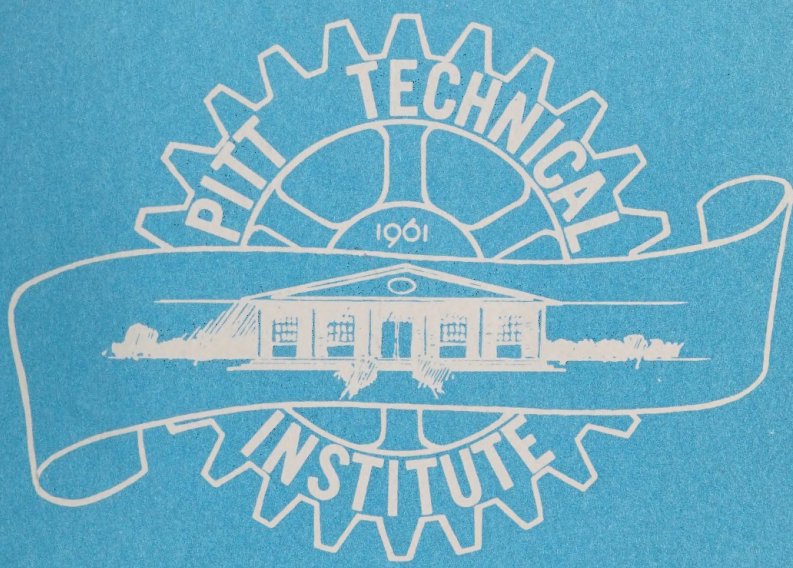


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PITT TECHNICAL INSTITUTE

GREENVILLE, NORTH CAROLINA

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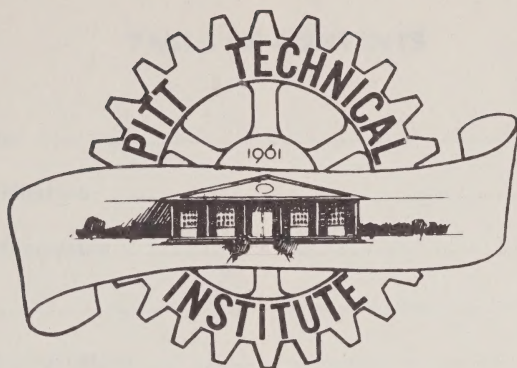
GREENVILLE, NORTH CAROLINA



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PITT TECHNICAL INSTITUTE

Under the Administration of The North Carolina Department of
Community Colleges, State Board of Education, Raleigh, North
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Pitt Technical Institute

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GREENVILLE, NORTH CAROLINA

27834

General Catalog


1967 — 1969

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VOLUME 3

PITT TECHNICAL INSTITUTE

NORTH CAROLINA

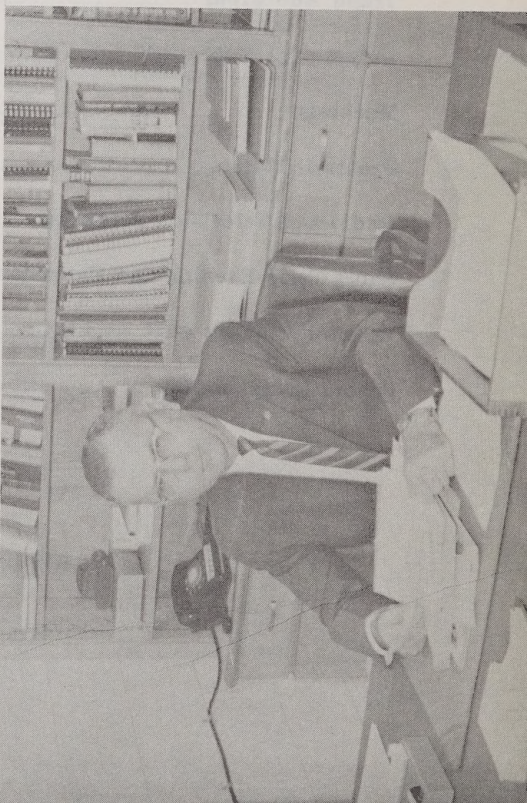
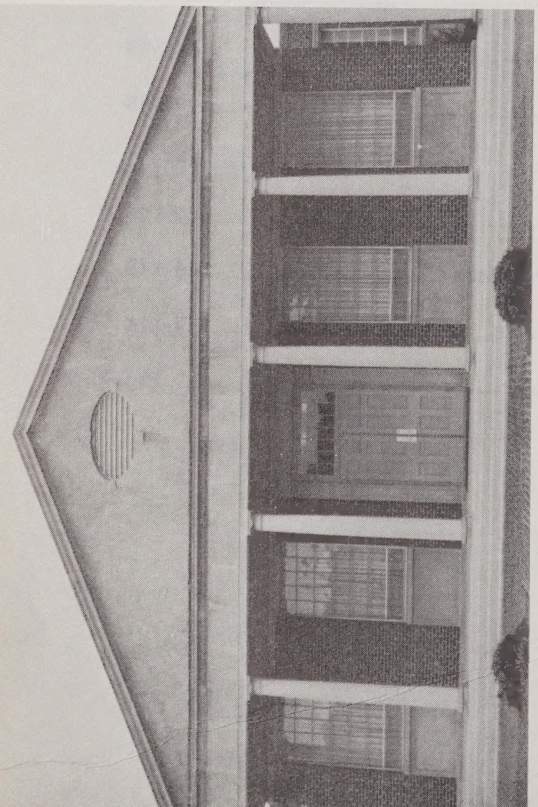


Students having questions not answered in this publication may secure additional information from The Director of Student Personnel, Pitt Technical Institute, P. O. Box 97, Greenville, North Carolina 27834
Telephone 756-3130

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ADMINISTRATION, FACULTY, AND STAFF

Board of Trustees

Length and Expiration	Name and Address	Occupation	Agency Appointing
8 Years June 30, 1973	Mr. Wiley Gaskins Grifton, N. C.	Farmer and Mayor of Grifton	Pitt County Commissioners
4 Years June 30, 1967	Mr. Corey Stokes 807 West Third Street Ayden, N. C.	Owner, S. & E. Motor Service Company	Pitt County Commissioners
6 Years June 30, 1969	Mr. Vernon E. White Winterville, N. C.	Farmer	Pitt County Commissioners
8 Years June 30, 1971	Dr. Robert Lee Humber 117 West Fifth Street Greenville, N. C.	State Senator, Inter- national Lawyer, Educator	Pitt County Commissioners
8 Years June 30, 1973	Mr. C. W. Everett Bethel, N. C.	Attorney at Law	Pitt County Bd. of Education
8 Years June 30, 1971	Mr. R. E. Davenport, Jr. Farmville, N. C.	President, Thermatics, Inc., Elm City, N. C.	Pitt County Bd. of Education
4 Years June 30, 1967	Mrs. D. J. Whichard, II Forest Hills Drive Greenville, N. C.	Housewife	Greenville City School Board
6 Years June 30, 1969	Mr. Joseph M. Taft 1705 East Fifth Street Greenville, N. C.	Co-Owner, Taft Furni- ture Company	Greenville City School Board
8 Years June 30, 1973	Mr. James W. Brewer 614 Maple Street Greenville, N. C.	Businessman	Governor Dan K. Moore
June 30, 1967	Mr. Robert L. Ramey 1802 Rosewood Drive Greenville, N. C.	Tobacconist	Governor Dan K. Moore
June 30, 1969	Mr. J. C. Wynne, Jr. Bethel, N. C.	Oil Distributor	Governor Terry Sanford
June 30, 1971	Mr. A. B. Whitley, Jr. Greenville Boulevard Greenville, N. C.	Owner, A. B. Whit- ley, Inc.	Governor Terry Sanford

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M. A. East Carolina College
Advanced Work—East Carolina College, Duke University

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B. S., N. C. State University
Certificate in School Administration—U.N.C. Chapel Hill
M. S., N. C. State University
Advanced Work—N. C. State University

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M. A., East Carolina College
Advanced Work—University of North Carolina, North Carolina State
University, Florida State University, East Carolina College

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M. A.—East Carolina College

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M. Ed., University of North Carolina, Chapel Hill

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M. A., East Carolina College
Advanced Work—N. C. State University

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Development Training*

Mr. Guy C. Langston, *Area Consultant, Law Enforcement
Training*

Mr. James C. Manning, *MDTA Coordinator*

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B. A., Atlantic Christian College

Verna Faye Bowen..... *Instructor, Business Education*
B. S., East Carolina College
Advanced Work—East Carolina College

Milan Brickhouse..... *Instructor, Auto Mechanics*
Bath High School—1942, Ford Service Schools
General Motors Service Schools

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B. S., East Carolina College
M. A., East Carolina College
Advanced Work—East Carolina College

Marion Sumerlin Bunting..... *Instructor, Math, Physics*
A. B., Atlantic Christian College
Advanced Work—East Carolina College

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Advanced Work—Southeastern Theological Seminary
East Carolina College

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New Bern High School
U. S. Naval Apprentice School

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B. S. Atlantic Christian College
Advanced Work—East Carolina College

Joyce S. Furlong..... *Learning Laboratory Coordinator*
B. S., East Carolina College
Advanced Work—East Carolina College

J. N. Hoover..... *Instructor, Electronics*
B. E. E. E., N. C. State University

Jo Ann Barber Leith..... *Instructor, Business Education*
B. S., East Carolina College
M. A., East Carolina College

Daniel C. Martin, Jr..... *Instructor, Radio and T. V.*
Associate in Electronic Technology—DeVry Technical Institute

Edwin F. Martin, Jr..... *Instructor, Architectural Drafting*
B. S., North Carolina State University
Advanced Work—East Carolina College

William H. Moore..... *Instructor, Agricultural Business*
 B. S. A., University of Georgia
 M. Ed., University of Georgia
 M. S., Ohio State University

Jo Ann Rodri..... *Instructor, Practical Nurse Education*
 Rex Hospital School of Nursing, 1953-1956
 Advanced Work—University of North Carolina

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 B. S., East Carolina College

Roland A. Smith..... *Instructor, Auto Mechanics*
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 Gaston Technical Institute

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 Advanced Work—East Carolina College

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 Lenoir Community College

George G. Edmondson..... *Instructor, Radio and T.V.*
 B. S., East Carolina College

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Mrs. Elizabeth Dudley..... *Secretary*

Mrs. Connie Harrell..... *Ass't. Bookkeeper*

Miss Alberta Manning..... *Business Machines Operator*

Mrs. Linda Mauney..... *Secretary*

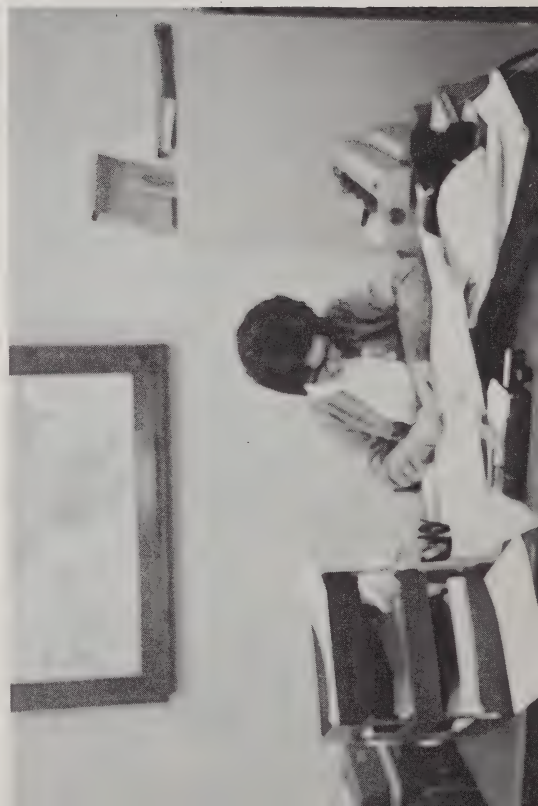
Mrs. Linda Smith..... *Secretary*

Mrs. Mary Alice Smith..... *Secretary*

Mrs. Nina Stokes..... *Secretary*

Mrs. Helen Worthington..... *Bookkeeper*





General Information

SCHOOL CALENDAR 1967-1968**(Tentative)**

FALL QUARTER

September	11	Monday—Workshop for all instructors
	12	Tuesday—Registration
	13	Wednesday—Student orientation
	14	Thursday—First day of classes
	18	Monday—Last day for late registration
	22	Friday—Last day to change class assignment
October	20	Friday—Mid-quarter reports due
November	23-24	Thursday-Friday—Thanksgiving holidays
December	1	Friday—Last day of fall quarter
	4	Monday—Final quarter grades due

