning, programming and conducting recreational activities. Opportunity will be provided for students to devote volunteer time with various recreational and educational agencies in the community. Prerequisite: None.

REC 112 Arts and Crafts 2 3 0 3

This course is designed to give the student practical experiences in creative crafts projects and to instruct the student on factors influencing the development and management of a comprehensive crafts program. Prerequisite: None.

REC 114 Scrap Art 0 3 0 1

This course will stress various methods of creating art objects out of recycled materials that can be found around the house. Crafts for youngsters in a recreational setting will be stressed. Prerequisite: None.

REC 119 Team Sports 2 2 0 3

Offers a survey of the basic terminology, skills and rules of selected team sports and their use in recreation. Emphasis is upon knowledge and understanding of the organization, administration, and promotion of sports rather than mastery of performance skills. Prerequisite: None.

REC 120 Cultural Arts 3 0 0 3

Presents music and art as an integral part of a well-planned recreation program. Singing, rhythm and appreciation of music are included with emphasis on developing appreciation and promotion of music and art rather than mastery of performance skills. Prerequisite: None.

REC 121 Progam Planning and Organization 2 0 3 3

A study of essential elements and basic principles involved in the organization, supervision, promotion and evaluation of various types of recreation programs. Emphasis is on organized programs and services. Prerequisite: None.

REC 201 Group Leadership 3 0 0 3

Provides insight into the theory, principles and practice of planning, organizing and conducting effective recreation programs for various groups. Emphasis is on group involvement. Prerequisite: None.

REC 204 Outdoor Recreation 2 4 0 4

This course presents an overview of the scope and extent of outdoor recreation. The history and development of outdoor recreation and its relationship to conservation are presented. Students learn campcraft skills and techniques. Organized camping experiences are planned and conducted to provide leadership experiences. Prerequisite: None.

REC 207 Sports Officiating 2 2 0 3

A course designed to acquaint students with the rules, knowledge and skills in officiating recreational activities. Also included are how to recruit, train and schedule officials for activities. Prerequisite: None.

REC 211 Water Related Sports 2 3 0 3

Includes the basic terminology, skills, and techniques of selected water related activities and their use in recreational programs. Also stressed are swimming pool operations. Prerequisite: None.

REC 220 Camp Counseling 2 4 0 4

This course is designed to teach students the theory of camping, different types of camp programs and skills, and the duties and rewards of being a camp counselor. Prerequisite: None

REC 221 Individual Lifetime Recreation Activities 2 3 0 3

A survey of the basic terminology, skills, and rules for selected individual lifetime sports and their use in recreation. Prerequisite: None.

REC 225 Scheduling Activities and Tournaments 1 2 0 2

A study of the techniques utilized in the scheduling of activities that are incorporated in municipal and therapeutic recreation programs. A major emphasis is placed on structuring tournaments. Prerequisite: None.

REC 231 Social Recreation 3 2 0 4

Introduce methods and materials for planning, organizing, and conducting social activities for groups of various sizes and ages. Major activities are discussed, played and/or demonstrated. Prerequisite: None.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

REC 235 Special Populations and Recreation 3 0 0 3

This course is designed to familiarize the recreation student with the various groups of people in our society who require special consideration when planning recreational activities. These groups include the mentally and physically handicapped, the aged and those people who are classified as social deviants. Factors such as planning activities, facilities and new trends in recreation will be discussed. Prerequisite: None.

REC 250 Family, School, and Community Health 3 0 0 3

This course is designed to study factors that influence physical and mental health. Topics which will be discussed include drugs, alcohol, environmental factors hazardous to health, communicable diseases, death, mental health and all other present day problems that deal with health. Prerequisite: None.

REC 299 Recreation Internship 1 18 0 7

This is an actual work experience in which the student serves as a leader with a recreation department, park, or summer camp. Prerequisite: None.

Real Estate Courses

RLS 202 Real Estate Mathematics 3 0 0 3

Instruction in basic mathematics concepts such as decimals, fractions, percentages, multiplication, division. In addition, various mathematical functions relating to real estate practice, including computations of area, commissions, taxes, interest, discount points, depreciation, prorations, capitalization and depreciation. Prerequisite: None.