Total Number of Teaching Days—55

WINTER QUARTER

December	5	Tuesday—Registration
	6	Wednesday—First day of classes
	11	Monday—Last day for late registration
	15	Friday—Last day to change class assignments
	21	Thursday—First day of Christmas holidays
January	2	Tuesday—First day of classes after Christmas holidays
	23	Tuesday—Mid-quarter reports due
March	1	Friday—Last day of winter quarter
	4	Monday—Final quarter grades due

Total Number of Teaching Days—55

SPRING QUARTER

March	6	Wednesday—Registration
	7	Thursday—First day of classes
	12	Tuesday—Last day for late registration
	18	Monday—Last day to change class assignment
April	11	Thursday—Mid-quarter reports due
	12	Friday—First day of Easter holidays
	16	Tuesday—First day of classes after Easter holidays
May	24	Friday—Last day of classes in spring quarter
	26	Sunday—Graduation for two-year students

Total Number of Teaching Days—55

May 27-June 4 State planned workshops—all teachers on duty

SUMMER QUARTER

June	5	Wednesday—Registration
	6	Thursday—First day of classes
	12	Wednesday—Last day for late registration
July	4-5	Thursday-Friday—Independence Day holidays
	8	Monday—First day of classes after Independence Day holidays
	19	Friday—End of six-weeks session
	22	Monday—Mid-quarter reports due
August	23	Friday—Last day of classes
	25	Sunday—Graduation for all four-quarter students

Total Number of Teaching Days—55

August 26 to	Time set aside for 10 days vacation for four-quarter instruct-
September 6	ors
September 9	All instructors present for workshops

SCHOOL CALENDAR 1968-1969

(Tentative)

FALL QUARTER

September	9	Monday—All instructors present for workshops
	10	Tuesday—Registration
	11	Wednesday—Student orientation
	12	Thursday—First day of classes
	23	Monday—Last day for late registration
	30	Monday—Last day to change class assignment
October	18	Friday—Mid-quarter reports due
November	27	Wednesday—Last day of classes in fall quarter
	28-29	Thursday-Friday—Thanksgiving holidays
Total Number of Teaching Days—55		

WINTER QUARTER

December	2	Monday—Registration
	3	Tuesday—First day of classes
	12	Thursday—Last day for late registration
	19	Thursday—Last day to change class assignment
	20	Friday—Last day of school before Christmas holidays
January	2	Thursday—First day of classes after Christmas holidays
	20	Monday—Mid-quarter reports due
February	27	Thursday—End of winter quarter
	28	Friday—All quarter reports due

Total Number of Teaching Days—55

SPRING QUARTER

March	5	Wednesday—Registration
	6	Thursday—First day of classes
	14	Friday—Last day for late registration
	21	Friday—Last day to change class assignment

PITT TECHNICAL INSTITUTE

April	3	Thursday—Last day of classes before Easter holidays
	8	Tuesday—First day of classes after Easter
	15	Tuesday—Mid-quarter reports due
May	23	Friday—Last day of classes in spring quarter
	24	Saturday—All quarter reports due
	25	Sunday—Graduation for all two-year students
Total Number of Teaching Days—55		
May 26-June 3	3	State sponsored workshops—all faculty

SUMMER QUARTER

June	4	Wednesday—Registration
	5	Thursday—First day of classes
	16	Monday—Last day for late registration
	20	Friday—Last day to change class assignment
July	3	Thursday—Last day of classes prior to Independence Day holiday
	14	Monday—Mid-quarter reports due
	17	Thursday—Last day of classes for six-week summer session
August	21	Thursday—Last day of classes in summer quarter
	21	Thursday—All quarter reports due
	22	Friday—Graduation for all four-quarter classes
Aug. 25-Sept. 5	5	Time set aside for four-quarter instructors' ten-day vacation
September	8	All instructors present for workshops

DAILY CLASS SCHEDULE

8:30- 9:30	.....	First Period
9:30-10:30	.....	Second Period
10:30-11:30	.....	Third Period
11:30-12:30	.....	Fourth Period (Lunch)
12:30- 1:30	.....	Fifth Period (Lunch)
1:30- 2:30	.....	Sixth Period
2:30- 3:30	.....	Seventh Period
3:30- 4:30	.....	Eighth Period

HISTORY

Pitt Technical Institute had its beginning in 1960 when the citizens of Pitt County approved a bond issue for the construction of the physical plant. The leadership of Dr. Robert Lee Humber was an important factor in the establishment of the school. The school was chartered by the State of North Carolina in 1961 to serve the needs of Pitt County and the surrounding area. In 1964 the school was designated a Technical Institute by the State Board of Education.

The first classes were held in the new modern building in September, 1964. Since the beginning of the Institute there has been a steady increase in enrollment.

The Pitt Technical Institute is located on Highway 11, South, between Greenville and Winterville. There is approximately 40,000 square feet of useable space designed to house a technical and vocational trade school. The laboratories and shops are spacious and well equipped. There is available a modern technical library.

As well as facilities at the center in Greenville, extension units are located in Washington, Williamston, Everetts and Roanoke Rapids.

Purposes

Pitt Technical Institute was established to serve the people and industry of this area by providing a comprehensive post-secondary educational program in Technical and Vocational curriculums. The institute has available programs in technical, business, vocational-trade, adult education, high-school upgrading, basic education, cultural and avocational courses. Guidance services are available at the institute for both in-school and out-of-school citizens.

The institute strives to develop skills, knowledge, attitudes, and abilities of each student for entry and progress within any work area. The institute seeks to help employed adults upgrade their skills or train for new job opportunities as they become available in our area. The institute further seeks to help every individual who enters its doors to become better citizens of a democratic society.

Grading System

93—100	—	Excellent
85— 92	—	Good
77— 84	—	Average
70— 76	—	Below Average
Below 70	—	Failing
		Incomplete

Counseling and Testing

Additional counseling and testing may be required by a student to insure proper placement within the curriculum. The counseling service will work with the individual to keep them informed of the progress they are making. Students are encouraged to avail themselves of the counseling and testing services.

Student Conduct

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

Dismissal

A student may be dismissed from a class or from the Institute for academic deficiencies, or for conduct or personal habits which are not in the best interests of the student and of the institution.

Information on dismissal and re-instatement procedures may be obtained in the Student Personnel Office.

Attendance

Students are expected to attend all class, laboratory and shop sessions. No grade will be issued for a course if, for whatever reason, a student has been absent for 25% of the total possible class sessions (hours) per course per quarter.

A student must satisfy his instructor that he should be permitted to remain in a course after he incurs any absence in excess of the following:

- A. Three (3) regular one hour class sessions.
- B. Two (2) shop or laboratory sessions which meet for two or more hours.
- C. Two (2) regular one hour class sessions, and one (1) shop or laboratory session which meets for two or more hours.

When a student is absent from a class and a laboratory or shop session which meet consecutively, each session missed will be counted as an absence making a total of two absences for that course.

Students have full responsibility for accounting to their instructors for absences. The instructor has final authority for

deciding whether work missed can be made up.

Students are expected to report for class on time. Habitual tardiness may, at the discretion of the instructor, be considered in computing class attendance. A student may appeal an instructor's decision by arranging a conference with the Director of Student Personnel and the instructor involved.

Fundamentals Learning Laboratory

The purpose of the Fundamental Learning Laboratory are threefold: to provide necessary materials and facilities to help adults prepare for the high school equivalency examination, to help students and adults gain educational improvement of their own choosing and to help students remedy academic deficiencies.

A registration fee of \$2.00 is paid by the applicant upon registering. The only necessary materials he need furnish are pencil and paper, and the only requirement is that he be at least eighteen years old.

The lab schedule will be announced at the beginning of the school term.

Withdrawals

Students desiring to withdraw from the Institute or from a specific course must officially withdraw through the Student Personnel Office.

Students failing to officially withdraw waive all re-entry privileges for one year and all grades for the quarter will be shown as failing.

A student who officially withdraws before the end of the seventh week of the quarter in which the course is normally completed will receive a grade of WP or WF depending upon whether the work is passing or failing at the time of withdrawal.

Students cannot officially withdraw from a course after the seventh week, except in emergency situations.

Credit

No degree, diploma, certificate, or course credit will be granted, nor will a transcript be furnished a student until all financial obligations to the Institute, other than student loans, have been paid.

All previously incurred expenses and accounts, including library fines, must be fully paid before a student may re-enter at the beginning of any quarter.

Student Government

In order to promote the general welfare of the school in a democratic fashion, the students organized a Student Council to facilitate communication between the student body, the faculty, and the administration. The council membership consists of a president, vice president, secretary-treasurer, and one member from each of the study programs in the school. The student council provides a means through which the students may practice good citizenship.

Housing and Boarding

The Pitt Technical Institute does not have dormitory or cafeteria facilities for students to use. Most of the students live within commuting distance of the school and drive back and forth each day. The school will assist students who wish to live near the school to find suitable living accommodations.

There are vending machines in the student lounge where students may purchase fresh sandwiches, hot soup, drinks, and other food-items for their needs during the school day.

Draft Deferment

Students will be exempted from the Selective Service draft as long as they are enrolled and doing satisfactory work at the school. Deferment forms will be sent the Selective Service Board upon request of the student.

Library

The Library is housed in spacious, well-lighted quarters, with seating space for 50 readers. The book collection which is primarily scientific and technical consists of 6,098 volumes. New books are being added continually. Among these are biographies and historical novels. The reference collection contains 5 sets of encyclopedias and more than 125 specialized dictionaries and handbooks. In addition to the book collection, about 100 periodicals and 11 newspapers are received currently. The Library is also the audio-visual center of the school. Included are a variety of projection equipment and a fast growing collection of films, filmstrips, and slides. There is available a good selection of other materials, such as pamphlets and clippings.

The Library is open from 8:00 a.m. to 10:00 p.m. daily. A full-time librarian is on hand to assist students with special problems. All citizens of Pitt County, whether a student or not may check out books.

Placement Service

The Institute will provide a placement service for its graduates. Prospective employers will be kept abreast with the curriculum and the numbers and names of students.

Student Lounge

An area is provided for students to use during their recess and leisure time. Vending machines are available for soft-drinks, pastry and sandwiches.

Recreation

Recreational facilities are being added as space and finances will allow. Table tennis and other games are available.

EXPENSES

(For one and two-year programs)

Tuition

Full-time students will pay tuition of \$32.00 per quarter. This will be due on the registration date for each quarter. Part-time students will pay tuition fees of \$2.50 for each credit hour of work taken. Students whose legal residence is outside of the State of North Carolina will pay tuition fees two-and-a-half times the above rates.

Books and Supplies

A student is required to buy the necessary textbooks and supplies prescribed in the curriculum area he is entering. These vary widely according to curriculum.

Other Fees

All students are urged to carry the group insurance available at the Institute for \$2.50 per year.

Students in the Practical Nurse Education curriculum may be required to purchase their uniforms.

An activity fee of \$2.00 per quarter will be charged all students registered for curriculum programs.

Students may purchase year books if they desire.

A nominal fee is charged for cap, gown, and diploma at graduation.

Refunds

Refunds for full-time students are made only when a student withdraws from the Technical Institute for unavoidable reasons. In such cases, \$20.00 may be refunded if withdrawal is completed within 10 calendar days from the beginning of the quarter. No refunds can be made after this time.

Work-Study Program

Work-study positions are available under provisions of the Vocational Education Act of 1963. To be eligible, the person must be enrolled or accepted for enrollment as a full-time student in occupational education. Applicants must be between 18 and 21 years of age and in need of the earnings to commence or to continue occupational education. Students approved for this program may be employed up to a maximum of 15 hours per week after regularly scheduled classes. Requests for information and application forms should be directed to the Office of Student Personnel.

Part-Time Employment

Students in need of part-time employment to help meet educational and personal expenses will be assisted by the Office of Student Personnel in locating job opportunities in the local area.

Veterans

Qualified veterans who are admitted for instruction may be approved upon presentation of the Certificate of Eligibility issued by the Veterans Administration. Students will be accepted under Public Law 550 or Public Law 89-358. Veterans under Public Law 550 and 89-358 are responsible directly to the school for payment of all costs.

SCHOLARSHIPS AND LOANS**North Carolina Bankers Student Loan Plan**

The Student Loan Plan is a joint effort of Tarheel business, education and government which enables you to continue your education after high school even though you may not have the necessary money. Administered through the College Foundation, Inc., the plan is of special value to students who find it necessary to obtain part-time employment at their particular college, university, or technical school.

Any North Carolina citizen who is accepted for admission by an accredited college, university, or technical institute within the state is considered eligible to participate in the plan.

When your application for a student loan is received by your college admissions officer, he may then refer it to the College Foundation Incorporated. The Foundation's funds come from the many North Carolina banks taking part in the Student Loan Plan.

No repayment is required while you are enrolled as a student. After graduation, you arrange with the Foundation to repay your obligation. You may have up to four years in which to pay back the loan.

James E. and Mary Z. Bryan Student Loan Plan

Any bona fide resident of North Carolina who desires an education beyond the high school and who has been accepted by an accredited school either within or without the State of North Carolina is eligible to apply for a loan. Each applicant must meet certain academic standards, as related to the course of study he plans to pursue and must substantiate proof of financial need.

Students who wish to apply for a loan should contact the Student Aid Officer at the institution. The Student Aid Officer will supply application forms and detailed information concerning the loan procedures. When the student meets institutional requirements for financial assistance, the loan application will be forwarded to the Foundation's Raleigh office. When approved, the loan funds will be disbursed by the Foundation to the Institution and the student and will be sent to the Student Aid Officer. Completed applications must be returned to the Student Aid Officer—not returned directly to the Foundation.

Loans are made directly to the student; thus the student is the prime borrower. Co-signers are necessary on all notes and signatures are to be notarized. There is no payment required on the principal while the borrower is attending school as a full-time student. Interest at the rate of four per cent accrues while the student is in school and at six per cent during the repayment period. The maximum amount available per student is \$1,000.00 per school year. Repayment shall begin ninety days after leaving school and shall extend over a period of six years if the total maximum amount of \$4,000 is borrowed.

For additional information and applications, contact the Student Aid Officer at the school.

COURSE NUMBERING SYSTEM

The following system established by the Department of Community Colleges is used in designating the courses offered by the Institute.

1. Each course is indicated by a three-letter prefix designating the general subject area. The prefix for technical courses will be preceded by the letter "T".
2. A number follows the letter prefix to indicate a specific course within an area according to the following rules:
 - Vocational* courses are assigned numbers within the range of 1000 to 2000.
 - Technical* courses are assigned numbers within the range of 100 to 300.
 - Adult Education* courses beyond the high school level are assigned numbers within the range of 2000 to 3000.
 - Special* courses developed by the Institute for curriculum programs will be indicated by the letter "S" following an appropriate prefix and number chosen according to the above rules.

The Following is a List of the Abbreviations Used as Prefixes:

AHR	.....	Air Conditioning, Heating & Refrigeration
ART	.....	Art
AUT	.....	Automotive
BUS	.....	Business
CHM	.....	Chemistry
CAT	.....	Commercial Art
DEN	.....	Dental
DFT	.....	Drafting and Design
ECO	.....	Economics
ELC	.....	Electrical
EDP	.....	Electronic Data Processing
ELN	.....	Electronics
ENG	.....	English
ISC	.....	Industrial Science
MAT	.....	Mathematics
MEC	.....	Mechanical
NUR	.....	Nursing
PHI	.....	Philosophy
PHY	.....	Physics
PME	.....	Power Mechanics
POL	.....	Political Science
PSY	.....	Psychology
SOC	.....	Sociology
SSC	.....	Social Science
WLD	.....	Welding

Admission Requirements—Technical Program

Requirements for admission of a candidate to the regular two-year technology program include the following qualifications:

1. Must be a high school graduate or have a state approved equivalency certificate.
2. Should have high school credits for two units of mathematics, one of which is in algebra and the other in plane geometry, or an equivalent in modern mathematics. Competence may be determined by appropriate tests. Those who fail to meet the accepted standards for technical mathematics will be required to successfully complete a prerequisite mathematics course to remove the deficiency. A student with deficiencies may be admitted only when there is strong indication of probable success.
3. Should have completed one unit of physical science with laboratory.
4. Must submit transcripts of high school and post-high school education.
5. Must demonstrate aptitude for technician training as determined by standard tests. These tests will aid in student selection, placement, and guidance. Institutional guidance and counseling will be available to the student throughout his education, not just at the time of his enrollment.
6. Must be in good physical and mental health.
7. Must have an interview with a designated representative for discussing enrollment plans and lifetime career goals.

Application forms for admission to the technical division may be obtained from the Admissions Office.

Admission Requirements—Vocational Trades

A candidate for admission to the regular trade-vocational training programs must meet the following qualifications:

1. Must be at least 18 years of age and have the ability to enter into or make advancement in the area in which enrolled.
2. Must have satisfactorily completed a minimum of eight (8) units of accredited secondary school work. Those who have not successfully completed eight (8) units of such work will be required to take other standard and/or local institution tests.
3. Must demonstrate aptitude for trade-vocational training as determined by standard and/or local institution tests to insure ability to meet job requirements in the desired trade.

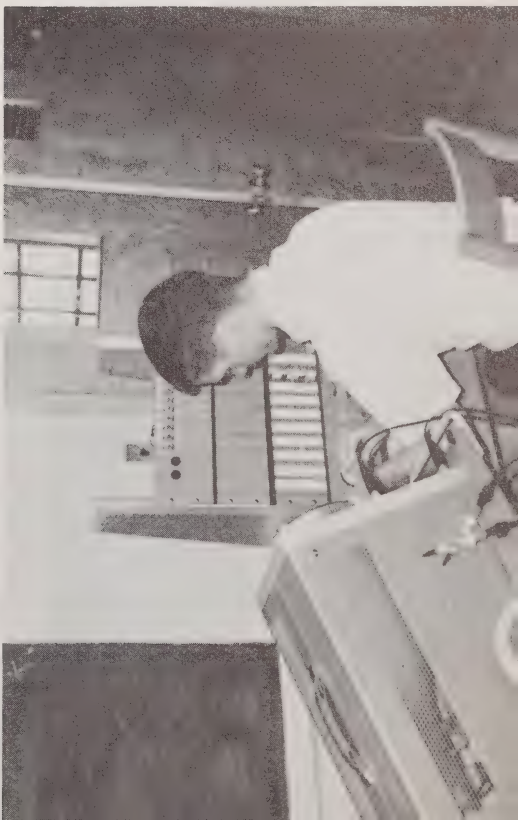
4. Must have one (1) unit of secondary school math. Those who have deficiencies will be required to remove the deficiency before completing their training. Provisional admittance may be granted at the discretion of the College administration.
5. Must have a personal interview with designated school representative.
6. Must be in good physical and mental health.

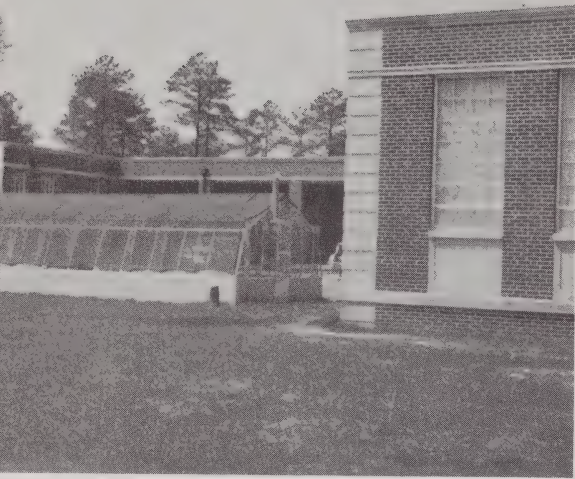
Application for Admission to Curriculum Programs

Any person who wishes to take a course or program is asked to complete an application form and return it to the Institute. Upon receipt of the application, the Student Personnel Office will mail promptly to the prospective student instructions regarding admission procedures. Applications should be submitted well in advance of the beginning of the term in which the student desires to enroll. While students may be processed to the day of registration, an early application assures adequate time for the processing of the student and enables entry into a program where enrollment may be limited. Candidates are encouraged to apply early to be assured of a place in class. Classes are closed when maximum enrollment is reached. A student who plans to pursue a diploma or associate degree must ask his high school or college to submit a transcript of all previous work undertaken. Prior to registration, candidates may be requested to appear at the Institute for a personal interview and tests.

Schedule of Curriculum Classes—Course Offerings

Shortly before registration day each quarter, the Institute will announce a master schedule of courses to be offered. This will generally include all those courses required for a student to complete the work as outlined in the catalog for his curriculum. In some instances, however, it will be necessary for the Institute to rearrange this sequence of course offerings. Every effort will be made to enable a student to complete his program in the minimum possible time. Whenever practical, make-up classes and special courses will be offered to those needing them.





Technical Education

ACCOUNTING

INTRODUCTION

Purpose of Curriculum

Accounting is one of the fastest growing employment fields in America today, and the job outlook for good accountants seems bright for many years to come. 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 specific objectives of the Accounting Curriculum are to develop the following competencies:

1. Understanding of the principles of organization and management in business operations.
2. Understanding of the fundamentals of accounting and analysis of financial statements.
3. Understanding and skill in effective communications for business.

Job Description

The duties and responsibilities of an accountant vary somewhat in different firms. Some of the things an accountant might do are: record transactions, render periodic reports, maintain cost records, make special reports, complete tax returns, audit the books, and advise management in areas of financial affairs.

The graduate of the Accounting Curriculum may qualify for various jobs in business and industry leading to any of the following accounting positions: accounting clerk, payroll clerk, accounting machine operator, auditor, and cost accountant. This training plus further experience should prepare them to become office managers, accounting supervisors, and to fill other responsible positions in a business firm.

Suggested Curriculum By Quarters

COURSE TITLE			Hours		Quarter Hours Credit
			Per Week Class	Lab.	
FIRST QUARTER					
T-ENG	101	Grammar	3	0	3
T-BUS	102	Typewriting (or Elective)	2	3*	3
T-MAT	110	Business Mathematics	5	0	5
T-BUS	101	Introduction to Business	5	0	5
T-ECO	102	Economics	3	0	3
			—	—	—
			18	3	19
SECOND QUARTER					
T-ENG	102	Composition	3	0	3
T-BUS	120	Accounting	5	2	6
T-ECO	104	Economics	3	0	3
T-BUS	115	Business Law	3	0	3
T-BUS	123	Business Finance	3	0	3
			—	—	—
			17	2	18
THIRD QUARTER					
T-ENG	103	Report Writing	3	0	3
T-BUS	124	Business Finance	3	0	3
T-BUS	110	Office Machines	2	2	3
T-BUS	121	Accounting	5	2	6
T-BUS	116	Business Law	3	0	3
			—	—	—
			16	4	18
FOURTH QUARTER					
T-ENG	204	Oral Communication	3	0	3
T-EDP	104	Introduction to Data Processing Systems	3	0	0
T-BUS	222	Accounting	5	2	6
—————		Elective	6	0	6
			—	—	—
			17	4	19

FIFTH QUARTER

T-ENG 206	Business Communication	3	0	3
—————	Social Science Elective	3	0	3
T-BUS 223	Accounting	5	2	6
T-BUS 225	Cost Accounting	3	2	4
T-BUS 235	Business Management	3	0	3
		—	—	—
		17	4	19

SIXTH QUARTER

—————	Social Science Elective	3	0	3
T-BUS 229	Taxes	3	2	4
T-BUS 269	Auditing	3	2	4
—————	Elective	4	0	4
		—	—	—
		13	4	15
	Total Quarter Hours in Courses			98
	Electives (Min.)			10
				—
	Total			108

*"Manipulative laboratory" involves development of skills and job proficiency. Credit of one quarter hour for each three hours of laboratory.