RLS 209 Real Estate Finance 3 2 0 4

The economics of finance are covered together with the legal aspects of real estate finance, sources of mortgage money, terms under which different financing should be used, sources of funds, mathematics of real estate finance, and appraisals for financing purposes. Prerequisite: RLS 286 or Real Estate License.

RLS 216 Real Estate Sales and Brokerage 3 2 0 4

The relation of the salesman and the broker is studied. Such factors as real estate salesmanship, location of prospects, bringing the prospect and the property together, the use of advertising in selling, time use, the basic development of a sales plan, a sales presentation, and the closing techniques. Prerequisite: RLS 286 or Real Estate License.

RLS 221 Real Estate Investments and Taxation 3 0 0 3

Local and national trends in the development, use, and value of real property, as well as governmental policies and their affect on the real estate market, are examined and discussed. Skills are developed in the analysis, research, and correlation of the various trends, policies, and factors effecting real estate. A study of real estate as an investment. Prerequisite: RLS 286 or Real Estate License.

RLS 226 Land Development 3 2 0 4

A study of the land and population economics of land utilization and the development factors related to manufacturing, labor, transportation and commerce in or near development location. Prerequisite: RLS 286 or Real Estate License.

RLS 228 Land Use Policy and Governmental Influence on Real Estate 3 2 0 4

A study of the local and national trends in the development, use and value of real property, as well as governmental policies and their effect on the real estate market. Skills are developed in the analysis, research and correlation of the various trends, policies and factors effecting real estate. Prerequisite: RLS 286 or Real Estate License.

RLS 231 Real Estate Merchandising 3 2 0 4

Organization and conduct of real estate brokerage and managerial business and professional activities, and the social, economic, legal licensing and ethical responsibilities of the real estate broker and property manager. A survey of the real estate merchandising process including advertising, marketing, and selling with special emphasis on the real estate salesperson, the consumer, and influence on the economy. Prerequisite: RLS 286 or Real Estate License.

RLS 286 Real Estate Fundamentals and Principles (Broker) 4 2 0 5

A survey course designed to provide both the beginner and the real estate practitioner with the basic knowledge of real estate. It includes the basic aspects of real estate ownership, contracts, financing, closing, licensing, mathematics, brokerage, land use, property management, and law of agency. Approved Prelicensing Real Estate Brokers Course. Prerequisite: None.

RLS 292 Real Estate Appraisal 4 2 0 5

The study of the functions of the real estate appraisers; planning, and the process of appraisal, site evaluation, and building materials, and equipment. The three methods of appraising property are considered: the Income Approach, the Market Data Approach, and the Cost Approach, including depreciation and renovation. Prerequisite: RLS 286 or Real Estate License.

RLS 293 Residential Real Estate Appraisal 3 2 0 4

A study of the methods and techniques used in estimating the value of residential properties and in preparing a residential appraisal report. Topics include analysis of economical factors effecting the value of real estate, local, State, federal and neighborhood influences and attitudes, economical factors and estimation of value. Prerequisites: RLS 286 or Real Estate License and RLS 292.

RLS 294 Commercial Real Estate Appraisal 3 2 0 4

A study of the capitalization of income and the income approach to value. Topics covered include an analysis of steps to estimate the value of income-producing properties such as apartment, hotels, motels, office buildings, retail stores, industrial, etc.; interest rates; recapture rates; capitalization rates and techniques, and appraisal of lease interests. Prerequisites: RLS 286 or Real Estate License and RLS 292.

RLS 296 Property Management 4 2 0 5

A study of the nature of property management, types of property, lease preparation, property maintenance and protection of property (insurance). Other topics include accounting and budgeting in property management, tenant selection and legal and professional requirements of a property manager. Prerequisite: RLS 286 or Real Estate License.