COURSE DESCRIPTIONS BY QUARTERS

FIRST QUARTER	Hours		Quarter Hours Credit
	Per Week Class	Lab.	
T-ENG 101 Grammar	3	0	3
<p>Designed to aid the student in the improvement of self-expression in grammar. The approach is functional with emphasis on grammar, diction, sentence structure, punctuation, and spelling. 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.</p>			
T-BUS 102 Typewriting	2	3*	3
<p>Introduction to the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, tabulation, and manuscripts. Prerequisite: None.</p>			
T-MAT 110 Business Mathematics	5	0	5
<p>This course stresses the fundamental operations and their application to business problems. Topics covered include payrolls, price marking, interest and discount, commission, taxes, and pertinent uses of mathematics in the field of business. Prerequisite: None.</p>			
T-BUS 101 Introduction to Business	5	0	5
<p>A survey of the business world with particular attention devoted to the structure of the various types of business organization, methods of financing, internal organization, and management. Prerequisite: None.</p>			
T-ECO 102 Economics	3	0	3
<p>The fundamental principles of economics including the institutions and practices by which people gain a livelihood. Included is a study of the laws of supply and demand and the principles bearing upon production, exchange, distribution, and consumption both in relation to the individual enterprise and to society at large. Prerequisite: None.</p>			
SECOND QUARTER			
T-ENG 102 Composition	3	0	3
<p>Designed to aid the student in the improvement of self-expression in business and technical composition. Emphasis is on the sentence, paragraph and whole composition. Prerequisite: T-ENG 101.</p>			

T-BUS 120 Accounting 5 2 6

Principles, techniques and tools of accounting, for understanding of the mechanics of accounting. Collecting, summarizing, analyzing, and reporting information about service and mercantile enterprises, to include practical application of the principles learned.

Prerequisite: T-MAT 110.

T-ECO 104 Economics 3 0 3

Greater depth in principles of economics, including a penetration into the composition and pricing of national output, distribution of income, international trade and finance, and current economic problems.

Prerequisite: T-ECO 102.

T-BUS 115 Business Law 3 0 3

A general course designed to acquaint the student with certain fundamentals and principles of business law, including contracts, negotiable instruments, and agencies.

Prerequisite: None.

T-BUS 123 Business Finance 3 0 3

Financing of business units, as individuals, partnerships, corporations, and trusts. A detailed study is made of short-term, long-term, and consumer financing.

Prerequisite: None.

THIRD QUARTER**T-ENG 103 Report Writing** 3 0 3

The fundamentals of English are utilized as a background for the organization and techniques of modern report writing. Exercises in developing typical reports, using written techniques and graphic devices are completed by the students. Practical application in the preparation of a full-length report is required of each student at the end of the term. This report must have to do with something in his chosen curriculum.

Prerequisite: T-ENG 102.

T-BUS 124 Business Finance 3 0 3

Financing, federal, state, and local government and the ensuing effects upon the economy. Factors affecting supply of funds, monetary and credit policies.

Prerequisite: T-BUS 123.

T-BUS 110 Office Machines 2 2 3

A general survey of the business and office machines. Students will receive training in techniques, processes, operation and application of the ten-key adding machines, full keyboard adding machines, and calculator.

Prerequisite: None.

T-BUS 121 Accounting 5 2 6

Partnership and corporation accounting including a study of payrolls, federal and state taxes. Emphasis is placed on the recording, summarizing and interpreting data for management control rather than on bookkeeping skills. Accounting services are shown as they contribute to the recognition and solution of management problems.

Prerequisite: T-BUS 120.

T-BUS 116 Business Law 3 0 3

Includes the study of laws pertaining to bailments, sales, risk-bearing, partnership-corporation, mortgages, and property rights.

Prerequisite: T-BUS 115.

FOURTH QUARTER

T-ENG 204 Oral Communication 3 0 3

A study of basic concepts and principles of oral communications to enable the student to communicate with others. Emphasis is placed on the speaker's attitude, improving diction, voice, and the application of particular techniques of theory to correct speaking habits and to produce effective oral presentation. Particular attention given to conducting meetings, conferences, and interviews.

Prerequisite: T-ENG 101.

T-EDP 104 Introduction to Data Processing Systems 3 2 4

Fundamental concepts and operational principles of data processing systems, as an aid in developing a basic knowledge of computers, prerequisite to the detail study of particular computer problems. This course is a prerequisite for all programming courses.

Prerequisite: None.

T-BUS 222 Accounting 5 2 6

Thorough treatment of the field of general accounting, providing the necessary foundation for specialized studies that follow. The course includes, among other aspects, the balance sheet, income and surplus statements, fundamental processes of recording, cash and temporary investments, and analysis of working capital.

Prerequisite: T-BUS 121.

FIFTH QUARTER

T-ENG 206 Business Communication	3	0	3
<p>Develops skills in techniques in writing business communications. Emphasis is placed on writing action—getting sales letters and prospectuses. Business reports, summaries of business conferences, letters involving credit, collections, adjustments, complaints, orders, acknowledgments, remittances, and inquiry.</p> <p>Prerequisite: T-ENG 102.</p>			
T-BUS 223 Accounting	5	2	6
<p>Additional study of intermediate accounting with emphasis on investments, plant and equipment, intangible assets and deferred charges, long-term liabilities, paid-in capital, retained earnings, and special analytical processes.</p> <p>Prerequisite: T-BUS 222.</p>			
T-BUS 225 Cost Accounting	3	2	4
<p>Nature and purposes of cost accounting; accounting for direct labor, materials, and factory burden; job cost, and standard cost principles and procedures; selling and distribution cost; budgets, and executive use of cost figures.</p> <p>Prerequisite: T-BUS 121.</p>			
T-BUS 235 Business Management	3	0	3
<p>Principles of business management including overview of major functions of management, such as planning, staffing, controlling, directing, and financing. Clarification of the decision-making function versus the operating function. Role of management in business—qualifications and requirements.</p> <p>Prerequisite: None.</p>			

SIXTH QUARTER

T-BUS 229 Taxes	3	2	4
<p>Application of federal and state taxes to various businesses and business conditions. A study of the following taxes: income, payroll, intangible, capital gain, sales and use, excise, and inheritance.</p> <p>Prerequisite: T-BUS 121.</p>			
T-BUS 269 Auditing	3	2	4
<p>Principles of conducting audits and investigations; setting up accounts based upon audits; collecting data on working papers; arranging and systemizing the audit, and writing the audit report. Emphasis placed on detailed audits, internal auditing, and internal control.</p> <p>Prerequisite: T-BUS 223.</p>			

BUSINESS ADMINISTRATION

INTRODUCTION

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 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.
4. Understanding and skill in effective communication for business.
5. Knowledge of human relations as they apply to successful business operations in a rapidly expanding economy.

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 data in the various books, sending out bills, checking calculations, adjusting complaints, operating various office machines, and assisting managers in supervising. Positions are available in businesses such as advertising; banking; credit; finance; retailing; wholesaling; hotel, tourist, and travel industry; insurance; transportation and communications.

BUSINESS ADMINISTRATION**Suggested Curriculum By Quarters**

COURSE TITLE			Hours		Quarter Hours Credit
			Per Week Class	Lab.	
FIRST QUARTER					
T-ENG	101	Grammar	3	0	3
T-BUS	102	Typewriting (or Elective)	2	3*	3
T-MAT	110	Business Mathematics	5	0	5
T-BUS	101	Introduction to Business	5	0	5
T-ECO	102	Economics	3	0	3
			—	—	—
			18	3	19
SECOND QUARTER					
T-ENG	102	Composition	3	0	3
T-BUS	120	Accounting	5	2	6
T-ECO	104	Economics	3	0	3
T-BUS	115	Business Law	3	0	3
T-BUS	123	Business Finance	3	0	3
			—	—	—
			17	2	18
THIRD QUARTER					
T-ENG	103	Report Writing	3	0	3
T-BUS	124	Business Finance	3	0	3
T-BUS	110	Office Machines	2	2	3
T-BUS	121	Accounting	5	2	6
T-BUS	116	Business Law	3	0	3
			—	—	—
			16	4	18
FOURTH QUARTER					
T-ENG	204	Oral Communication	3	0	3
T-BUS	232	Sales Development	3	0	3
T-EDP	104	Introduction to Data Processing Systems	3	2	4
T-BUS	239	Marketing	5	0	5
		Elective	3	0	3
			—	—	—
			17	2	18

FIFTH QUARTER

T-ENG 206	Business Communication	3	0	3
—————	Social Science Elective	3	0	3
T-BUS 243	Advertising	3	2	4
T-BUS 235	Business Management	3	0	3
—————	Elective	3	0	3
		—	—	—
		15	2	16

SIXTH QUARTER

—————	Social Science Elective	3	0	3
T-BUS 229	Taxes	3	2	4
T-BUS 272	Principles of Supervision	3	0	3
T-BUS 271	Office Management	3	0	3
—————	Elective	6	0	6
		—	—	—
		18	2	19

Total Quarter Hours in Courses	96
Electives (Min.)	12

108

—————
 *"Manipulative laboratory" involves development of skills and job proficiency. Credit of one quarter hour for each three hours of laboratory.

BUSINESS ADMINISTRATION**COURSE DESCRIPTIONS BY QUARTERS**

COURSE TITLE	Hours		Quarter Hours Credit
	Per Week Class	Lab.	
FIRST QUARTER			
T-ENG 101 Grammar	3	0	3
Designed to aid the student in the improvement of self-expression in grammar. The approach is functional with emphasis on grammar, diction, sentence structure, punctuation, and spelling. 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.			
T-BUS 102 Typewriting	2	3*	3
Introduction to the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, tabulations, and manuscripts. Prerequisite: None.			
T-MAT 110 Business Mathematics	5	0	5
This course stresses the fundamental operations and their application to business problems. Topics covered include payrolls, price marking, interest and discount, commission, taxes, and pertinent uses of mathematics in the field of business. Prerequisite: None.			
T-BUS 101 Introduction to Business	5	0	5
A survey of the business world with particular attention devoted to the structure of the various types of business organization, methods of financing, internal organization, and management. Prerequisite: None.			
T-ECO 102 Economics	3	0	3
The fundamental principles of economics including the institutions and practices by which people gain a livelihood. Included is a study of the laws of supply and demand and the principles bearing upon production, exchange, distribution, and consumption both in relation to the individual enterprise and to society at large. Prerequisite: None.			

SECOND QUARTER

T-ENG 102 Composition 3 0 3

Designed to aid the student in the improvement of self-expression in business and technical composition. Emphasis is on the sentence, paragraph and whole composition.

Prerequisite: T-ENG 101.

T-BUS 120 Accounting 5 2 6

Principles, techniques and tools of accounting, for understanding of the mechanics of accounting. Collecting, summarizing, analyzing, and reporting information about service and mercantile enterprises, to include practical application of the principles learned.

Prerequisite: T-MAT 110.

T-ECO 104 Economics 3 0 3

Greater depth in principles of economics, including a penetration into the composition and pricing of national output, distribution of income, international trade and finance, and current economic problems.

Prerequisite: T-ECO 102.

T-BUS 115 Business Law 3 0 3

A general course designed to acquaint the student with certain fundamentals and principles of business law, including contracts, negotiable instruments, and agencies.

Prerequisite: None.

T-BUS 123 Business Finance 3 0 3

Financing of business units, as individuals, partnerships, corporations, and trusts. A detailed study is made of short-term, long-term, and consumer financing.

Prerequisite: None.

THIRD QUARTER

T-ENG 103 Report Writing 3 0 3

The fundamentals of English are utilized as a background for the organization and techniques of modern report writing. Exercises in developing typical reports, using writing techniques and graphic devices are completed by the students. Practical application in the preparation of a full-length report is required of each student at the end of the term. This report must have to do with something in his chosen curriculum.

Prerequisite: T-ENG 102.

T-BUS 124 Business Finance	3	0	3
Financing, federal, state, and local government and the ensuing effects upon the economy. Factors affecting supply of funds, monetary and credit policies. Prerequisite: T-BUS 123.			
T-BUS 110 Office Machines	2	2	3
A general survey of the business and office machines. Students will receive training in techniques, processes, operation and application of the ten-key adding machines, full keyboard adding machines, and calculator. Prerequisite: None.			
T-BUS 121 Accounting	5	2	6
Partnership and corporation accounting including a study of payrolls, federal and state taxes. Emphasis is placed on the recording, summarizing and interpreting data for management control rather than on bookkeeping skills. Accounting services are shown as they contribute to the recognition and solution of management problems. Prerequisite: T-BUS 120.			
T-BUS 116 Business Law	3	0	3
Includes the study of laws pertaining to bailments, sales, risk-bearing, partnership-corporation, mortgages, and property rights. Prerequisite: T-BUS 115.			

FOURTH QUARTER

T-ENG 204 Oral Communication	3	0	3
A study of basic concepts and principles of oral communications to enable the student to communicate with others. Emphasis is placed on the speaker's attitude, improving diction, and the application of particular techniques of theory to correct speaking habits and to produce effective oral presentation. Particular attention given to conducting meetings, conferences, and interviews. Prerequisite: T-ENG 101.			
T-BUS 232 Sales Development	3	0	3
A study of retail, wholesale and specialty selling. Emphasis is placed upon mastering and applying the fundamentals of selling. Preparation for and execution of sales demonstrations required. Prerequisite: None.			
T-EDP 104 Introduction to Data Processing Systems	3	2	4
Fundamental concepts and operational principles of data processing systems, as an aid in developing a basic knowledge of computers, prerequisite to the detail study of particular computer problems. This course is a prerequisite for all programming courses. Prerequisite: None.			

T-BUS 239 Marketing 5 0 5
 A general survey of the field of marketing, with a detailed study of the functions, policies, and institutions involved in the marketing process.
 Prerequisite: None.

FIFTH QUARTER

T-ENG 206 Business Communication 3 0 3
 Develops skills in techniques in writing business communications. Emphasis is placed on writing action-getting sales letters and prospectuses. Business reports, summaries of business conferences, letters involving credit, collections, adjustments, complaints, orders, acknowledgements, remittances, and inquiry.
 Prerequisite: T-ENG 102.

T-BUS 243 Advertising 3 2 4
 The role of advertising in a free economy and its place in the media of mass communication. A study of advertising appeals; product and market research; selection of media; means of testing effectiveness of advertising. Theory and practice of writing advertising copy for various media.
 Prerequisite: None.

T-BUS 235 Business Management 3 0 3
 Principles of business management including overview of major functions of management, such as planning, staffing, controlling, directing, and financing. Clarification of the decision-making function versus the operating function. Role of management in business—qualifications and requirements.
 Prerequisite: None.

SIXTH QUARTER

T-BUS 229 Taxes 3 2 4
 Application of federal and state taxes to various businesses and business conditions. A study of the following taxes: income, payroll, intangible, capital gains, sales and use, excise, and inheritance.
 Prerequisite: T-BUS 121.

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

T-BUS 271 Office Management 3 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 actuating office problems.
 Prerequisite: None.

SECRETARIAL-EXECUTIVE

INTRODUCTION

Purpose of Curriculum

The demand for better qualified secretaries in our ever-expanding business world is becoming more acute. The purpose of this curriculum is to outline a training program that will provide training in the accepted procedures required by the business world and to enable persons to become proficient soon after accepting employment in the business office.

The Executive Secretary Curriculum is designed to offer the students the necessary secretarial skills in typing, dictation, transcription, and terminology for employment in the business world. The special training in secretarial subjects is supplemented by related courses in mathematics, accounting, business law, and personality development.

Job Description

The graduate of the Executive Secretary Curriculum should have a knowledge of business terminology, skill in dictation and accurate transcription of business letters and reports. The graduate may be employed as a stenographer or a secretary. Stenographers are primarily responsible for taking dictation and transcribing letters, memoranda, or reports. The secretary, in addition to taking dictation and transcribing, is given more responsibility in connection with meeting office callers, screening telephone calls, and being an assistant to an executive. She may enter a secretarial position in a variety of offices in businesses such as insurance companies, banks, marketing institutions, and financial firms.

Suggested Curriculum By Quarters

COURSE TITLE	Hours		Quarter Hours Credit
	Per Week Class	Lab.	
FIRST QUARTER			
T-ENG 101 Grammar	3	0	3
T-BUS 102 Typewriting (or Elective)	2	3*	3
T-MAT 110 Business Mathematics	5	0	5
T-BUS 101 Introduction to Business	5	0	5
T-BUS 106 Shorthand (or Elective)	3	2	4
	—	—	—
	18	5	20

SECOND QUARTER

T-ENG 102	Composition	3	0	3
T-BUS 103	Typewriting (or Elective)	2	3*	3
T-BUS 107	Shorthand	3	2	4
T-BUS 120	Accounting	5	2	6
T-BUS 115	Business Law	3	0	3
		—	—	—
		16	7	19

THIRD QUARTER

T-ENG 103	Report Writing	3	0	3
T-BUS 104	Typewriting	2	3*	3
T-BUS 108	Shorthand	3	2	4
T-BUS 110	Office Machines	2	2	3
T-BUS 112	Filing	3	0	3
		—	—	—
		13	7	16

FOURTH QUARTER

T-ENG 204	Oral Communication	3	0	3
T-BUS 206E	Dictation and Transcription (Executive)	3	2	4
T-BUS 205	Advanced Typewriting	2	3*	3
T-BUS 211	Office Machines	2	2	3
T-EDP 104	Introduction to Data Processing Systems	3	2	4
		—	—	—
		13	9	17

FIFTH QUARTER

T-ENG 206	Business Communication	3	0	3
T-BUS 207E	Dictation and Transcription (Executive)	3	2	4
T-BUS 214	Secretarial Procedures	3	2	4
_____	Social Science Elective	3	0	3
_____	Elective	6	0	6
		—	—	—
		18	4	20

SIXTH QUARTER

_____	Social Science Elective	3	0	3
T-BUS 208E	Dictation and Transcription (Executive)	3	2	4
T-BUS 271	Office Management	3	0	3
_____	Elective	6	0	6
		—	—	—
		15	2	16
Total Quarter Hours in Courses				96
Electives (Min.)				12

108

*"Manipulative laboratory" involves development of skills and job proficiency. Credit of one quarter hour for each three hours of laboratory.

Course Descriptions By Quarters

COURSE TITLE	Hours		Quarter Hours Credit
	Per Week Class	Lab.	
FIRST QUARTER			
T-ENG 101 Grammar	3	0	3
Designed to aid the student in the improvement of self-expression in grammar. The approach is functional with emphasis on grammar, diction, sentence structure, punctuation, and spelling. 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.			
T-BUS 102 Typewriting	2	3*	3
Introduction to the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, tabulation, and manuscripts. Prerequisite: None.			
T-MAT 110 Business Mathematics	5	0	5
This course stresses the fundamental operations and their application to business problems. Topics covered include payrolls, price marking, interest and discount, commission, taxes, and pertinent uses of mathematics in the field of business. Prerequisite: None.			
T-BUS 101 Introduction to Business	5	0	5
A survey of the business world with particular attention devoted to the structure of the various types of business organization, methods of financing, internal organization, and management. Prerequisite: None.			
T-BUS 106 Shorthand	3	2	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.			
SECOND QUARTER			
T-ENG 102 Composition	3	0	3
Designed to aid the student in the improvement of self-expression in business and technical composition. Emphasis is on the sentence, paragraph and whole composition. Prerequisite: T-ENG 101.			

- T-BUS 103 Typewriting** 2 3* 3
 Instruction emphasizes 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: T-BUS 102 or the equivalent. Speed requirement, 30 words per minute for five minutes.
- T-BUS 107 Shorthand** 3 2 4
 Continued study of theory with greater emphasis on dictation and elementary transcription.
 Prerequisite: T-BUS 106 or the equivalent .
- T-BUS 120 Accounting** 5 2 6
 Principles, techniques and tools of accounting, for understanding of the mechanics of accounting. Collecting, summarizing, analyzing, and reporting information about service and mercantile enterprises, to include practical application of the principles learned.
 Prerequisite: T-MAT 110.
- T-BUS 115 Business Law** 3 0 3
 A general course designed to acquaint the student with certain fundamentals and principles of business law, including contracts, negotiable instruments, and agencies.
 Prerequisite: None.

THIRD QUARTER

- T-ENG 103 Report Writing** 3 0 3
 The fundamentals of English are utilized as a background for the organization and techniques of modern report writing. Exercises in developing typical reports, using writing techniques and graphic devices are completed by the students. Practical application in the preparation of a full-length report is required of each student at the end of the term. This report must have to do with something in his chosen curriculum.
 Prerequisite: T-ENG 102.
- T-BUS 104 Typewriting** 2 3* 3
 Emphasis on production typing problems and speed building. Attention 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: T-BUS 103 or the equivalent. Speed requirement, 40 words per minute for five minutes.
- T-BUS 108 Shorthand** 3 2 4
 Theory and speed building. Introduction to office style dictation. Emphasis on development of speed in dictation and accuracy in transcription.
 Prerequisite: T-BUS 107.

T-BUS 110 Office Machines 2 2 3

A general survey of the business and office machines. Students will receive training in techniques, processes, operation and application of the ten-key adding machines, full keyboard adding machines, and calculator.

Prerequisite: None.

T-BUS 112 Filing 3 0 3

Fundamentals of indexing and filing, combining theory and practice by the use of miniature letters, filing boxes and guides. Alphabetic, Triple Check, Automatic, Geographic, Subject, Soundex, and Dewey Decimal filing.

Prerequisite: None.

FOURTH QUARTER**T-ENG 204 Oral Communication** 3 0 3

A study of basic concepts and principles of oral communications to enable the student to communicate with others. Emphasis is placed on the speaker's attitude, improving diction, voice, and the application of particular techniques of theory to correct speaking habits and to produce effective oral presentation. Particular attention given to conducting meetings, conferences, and interviews.

Prerequisite: T-ENG 101.

T-BUS 206E Dictation and Transcription 3 2 4

Develops the skill of taking dictation and of transcribing at the typewriter materials appropriate to the course of study, which includes a review of the theory and the dictation of familiar and unfamiliar material at varying rates of speed. Minimum dictation rate of 100 words per minute required for five minutes on new material.

Prerequisite: T-BUS 108.

T-BUS 205 Advanced Typewriting 2 3* 3

Emphasis is placed on the development of individual production rates. The student learns the techniques needed in planning and in typing projects that closely approximate the work appropriate to the field of study. These projects include review of letter forms, methods of duplication, statistical tabulation, and the typing of reports, manuscripts and legal documents.

Prerequisite: T-BUS 104. Speed requirement, 50 words per minute for five minutes.

T-BUS 211 Office Machines 2 2 3

Instructions in the operation of the bookkeeping-accounting machines, duplicating equipment, and the dictating and transcribing machines.

Prerequisite: T-BUS 110.

T-EDP 104 Introduction to Data Processing Systems 3 2 4

Fundamental concepts and operational principles of data processing systems, as an aid in developing a basic knowledge of computers, prerequisite to the detail study of particular computer problems. This course is a prerequisite for all programming courses.
Prerequisite: None.

FIFTH QUARTER

T-ENG 206 Business Communication 3 0 3

Develops skills in techniques in writing business communications. Emphasis is placed on writing action—getting sales letters and prospectuses. Business reports, summaries of business conferences, letters involving credit, collections, adjustments, complaints, orders, acknowledgements, remittances, and inquiry.
Prerequisite: T-ENG 102.

T-BUS 207E Dictation and Transcription 3 2 4

Covering materials appropriate to the course of study, the student develops the accuracy, speed, and vocabulary that will enable her to meet the stenographic requirements of business and professional offices. Minimum dictation rate of 110 words per minute required for five minutes on new material.
Prerequisite: T-BUS 206.

T-BUS 214 Secretarial Procedures 3 2 4

Designed to acquaint the student with the responsibilities encountered by a secretary during the work day. These include the following: receptionist duties, handling the mail, telephone techniques, travel information, telegrams, office records, purchasing of supplies, office organization, and insurance claims.
Prerequisite: None.

SIXTH QUARTER

T-BUS 208E Dictation and Transcription 3 2 4

Principally a speed building course, covering materials appropriate to the course of study, with emphasis on speed as well as accuracy. Minimum dictation rate of 120 words per minute required for five minutes on new material.
Prerequisite: T-BUS 207.

T-BUS 271 Office Management 3 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 actuating office problems.
Prerequisite: None.

SECRETARIAL-LEGAL

INTRODUCTION

Purpose of Curriculum

The demand for better qualified legal secretaries in our ever-expanding legal profession is becoming more acute. The purpose of the Legal Secretary Curriculum is to outline a training program that will provide specialized training in the accepted procedures required by the legal profession, and to enable persons to become proficient soon after accepting employment in the legal office.