Respiratory Therapy Technology Courses

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
RTH 105 Introduction to Respiratory Therapy Theory and Equipment	2	3	3	4

Beginning preparation for effective functioning in the clinical area. Philosophical overview of the historical development of Respiratory Therapy with emphasis on modern concepts and trends. An introduction to respiratory therapy — why it is necessary, when it is necessary, and how it is administered to the patient, theories and principles of the function, repair, maintenance, and sterilization of gas, humidity and aerosol therapy equipment. Designed to introduce the student to the hosital atmosphere. Following classroom and laboratory practice, the student is assigned to a clinical facility to practice all learned skills under supervision in direct patient care service. Prerequisite: Admission to Respiratory Therapy Program.

RTH 106 Respiratory Therapy Theory and Equipment II	3	3	6	6

Study and guided experiences in the application of the principles underlying airway management, resuscitation, cardiopulmonary physiology, blood gases, acid-base balance, and an introduction to mechanical ventilation. Prerequisite: RTH 105.

RTH 111 Clinical Practice I	3	3	24	12

The utilization of apparatus and techniques of respiratory therapy with emphasis on the anatomical and physiological aspects of various procedures. Study and guided learning experiences concerned with nursing fundamentals as they relate to the basic health needs of the patient. Prerequisites: RTH 105, RTH 106, and RTH 151.

RTH 112 Clinical Practice II	1	0	39	14

Guided learning experiences in the management of various cardiorespiratory diseases and conditions of respiratory failure requiring assisted or controlled ventilation and lung physiotherapy. Perform the most common pulmonary function test and describe the significance of each test in regard to generalized disease processes. Prerequisites: RTH 105, RTH 106, RTH 151, and RTH 111.

RTH 151 Pharmacology	3	0	3	4

This course includes the effects, mechanisms of action, routes and methods of administration, distribution, metabolism, and excretion of drugs with special emphasis on those administered by respiratory therapists. Prerequisite: MAT 105

RTH 213 Clinical Practice III	1	0	36	13

This course will provide for complete student involvement in critical care areas, chest physiotherapy, pulmonary functions and pediatrics. Special emphasis on all parameters involved with continuous mechanical ventilation of the critically ill patient, i.e., intubations, extubation, tracheostomy care, arterial blood gases, and airway maintenance. Prerequisites: RTH 241, RTH 242, RTH 243, RTH 251, RTH 252, and RTH 253.

RTH 241 Pediatrics	2	3	0	3

Normal development and physiology of the fetal, neonate, and pediatric age group will be covered with emphasis on the cardiopulmonary system and perinatology. Disease processes and treatment modalities are taught in depth. Prerequisite: Second year student.

RTH 242 Clinical Application I 3 3 0 4

An in-depth study and laboratory practice of the principles underlying clinical evaluation of the pulmonary system, artificial ventilation, and of disease entitles of the adult and pediatric patient. Emphasis will be on operating ventilatory pattern, and how specific operator-effected changes affect the ventilatory pattern. Prerequisite: Second year student.

RTH 243 Cardiopulmonary Evaluation 3 3 0 4

An in-depth exposure to pulmonary function evaluation procedures. This course emphasizes the relations between structure and function in the diseased lung. The most important tests and their interpretation; patterns of abnormal function in the common types of lung disease as well as repiratory failure and its chief modes of treatment. Prerequisite: Second year student.

RTH 251 Clinical Application II 3 3 0 4

An in-depth study of disease management and the understanding of disease processes, especially as related to surgical procedures and long-standing diseases. An intensive study in planning, providing and evaluating the problems involved in acute respiratory emergencies will be included. Prerequisite: RTH 242.

RTH 252 Departmental Organization and Administration 2 0 0 2

A study in planning, organizing, directing, and controlling a respiratory therapy department. Record keeping, charting, and personnel management will be covered. Prerequisite: Second year student.

RTH 253 Advanced Techniques and Theories 2 2 0 3

The student will study information on heart-lung pumps and other new techniques. Prerequisite: Second year student.

Sociology and Social Science Courses

SOC 101 Principles of Sociology 3 0 0 3

This course is an introduction to the scientific study of human interaction as it takes place within social relationships, organizations, social structures, and societies. The student is provided an opportunity to analyze the various methods used by sociologists to collect and to analyze verifiable data to arrive at generalizations about human behavior. Social patterns are studied within the framework of social institutions. Included in this course are an introduction to social stratification and its consequences as well as the study of social change. Prerequisite: None.