The curriculum is designed to offer the students the necessary secretarial skills in typing, dictation, transcription, and terminology for employment in the legal profession. The special training in secretarial subjects is supplemented by related courses in mathematics, accounting, business law, and personality development.

Job Description

The graduate of the Legal Secretary Curriculum should have a knowledge of legal terminology, skill in dictation and accurate transcription of legal records, reports, letters, and documents. The duties of a legal secretary may consist of taking dictation and transcribing letters, memoranda and reports, meeting office callers and screening telephone calls, filing, and scheduling appointments. Opportunities for employment of the graduate exist in a variety of secretarial positions in the legal profession such as lawyers' offices and state and government offices.

Suggested Curriculum By Quarters

COURSE TITLE	Hours		Quarter Hours Credit
	Per Week Class	Lab.	
FIRST QUARTER			
T-ENG 101 Grammar	3	0	3
T-BUS 102 Typewriting (or Elective)	2	3*	3
T-MAT 110 Business Mathematics	5	0	5
T-BUS 101 Introduction to Business	5	0	5
T-BUS 106 Shorthand (or Elective)	3	2	4
	—	—	—
	18	5	20

SECOND QUARTER

T-ENG 102	Composition	3	0	3
T-BUS 103	Typewriting (or Elective)	2	3*	3
T-BUS 107	Shorthand	3	2	4
T-BUS 120	Accounting	5	2	6
T-BUS 115	Business Law	3	0	3
		—	—	—
		16	7	19

THIRD QUARTER

T-ENG 103	Report Writing	3	0	3
T-BUS 104	Typewriting	2	3*	3
T-BUS 108	Shorthand	3	2	4
T-BUS 110	Office Machines	2	2	3
T-BUS 112	Filing	3	0	3
T-BUS 183L	Terminology and Vocabulary (Legal)	3	0	3
		—	—	—
		16	7	19

FOURTH QUARTER

T-ENG 204	Oral Communication	3	0	3
T-BUS 206L	Dictation and Transcription (Legal)	3	2	4
T-BUS 205	Advanced Typewriting	2	3*	3
T-BUS 211	Office Machines	2	2	3
T-EDP 104	Introduction to Data Processing Systems	3	2	4
		—	—	—
		13	9	17

FIFTH QUARTER

T-ENG 206	Business Communication	3	0	3
T-BUS 207L	Dictation and Transcription (Legal)	3	2	4
T-BUS 214	Secretarial Procedures	3	2	4
—————	Social Science Elective	3	0	3
—————	Elective	3	0	3
		—	—	—
		15	4	17

SIXTH QUARTER

—————	Social Science Elective	3	0	3
T-BUS 208L	Dictation and Transcription (Legal)	3	2	4
T-BUS 271	Office Management	3	0	3
—————	Elective	6	0	6
		—	—	—
		15	2	16

Total Quarter Hours in Courses 99

Electives (Min.) 9

Total 108

*"Manipulative laboratory" involves development of skills and job proficiency. Credit of one quarter hour for each three hours of laboratory.

Course Descriptions By Quarters

COURSE TITLE	Hours		Quarter Hours Credit
	Per Week Class	Lab.	
FIRST QUARTER			
T-ENG 101 Grammar	3	0	3
Designed to aid the student in the improvement of self-expression in grammar. The approach is functional with emphasis on grammar, diction, sentence structure, punctuation and spelling. 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.			
T-BUS 102 Typewriting	2	3*	3
Introduction to the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, tabulation, and manuscripts. Prerequisite: None.			
T-MAT 110 Business Mathematics	5	0	5
This course stresses the fundamental operations and their application to business problems. Topics covered include payrolls, price marking, interest and discount, commission, taxes, and pertinent uses of mathematics in the field of business. Prerequisite: None.			
T-BUS 101 Introduction to Business	5	0	5
A survey of the business world with particular attention devoted to the structure of the various types of business organization, methods of financing, internal organization, and management. Prerequisite: None.			
T-BUS 106 Shorthand	3	2	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.			
SECOND QUARTER			
T-ENG 102 Composition	3	0	3
Designed to aid the student in the improvement of self-expression in business and technical composition. Emphasis is on the sentence, paragraph and whole composition. Prerequisite: T-ENG 101.			

T-BUS 103 Typewriting 2 3* 3

Instruction emphasizes 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: T-BUS 102 or the equivalent. Speed requirement, 30 words per minute for five minutes.

T-BUS 107 Shorthand 3 2 4

Continued study of theory with greater emphasis on dictation and elementary transcription.

Prerequisite: T-BUS 106 or the equivalent.

T-BUS 120 Accounting 5 2 6

Principles, techniques and tools of accounting, for understanding of the mechanics of accounting. Collecting, summarizing, analyzing, and reporting information about service and mercantile enterprises, to include practical application of the principles learned.

Prerequisite: T-MAT 110.

T-BUS 115 Business Law 3 0 3

A general course designed to acquaint the student with certain fundamentals and principles of business law, including contracts, negotiable instruments, and agencies.

Prerequisite: None.

THIRD QUARTER

T-ENG 103 Report Writing 3 0 3

The fundamentals of English are utilized as a background for the organization and techniques of modern report writing. Exercises in developing typical reports, using writing techniques and graphic devices are completed by the students. Practical application in the preparation of a full-length report is required of each student at the end of the term. This report must have to do with something in his chosen curriculum.

Prerequisite: T-ENG 102.

T-BUS 104 Typewriting 2 3* 3

Emphasis on production typing problems and speed building. Attention 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: T-BUS 103 or the equivalent. Speed requirement, 40 words per minute for five minutes.

- | | | | |
|--|---|---|---|
| T-BUS 108 Shorthand | 3 | 2 | 4 |
| Theory and speed building. Introduction to office style dictation. Emphasis on development of speed in dictation and accuracy in transcription. | | | |
| Prerequisite: T-BUS 107. | | | |
| T-BUS 110 Office Machines | 2 | 2 | 3 |
| A general survey of the business and office machines. Students will receive training in techniques, processes, operation and application of the ten-key adding machines, full keyboard adding machines, and calculator. | | | |
| Prerequisite: None. | | | |
| T-BUS 112 Filing | 3 | 0 | 3 |
| Fundamentals of indexing and filing, combining theory and practices by the use of miniature letters, filing boxes and guides. Alphabetic, Triple Check, Automatic, Geographic, Subject, Soundex, and Dewey Decimal filing. | | | |
| Prerequisite: None. | | | |
| T-BUS 183L Terminology and Vocabulary | 3 | 0 | 3 |
| to develop an understanding of the terminology and vocabulary appropriate to the course of study, as it is used in business, technical, and professional offices. | | | |
| Prerequisite: T-BUS 107. | | | |

FOURTH QUARTER

- | | | | |
|--|---|---|---|
| T-ENG 204 Oral Communication | 3 | 0 | 3 |
| A study of basic concepts and principles of oral communication to enable the student to communicate with others. Emphasis is placed on the speaker's attitude, improving diction, voice, and the application of particular techniques of theory to correct speaking habits and to produce effective oral presentation. Particular attention given to conducting meetings, conferences, and interviews. | | | |
| Prerequisite: T-ENG 101. | | | |
| T-BUS 206L Dictation and Transcription | 3 | 2 | 4 |
| Develops the skill of taking dictation and of transcribing at the typewriter materials appropriate to the course of study, which includes a review of the theory and the dictation of familiar and unfamiliar material at varying rates of speed. Minimum dictation rate of 100 words per minute required for five minutes on new material. | | | |
| Prerequisite: T-BUS 108. | | | |

SIXTH QUARTER

T-BUS 208L Dictation and Transcription 3 2 4

Principally a speed building course, covering materials appropriate to the course of study, with emphasis on speed as well as accuracy. Minimum dictation rate of 120 words per minute required for five minutes on new material.

Prerequisite: T-BUS 207.

T-BUS 271 Office Management 3 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 actuating office problems.

Prerequisite: None.



SECRETARIAL-MEDICAL

INTRODUCTION

Purpose of Curriculum

The demand for better qualified medical secretaries in our ever-expanding medical profession is becoming more acute. The purpose of this curriculum is to outline a training program that will provide specialized training in the accepted procedures required by the medical profession, and to enable persons to become proficient soon after accepting employment in the medical and health occupations.

The Medical Secretary Curriculum is designed to offer the students the necessary secretarial skills in typing, dictation, transcription, and terminology for employment in the medical profession. The special training in secretarial subjects is supplemented by related courses in mathematics, accounting, business law, and personality development.

Job Description

The graduate of the Medical Secretary Curriculum should have a knowledge of medical terminology, skill in dictation and accurate transcription of medical records, reports and letters. The duties of a medical secretary may consist of: taking dictation and transcribing letters, memoranda and reports, meeting office callers and screening telephone calls, filing, and scheduling appointments. The graduate may enter a secretarial position in a variety of offices such as physicians', private and public hospitals, federal and state health programs, and the drug and pharmaceutical industry.

Suggested Curriculum By Quarters

COURSE TITLE	Hours		Quarter Hours Credit
	Class	Lab.	
FIRST QUARTER			
T-ENG 101 Grammar	3	0	3
T-BUS 102 Typewriting (or Elective)	2	3*	3
T-MAT 110 Business Mathematics	5	0	5
T-BUS 101 Introduction to Business	5	0	5
T-BUS 106 Shorthand (or Elective)	3	2	4
	18	5	20

Suggested Curriculum By Quarters

COURSE TITLE	Hours Per Week		Quarter Hours Credit
	Class	Lab.	
FIRST QUARTER			
T-ENG 101 Grammar	3	0	3
Designed to aid the student in the improvement of self-expression in grammar. The approach is functional with emphasis on grammar, diction, sentence structure, punctuation, and spelling. 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.			
T-BUS 102 Typewriting	2	3*	3
Introduction to the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, tabulation, and manuscripts. Prerequisite: None.			
T-MAT 110 Business Mathematics	5	0	5
This course stresses the fundamental operations and their application to business problems. Topics covered include payrolls, price marking, interest and discount, commission, taxes, and pertinent uses of mathematics in the field of business. Prerequisite: None.			
T-BUS 101 Introduction to Business	5	0	5
A survey of the business world with particular attention devoted to the structure of the various types of business organization, methods of financing, internal organization, and management. Prerequisite: None.			
T-BUS 106 Shorthand	3	2	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.			
SECOND QUARTER			
T-ENG 102 Composition	3	0	3
Designed to aid the student in the improvement of self-expression in business and technical composition. Emphasis is on the sentence, paragraph and whole composition. Prerequisite: T-ENG 101.			
T-BUS 103 Typewriting	2	3*	3
Instruction emphasizes 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: T-BUS 102 or the equivalent. Speed requirement, 30 words per minute for five minutes.

T-BUS 107 Shorthand 3 2 4
Continued study of theory with greater emphasis on dictation and elementary transcription.
Prerequisite: T-BUS 106 or the equivalent.

T-BUS 120 Accounting 5 2 6
Principles, techniques and tools of accounting, for understanding of the mechanics of accounting. Collecting, summarizing, analyzing, and reporting information about service and mercantile enterprises, to include practical application of the principles learned.
Prerequisite: T-MAT 110.

T-BUS 115 Business Law 3 0 3
A general course designed to acquaint the student with certain fundamentals and principles of business law, including contracts, negotiable instruments, and agencies.
Prerequisite: None.

THIRD QUARTER

T-ENG 103 Report Writing 3 0 3
The fundamentals of English are utilized as a background for the organization and techniques of modern report writing. Exercises in developing typical reports, using writing techniques and graphic devices are completed by the students. Practical application in the preparation of a full-length report is required of each student at the end of the term. This report must have to do with something in his chosen curriculum.
Prerequisite: T-ENG 102.

T-BUS 104 Typewriting 2 3* 3
Emphasis on production typing problems and speed building. Attention 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: T-BUS 103 or the equivalent. Speed requirement, 40 words per minute for five minutes.

T-BUS 108 Shorthand 3 2 4
Theory and speed building. Introduction to office style dictation. Emphasis on development of speed in dictation and accuracy in transcription.
Prerequisite: T-BUS 107.

T-BUS 110 Office Machines 2 2 3
A general survey of the business and office machines. Students will receive training in techniques, processes, operation and application of

the ten-key adding machines, full keyboard adding machines, and calculator.

Prerequisite: None.

T-BUS 112 Filing 3 0 3

Fundamentals of indexing and filing, combining theory and practice by the use of miniature letters, filing boxes and guides. Alphabetic, Triple Check, Automatic, Geographic, Subject, Soundex, and Dewey Decimal filing.

Prerequisite: None.

T-BUS 183M Terminology and Vocabulary 3 0 3

To develop an understanding of the terminology and vocabulary appropriate to the course of study, as it is used in business, technical, and professional offices.

Prerequisite: T-BUS 107.

FOURTH QUARTER

T-ENG 204 Oral Communication 3 0 3

A study of basic concepts and principles of oral communications to enable the student to communicate with others. Emphasis is placed on the speaker's attitude, improving diction, voice, and the application of particular techniques of theory to correct speaking habits and to produce effective oral presentation. Particular attention given to conducting meetings, conferences, and interviews.

Prerequisite: T-ENG 101.

T-BUS 206M Dictation and Transcription 3 2 4

Develops the skill of taking dictation and of transcribing at the typewriter materials appropriate to the course of study, which includes a review of the theory and the dictation of familiar and unfamiliar materials at varying rates of speed. Minimum dictation rate of 100 words per minute required for five minutes on new material.

Prerequisite: T BUS 108.

T-BUS 205 Advanced Typewriting 2 3* 3

Emphasis is placed on the development of individual production rates. The student learns the techniques needed in planning and in typing projects that closely approximate the work appropriate to the field of study. These projects include review of letter forms, methods of duplication, statistical tabulation, and the typing of reports, manuscripts and legal documents.

Prerequisite: T-BUS 104. Speed requirement, 50 words per minute for five minutes.

T-BUS 211 Office Machines 2 2 3

Instructions in the operation of the bookkeeping-accounting machines, duplicating equipment, and the dictating and transcribing machines.

Prerequisite: T-BUS 110.

T-EDP 104 Introduction to Data Processing Systems 3 2 4

Fundamental concepts and operational principles of data processing

systems, as an aid in developing a basic knowledge of computers, prerequisite to the detail study of particular computer problems. This course is a prerequisite for all programming courses.
Prerequisite: None.

T-BUS 284M Terminology and Vocabulary 3 0 3
Greater emphasis on an understanding of the terminology and vocabulary appropriate to the course of study, as it is used in business, technical, and professional offices.
Prerequisite: T-BUS 183M.

FIFTH QUARTER

T-ENG 206 Business Communication 3 0 3
Develops skills in techniques in writing business communications. Emphasis is placed on writing action-getting sales letters and prospectuses. Business reports, summaries of business conferences, letters involving credit, collections, adjustments, complaints, orders, acknowledgements, remittances, and inquiry.
Prerequisite: T-ENG 102.

T-BUS 207M Dictation and Transcription 3 2 4
Covering materials appropriate to the course of study, the student develops the accuracy, speed, and vocabulary that will enable her to meet the stenographic requirements of business and professional offices. Minimum dictation rate of 110 words per minute required for five minutes on new material.
Prerequisite: T-BUS 206M.

T-BUS 214 Secretarial Procedures 3 2 4
Designed to acquaint the student with the responsibilities encountered by a secretary during the work day. These include the following: receptionist duties, handling the mail, telephone techniques, travel information, telegrams, office records, purchasing of supplies, office organization, and insurance claims.
Prerequisite: None.

SIXTH QUARTER

T-BUS 208M Dictation and Transcription 3 2 4
Principally a speed building course, covering materials appropriate to the course of study, with emphasis on speed as well as accuracy. Minimum dictation rate of 120 words per minute required for five minutes on new material.
Prerequisite: T-BUS 207.

T-BUS 271 Office Management 3 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 actuating office problems.
Prerequisite: None.

AGRICULTURAL BUSINESS

INTRODUCTION

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.

Agricultural production is undergoing tremendous changes. The trends are to larger, highly mechanized and specialized farms with huge capital investments. This means that there will be an increasing demand for capable farm managers to coordinate the purchasing, production and marketing of these larger agricultural production operations.

Farm managers of the future must possess greater technical competence to remain in the highly competitive production phase of agriculture. They must be able to cope with present production problems and adapt to rapid technological changes.

It is anticipated that changes in agriculture and the general economic environment will occur at a faster rate in the future. Profitable management of agricultural operations will demand successful adjustment to these changes. Decisions involved in these adjustments will require an individual with more training, knowledge and ability.

The Agricultural Business Curriculum is designed to help students acquire knowledge, understandings, and abilities in the broad field of agricultural business, including agricultural production. It combines knowledge of agriculture with business training to prepare the graduate for many of the varied employment opportunities in agriculture. The specific objectives of the Agricultural Business Curriculum are to develop the following student competencies:

1. Understanding of the principles of organization and management in agricultural businesses and industries.
2. Understanding of the application of the principles of business management to agricultural production, and the abilities essential to the management of an efficient well-organized farming operation.
3. Understanding of the basic principles of our economic sys-

- tem, marketing, credit, price concepts and governmental policies and programs relating to agriculture.
4. Understanding of the agricultural sciences most essential to the production and marketing of agricultural products, including knowledge of the animal, plant, and soil sciences and their relationships with ability to apply these educational experiences to practical problems of agricultural business and industry.

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 should enable him 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; salesman, or office managers of farm products marketing firms.

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.

Suggested Curriculum By Quarters

COURSE TITLE	Hours Per Week		Quarter Hours Credit
	Class	Lab.	
FIRST QUARTER			
T-ENG 101 Grammar	3	0	3
T-BUS 101 Introduction to Business	5	0	5
T-MAT 110 Business Mathematics	5	0	5
T AGR 125 Animal Science	5	2	6
	—	—	—
	18	2	19

SECOND QUARTER

T-ENG 102	Composition	3	0	3
T-AGR 185	Soil Science and Fertilizers	5	2	6
T-BUS 120	Accounting	5	2	6
T-AGR 104	Introduction to Agricultural Economics	3	2	4
		—	—	—
		16	6	19

THIRD QUARTER

T-ENG 103	Report Writing	3	0	3
T-BUS 110	Office Machines	2	2	3
T-BUS 121	Accounting	5	2	6
T-AGR 170	Plant Science	5	2	6
		—	—	—
		15	6	18

FOURTH QUARTER

T-ENG 204	Oral Communication	3	0	3
T-BUS 123	Business Finance	3	0	3
T-BUS 232	Sales Development	3	0	3
T-AGR 204	Farm Business Management	5	2	6
—————	Elective*	0	0	3
		—	—	—
		14	2	18

FIFTH QUARTER

T-AGR 205	Agricultural Marketing	5	2	6
T-AGR 201	Agricultural Chemicals	5	2	6
—————	Social Science Elective	3	0	3
—————	Elective*	0	0	3
		—	—	—
		13	4	18

SIXTH QUARTER

T-AGR 228	Livestock Diseases and Parasites	3	2	4
T-AGR 218	Agricultural Mechanization	3	2	4
—————	Social Science Elective	3	0	3
—————	Elective*	0	0	5
		—	—	—
		9	4	16

Total Hours in Courses 97

Electives (Max.) 11

Total 103

*At least six hours of electives should be in agricultural courses. Local institutions may add work experience to this curriculum.

Course Descriptions By Quarters

COURSE TITLE	Hours		Quarter Hours Credit
	Per Week Class	Lab.	
FIRST QUARTER			
T-ENG 101 Grammar	3	0	3
Designed to aid the student in the improvement of self-expression in grammar. The approach is functional with emphasis on grammar, diction, sentence structure, punctuation, and spelling. 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.			
T-BUS 101 Introduction to Business	5	0	5
A survey of the business world with particular attention devoted to the structure of the various types of business organization, methods of financing, internal organization, and management. Prerequisite: None.			
T-MAT 110 Business Mathematics	5	0	5
This course stresses the fundamental operations and their application to business problems. Topics covered include payrolls, price marking, interest and discount, commission, taxes, and pertinent uses of mathematics in the field of business. Prerequisite: None.			
T-AGR 125 Animal Science	5	2	6
An introductory animal science course covering the fundamental principles of livestock production. A study of the animal body and the basic principles of reproduction, genetics, growth, fattening, digestion, along with the selection, feeding, improvement, processing and marketing of livestock. Prerequisite: None.			
SECOND QUARTER			
T-ENG 102 Composition	3	0	3
Designed to aid the student in the improvement of self-expression in business and technical composition. Emphasis is on the sentence, paragraph and whole composition. Prerequisite: T-ENG 101.			
T-AGR 185 Soil Science and Fertilizers	5	2	6
A course dealing with basic principles of efficient classification, evaluation, and management of soils; care, cultivation, and fertilization of the soil, and conservation of soil fertility. Prerequisite: None.			

T-BUS 120 Accounting 5 2 6
 Principles, techniques and tools of accounting, for understanding of the mechanics of accounting. Collecting, summarizing, analyzing, and reporting information about service and mercantile enterprises, to include practical application of the principles learned.
 Prerequisite: T-MAT 110.

T-AGR 104 Introduction to Agricultural Economics 3 2 4
 An introduction to economics, the functions of the economic system and agriculture's role 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. Analysis of the main sources of change which affect agricultural firms.
 Prerequisite: None.

THIRD QUARTER

T-ENG 103 Report Writing 3 0 3
 The fundamentals of English are utilized as a background for the organization and techniques of modern report writing. Exercises in developing typical reports, using writing techniques and graphic devices are completed by the students. Practical application in the preparation of a full-length report is required of each student at the end of the term. This report must have to do with something in his chosen curriculum.
 Prerequisite: T-ENG 102.

T-BUS 110 Office Machines 2 2 3
 A general survey of the business and office machines. Students will receive training in techniques, processes, operation and application of the ten-key adding machines, full keyboard adding machines, and calculator.
 Prerequisite: None.

T-BUS 121 Accounting 5 2 6
 Partnership and corporation accounting including a study of payrolls, federal and state taxes. Emphasis is placed on the recording, summarizing and interpreting data for management control rather than on bookkeeping skills. Accounting services are shown as they contribute to the recognition and solution of management problems.
 Prerequisite: T-BUS 120.

T-AGR 170 Plant Science 5 2 6
 An introductory general botany and crop science course covering the fundamental principles of the reproduction, growth, functions, and development of seed bearing plants with application to certain commercially important plants in North Carolina.
 Prerequisite: None.

FOURTH QUARTER

T-ENG 204 Oral Communication 3 0 3

A study of basic concepts and principles of oral communications to enable the student to communicate with others. Emphasis is placed on the speaker's attitude, improving diction, voice, and the application of particular techniques of theory to correct speaking habits and to produce effective oral presentation. Particular attention given to conducting meetings, conferences, and interviews.

Prerequisite: T ENG 101.

T-BUS 123 Business Finance 3 0 3

Financing of business units, as individuals, partnerships, corporations, and trusts. A detailed study is made of short-term, long-term, and consumer financing.

Prerequisite: None.

T-BUS 232 Sales Development 3 0 3

A study of retail, wholesale and specialty selling. Emphasis is placed upon mastering and applying the fundamentals of selling. Preparation for and execution of sales demonstrations required.

Prerequisite: None.

T-AGR 204 Farm Business Management 5 2 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 of partial budgeting to find the least cost production procedure. Analysis of production data to select the level of production that yields the most net revenue. Relationship between size, efficiency and income of a farm. Review of procedures for evaluating the efficiency of the manager.

Prerequisite: T-AGR 104.

FIFTH QUARTER

T-AGR 205 Agricultural Marketing 5 2 6

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 firms 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: T-AGR 104.

T-AGR 201 Agricultural Chemicals 5 2 6

A study of farm chemical pesticides, their ingredients, formulation, and farm application, with emphasis on the effective and safe use of chemicals in agricultural pest control.

Prerequisite: None.

SIXTH QUARTER

T-AGR 228 Livestock Diseases and Parasites 3 2 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: T-AGR 125.

T-AGR 218 Agricultural Mechanization 3 2 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, materials handling systems and other labor-saving devices.

Prerequisite: None.



ARCHITECTURAL DRAFTING

INTRODUCTION

Purpose of Curriculum

This curriculum was designed in cooperation with the North Carolina Chapter of the American Institute of Architects. Its explicit purpose is to train architectural draftsmen for the architect's office and the building industry. Through a survey made of the AIA member firms in North Carolina, it was determined that a large number of architectural draftsmen is needed to fill existing vacancies. Projections show that this existing need will more than double in the next two years.