SOC 102 Marriage & Family 3 0 0 3

The sociology of marriage and the family is designed to provide the student with insight into the family as an element in the social structure, its functioning, and changing character. The student is given an opportunity to study the sociological approach to family research and family role structures. The strengths and weaknesses of the various forms of families are considered as well as the factors involved in family disorganization. Prerequisite: None (Recommend SOC 101).

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit

SOC 203 Sociology of Death and Dying 3 0 0 3

This is a course designed to present the philosophical, anthropological, sociological, and cultural aspects of grief, bereavement, and frustration which are the consequences of death and dying. The student is afforded an opportunity to analyze the differential rates of death among the various groups, races, and societies, as well as the various cases and types of death. Further, the student is provided instruction on the preparation for death and dying, such as the health care roles of ritual specialists associated with death and dying, emphasizing health care specialists and funeral directors. Current issues related to death and dying are discussed in depth. Prerequisite: None (Recommend SOC 101).

SOC 210 Contemporary Social Problems 3 0 0 3

This course uses the macrosociological and microsociological approaches to study contemporary social problems. The student is afforded an opportunity to study and analyze the epideminologic, social, and cultural factors associated with deviant behavior, drug associated problems, criminal structures, social disorganization, racial and intergroup conflicts, poverty, violence, and population crisis as well as ecological problems. Prerequisite: SOC 101.

SSC 90 Introduction to the Social Sciences 3 2 0 4

This course offers the student in developmental studies a general introduction to the following social sciences; anthropology, economics, geography, history, political science, psychology, and sociology. The student is provided with an historical perspective of the development of the substantive content of the social sciences, the scientific methods used by social sciences, and some possible applications of each social science. A basic aim of this introductory course is to supply the student with the tools and information he needs to understand and appreciate scientific endeavors in the various social sciences. Prerequisite: None.

SSC 205 American Institutions 3 0 0 3

This is a course of study which focuses on the analysis of the structure, function, change, and meaning of culture, institutions, and society. The student is afforded an opportunity to analyze the distribution and aggregation of identities, roles, and resources as well as how power, prestige, and property are determinants of the class structure in the United States. The primary focus of the course is on the six basic social institutions: the family, religion, economy, education, polity, and health. Prerequisite: None.

Welding Courses

WLD 95 Shop Practice 2 0 3 3

Introduces the student to the art of welding, where welding is used, and the safety in shop practices. The student is introduced to welding with the oxy-acetylene torch in the flat position and oxy-acetylene cutting. In shop practices, the students arc weld in the flat position using $E60_{12}$ or $E60_{13}$ electrodes. This course checks the student to determine if the student has the ability and desire to become a full-time welding student. The minimum of technical facts are covered and only welding in the flat position is discussed. Prerequisite: None.

WLD 1112 Mechanical Testing and Inspection 1 2 3 3

The standard methods for mechanical testing of welds. The student is introduced to the various types of tests and testing procedures and performs the details of the test which give adequate information as to the quality of the weld. Types of tests covered are: DESTRUCTIVE — guided free-bend, notched-bend, tee-bend, trepanning, nick-tear, tension and impact; hydrostatic, boroscopic, radiograph, gamma ray, post-heating, magnetic particle, halide, halogen, cladding and magnaflux. Prerequisites: WLD 1120 and WLD 1121.

WLD 1120 Oxy-acetylene Welding and Cutting 3 0 12 7

Introduction to the history of oxy-acetylene welding, the principles of welding and cutting, nomenclature of the equipment, assembly of unit. Welding procedures such as practice of puddling and carrying the puddle, running flat beads, butt welding in the flat, vertical and overhead positions, brazing, hard and soft soldering. Safety procedures are stressed throughout the program of instruction. Prerequisite: None.

WLD 1121 Arc Welding 3 0 15 8

The operation of A.C. transformers and D.C. motor generator arc welding sets. Studies are made of welding heats, polarities, and electrodes for use in joining various metal alloys by the arc welding process. After the student is capable of running beads, butt and fillet welds in all positions are made and tested in order that the student may detect his weakness in welding. Safety procedures are emphasized throughout the course. Prerequisite: None.

WLD 1122 Commercial and Industrial Practices 3 0 9 6

Designed to build skills through practices in simulated industrial processes and techniques: sketching and laying out on paper the size and shape description, listing the procedure 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. Prerequisite: Three quarters of welding or equivalent.

WLD 1123 Inert Gas Welding 1 0 3 2

Introduction and practical operations in the use of inert-gas-shield arc welding. A study will be made of the equipment, operation, safety, and practice in the various positions. A thorough study of such topics as principles of operation, shielding gases, filler rods, process variations and applications, manual and automatic welding. Prerequisites: WLD 1120 and WLD 1121.

WLD 1124 Pipe Welding 4 0 14 8

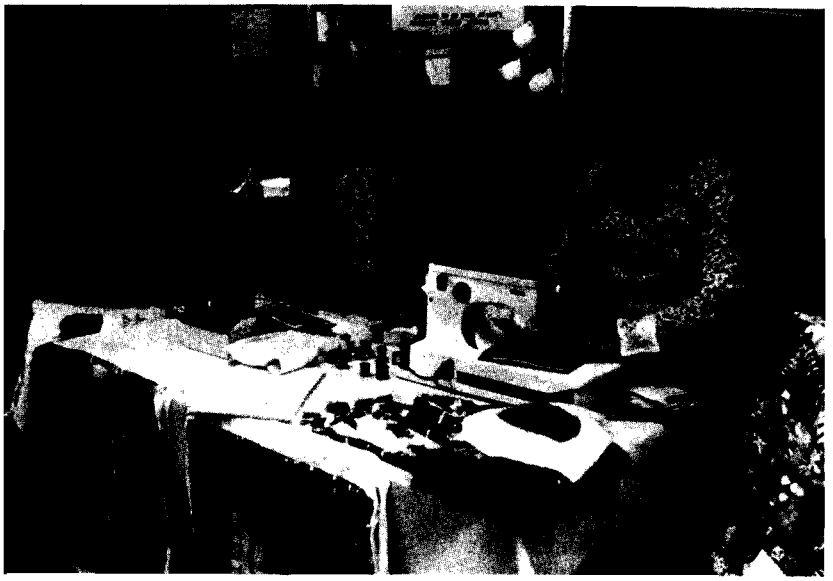
Designed to provide practice in the welding of pressure piping in the horizontal, vertical, and horizontal fixed position using shielded metal arc welding processes according to Sections VIII and IX of the ASME code. Prerequisites: WLD 1120 and WLD 1121.

WLD 1125 Certification Practices 3 0 6 5

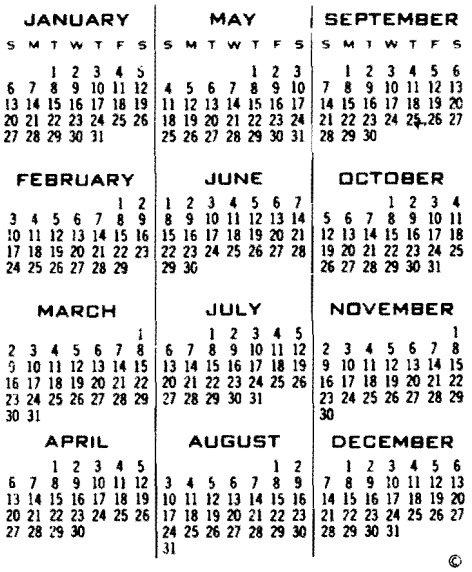
This course involves practice in welding the various materials to meet certification standards. The student uses various tests including the guided bend and the tensile strength tests to check the quality of the work done. Emphasis is placed on attaining skill in producing quality welds. Prerequisites: WLD 1123 and WLD 1124.

	Class Hrs.	Lab Hrs.	Shop/ Clinic Hrs.	Qtr. Hours Credit
WLD 1180 Basic Welding	**2**	**0**	**4**	**3**

A short course in welding, both oxy-acetylene and electric, designed as a helping course for Automotive Mechanics, Air Conditioning and Refrigeration Trade, Drafting, Sheet Metal and Machine Shop. This course covers a minimum of technical facts, and is designed to teach the student to weld in the flat position only with electric arc and oxy-acetylene. Prerequisite: None.



1980



JANUARY						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

FEBRUARY						
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	

MARCH						
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

APRIL						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

MAY						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

JUNE						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

JULY						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

AUGUST						
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

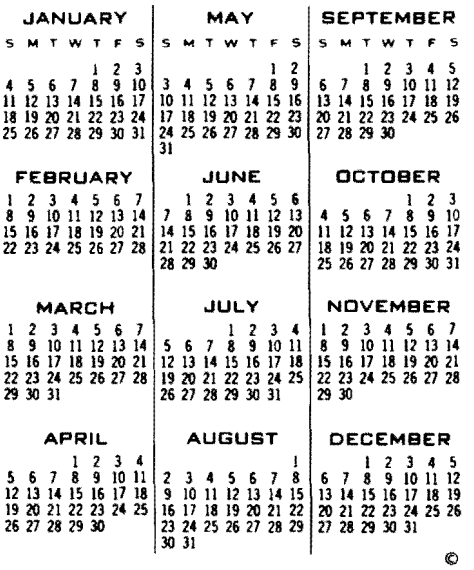
SEPTEMBER						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

OCTOBER						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

NOVEMBER						
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

DECEMBER						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

1981



JANUARY						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

FEBRUARY						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

MARCH						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

APRIL						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

MAY						
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

JUNE						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

JULY						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

AUGUST						
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

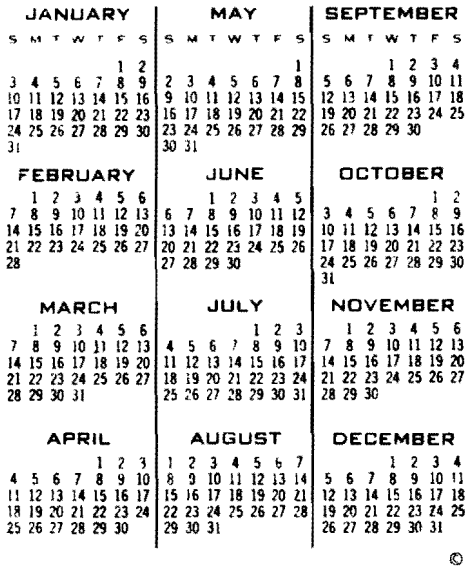
SEPTEMBER						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

OCTOBER						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

NOVEMBER						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

DECEMBER						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

1982



JANUARY						
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

FEBRUARY						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28						

MARCH						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

APRIL						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

MAY						
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

JUNE						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

JULY						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

AUGUST						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

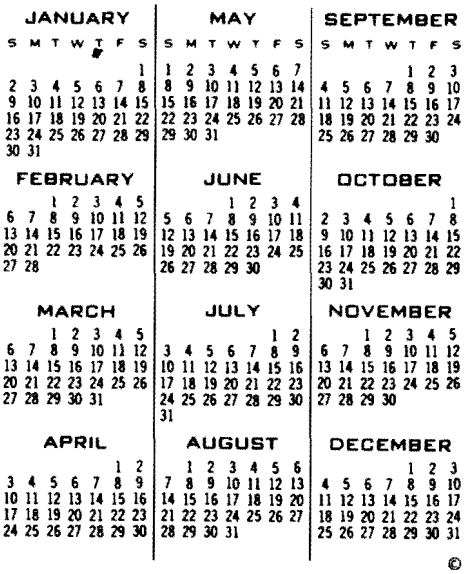
SEPTEMBER						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

OCTOBER						
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

NOVEMBER						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

DECEMBER						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

1983



JANUARY						
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

FEBRUARY						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28					

MARCH						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

APRIL						
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

MAY						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

JUNE						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

JULY						
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

AUGUST						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

SEPTEMBER						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

OCTOBER						
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

NOVEMBER						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

DECEMBER						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31