This program is designed to provide the individual with knowledge and skills that will lead to employment in the field of architectural drafting and afford opportunity for rapid advancement in technical knowledge and proficiency. Technical courses are included which will enable the graduate to advance into related areas of work as job experience is obtained. This program represents the education requirements as established by the Architectural Drafting Advisory Committee. The statement of goals and expectations of this committee are as follows:

Goal: To conduct a training course which would prepare a person with a high school background to develop, by further study and experience, the ability necessary to communicate the architect's designs to the builder.

We anticipate that graduates of the proposed curriculum would be prepared to enter an architect's office as "technicians" with the ability to turn the architect's designs into working drawings for the building industry. Graduates should be competent draftsmen well informed on the building industry in general, the operation of architects' offices, and should have a knowledge of materials and techniques of construction. Their training should include an appreciation of the mechanical and electrical aspects of buildings. Basic training in oral and written communication will give graduates a background for developing their potential in broader aspects of architectural practice, such as specification writing and supervision of construction.

We do not expect or desire that graduates be designers or artists but competent "technicians" filling an important position in the field of architectural practice. Their advancement to positions of responsibility would be dependent only on their own aspirations and willingness to study and work. Their education would just begin with this curriculum.

Job Description

Architectural drafting technicians are concerned with turning the architect's design sketches into complete and accurate working plans and detail drawings for construction purposes. He may prepare floor plans, elevation drawings, construction details, mechanical equipment layouts; door, window and room schedules, and site plans. The drafting technician will be involved in work requiring a knowledge of building codes, specifications and contract documents.

After gaining experience the technician may be involved in estimating, field inspection or in collecting site data and other information pertinent to construction.

ARCHITECTURAL DRAFTING AND DESIGN TECHNOLOGY

Curriculum By Quarters

COURSE TITLE			Hours		Quarter Hours Credit
			Per Week Class	Lab.	
FIRST QUARTER					
T-ENG	101	Grammar	3	0	3
T-MAT	101	Technical Mathematics	5	0	5
T-PHY	101	Physics: Properties of Matter	3	2	4
T-DFT	106	Architectural Drafting	2	6	4
T CIV	105	Architectural Materials & Methods	3	3	4
			—	—	—
			16	11	20
SECOND QUARTER					
T-ENG	102	Composition	3	0	3
T-MAT	102	Technical Mathematics	5	0	5
T-PHY	104	Physics: Light and Sound	3	2	4
T DFT	107	Architectural Drafting	2	6	4
T-AHR	106	Architectural Mechanical Equipment	3	3	4
			—	—	—
			16	11	20

THIRD QUARTER

T-ENG	103	Report Writing	3	0	3
T-MAT	103	Technical Mathematics	5	0	5
T-PHY	103	Physics: Electricity	3	2	4
T DFT	108	Architectural Drafting	0	9	3
T-CIV	114	Statics	5	0	5
			—	—	—
			16	11	20

FOURTH QUARTER

T-ENG	204	Oral Communication	3	0	3
T-CIV	216	Strength of Materials	3	2	4
T-DFT	220	Architectural Drafting	2	9	5
T CIV	101	Surveying	2	6	4
			—	—	—
			10	17	16

FIFTH QUARTER

—————		Social Science Elective	3	0	3
T-DFT	221	Architectural Drafting	2	9	5
T-DFT	223	Office Practice Seminar	2	0	2
T-DFT	235	Codes, Specifications and Contract Documents	3	3	4
—————		Elective (Min.)			3
			—	—	—
			10	12	17

SIXTH QUARTER

—————		Social Science Elective	3	0	3
T-DFT	222	Architectural Drafting	2	9	5
T DFT	236	Construction Estimating and Field Inspecting	3	3	4
—————		Elective (Min.)			3
			—	—	—
			8	12	15

Architectural Drafting

COURSE TITLE	Hours		Quarter Hours Credit
	Per Week Class	Lab.	
FIRST QUARTER			
T-ENG 101 Grammar	3	0	3
<p>Designed to aid the student in the improvement of self-expression in grammar. The approach is functional with emphasis on grammar, diction, sentence structure, punctuation, and spelling. Intended to stimulate students in applying the basic principles of English grammar in their day-to-day situations in industry and social life.</p> <p>Prerequisite: None.</p>			
T-MAT 101 Technical Mathematics	5	0	5
<p>The real number system is developed as an extension of natural numbers. Number systems of various bases are introduced. Fundamental algebraic operations, the rectangular coordinate system, as well as fundamental trigonometric concepts and operations are introduced. The application of these principles to practical problems is stressed.</p> <p>Prerequisite: Satisfactory evidence that admission requirements have been met.</p>			
T-PHY 101 Physics: Properties of Matter	3	2	4
<p>A fundamental course covering several basic principles of physics. The divisions included are solids and their characteristics, liquids at rest and in motion, gas laws and applications. Laboratory experiments and specialized problems dealing with these topics are part of this course.</p> <p>Prerequisite: None.</p>			
T-DFT 106 Architectural Drafting	2	6*	4
<p>A course designed to provide fundamental knowledge of the principles of drafting. Basic skills and techniques of drafting included are: use of drafting equipment, lettering, freehand orthographic and pictorial sketching, geometric construction, orthographic instrument drawing of principal views. Protection problems dealing with principles of descriptive geometry, involving points, lines, planes, and connectors. The principles of isometric, oblique, and perspective drawings are introduced.</p> <p>Prerequisite: None.</p>			
T-CIV 105 Architectural Materials and Methods	3	3	4
<p>Materials used in the construction of architectural structures will be studied. Field trips to construction sites and study of manufacturer's specifications for materials. Properties and standard sizes of structural materials, and construction techniques are included.</p> <p>Prerequisite: None.</p>			

SECOND QUARTER**T-ENG 102 Composition** 3 0 3

Designed to aid the student in the improvement of self expression in business and technical composition. Emphasis is on the sentence, paragraph and whole composition.

Prerequisite: T-ENG 101.

T-MAT 102 Technical Mathematics 5 0 5

A continuation of T-MAT 101. Advanced algebraic and trigonometric topics including quadratics, logarithms, determinants, progressions, the binomial expansion, complex functions are studied in depth.

nating and the principles involved in optical instruments. Application
Predequises: T MAT 101, T-PHY 101.

T-PHY 104 Physics: Light and Sound 3 2 4

A survey of the concepts involving wave motion leads to a study of sound, its generation, transmission and detection. The principles of wave motion also serve as an introduction to a study of light, illuminatin and the principles involved in optical instruments. Application is stressed throughout.

Prerequisite: T MAT 101, T-PHY 101.

T-DFT 107 Architectural Drafting 2 6 4

Development of techniques of architectural lettering, symbols, and their interpretation; dimensioning, freehand and instrument drafting. Drawing of construction details, using appropriate material symbols and connections. Sections, scale details and full-size details will be prepared from preliminary sketches. Applications of descriptive geometry are used in visualization and analytical solutions of the drafting problems involving auxiliary views, intersections and developments.

Prerequisite: T DFT 106.

T-AHR 106 Architectural Mechanical Equipment 3 3 4

General study of heating, air conditioning, plumbing and electrical equipment, materials and symbols. Building code requirements pertaining to residential and commercial structures. Reading and interpretation of working drawings by mechanical engineers. Coordination of mechanical and electrical features with structural and architectural designs.

Prerequisite: None.

THIRD QUARTER**T-ENG 103 Report Writing** 3 0 3

The fundamentals of English are utilized as a background for the organization and techniques of modern report writing. Exercises in developing typical reports, using writing techniques and graphic de-

vices are completed by the students. Practical application in the preparation of a full-length report is required of each student at the end of the term. This report must have to do with something in his chosen curriculum.

Prerequisite: T-ENG 102.

T-MAT 103 Technical Mathematics 5 0 5

The fundamental concepts of analytical geometry, differential and integral calculus are introduced. Topics included are 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 are stressed.

Prerequisite: T-MAT 102.

T-PHY 103 Physics: Electricity 3 2 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 the course.

Prerequisites: T-MAT 101, T-PHY 101.

T-DFT 108 Architectural Drafting 0 9 3

An approach in depth to the study of architectural drafting. Development of techniques in architectural lettering, dimensioning, freehand sketching and instrument drawing. Drawing of construction of details, using appropriate material symbols and conventions. Working drawings, including plans, elevations, sections, scale details and full-size details will be prepared from preliminary sketches.

Prerequisites: T-DFT 107, T-AHR 106, T-CIV 105.

T-CIV 114—Statics 5 0 5

Forces, resultants, and types of force systems; moments, equilibrium of coplanar forces by analytical and graphic methods; stresses and reactions in simple structures; equilibrium of forces in space, static and kinetic friction; center of gravity, controls, and moment of inertia.

Prerequisite: T-MAT 102.

FOURTH QUARTER

T-ENG 204 Oral Communication 3 0 3

A study of basic concepts and principles of oral communications to enable the student to communicate with others. Emphasis is placed on the speaker's attitude, improving diction, voice, and the application of particular techniques of theory to correct speaking habits and to produce effective oral presentation. Particular attention given to conducting meetings, conferences, and interviews.

Prerequisite: T-ENG 101.

T-CIV 216 Strength of Materials 3 2 4

Fundamental stress and strain relationship; torsion; shear and bending moments; stresses and deflections in beams; introduction to statically indeterminate beams; columns; combined stresses.
Prerequisites: T-CCV 114, T-MAT 103.

T-DFT 220 Architectural Drafting 2 9 5

Drawing of structural plans and details as prepared for building construction including steel, concrete, and timber structural components. Appropriate details and drawings necessary for construction and fabrication of structural members. Reference materials will be used to provide the draftsman with skills and knowledge in locating data and in using handbooks.
Prerequisite: T-DFT 108.

T-CIV 101 Surveying 2 6 4

Theory and practice of plane surveying including taping, differential and profile leveling, cross sections, earthwork computations, transit, stadia, and transit-tape surveys.
Prerequisites: T-MAT 102, T-DFT 107.

FIFTH QUARTER**T-DFT 221 Architectural Drafting** 2 9 5

Drawing of plans and details as prepared for mechanical equipment such as air conditioning, plumbing and electrical systems by using appropriate symbols and conventions. Consideration is given to coordination of mechanical and electrical features with structural and architectural components.
Prerequisite: T-DFT 220.

T-DFT 233 Office Practice Seminar 2 0 2

A study of the professional relationship of the architectural firm in relation to clients, contractors, suppliers, consultants and other architects. Ethics of the profession as applicable to the draftsman's role in the architectural firm will be stressed.

T-DFT 235 Codes, Specifications and Contract Documents 3 3 4

A study of building codes and their effect in relation to specifications and drawings. The purpose and writing of specifications will be studied along with their legal and practical application to working drawings. Contract documents will be analyzed and studied for the purpose of client-architect-contractor responsibilities, duties and mutual protection.
Prerequisite: T-DFT 220.

SIXTH QUARTER

T-DFT 222 Architectural Drafting 2 9 5

Preparation of the complete set of working drawings for the architectural structure. Preparation of millwork drawings, cabinets and built-in equipment detail drawings, and door, window, and room schedules. Site and landscaping plans will be studied and drawn. Final assembly of the complete document for construction purposes will be made.

Prerequisites: T-DFT 221, T-DFT 235, T-CIV 101.

T-DFT 236 Construction Estimating and Field Inspecting 3 3 4

Interpretation of working drawings for a project; preparation of material and labor quantity surveys from plans and specifications; approximate and detailed estimates of cost. The student will study materials take-off, labor take-off, sub-contractors' estimates, overhead costs, and bid and contract procedures. Detailed inspection of the construction by comparing the finished work with the specifications.

Prerequisite: T-DFT 235.



ELECTRONICS

INTRODUCTION

Purpose of Curriculum

The field of electronics has developed at a rapid pace since the turn of the century. For many years the major concern of electronics was in the area of communications. Developments during World War II and in the period since have revolutionized production techniques. New industries have been established to supplement the need and demand for electronics equipment.

Many opportunities exist for men and women with a technical education in electronics. This curriculum provides a basic background in electronic related theory with practical applications of electronics for business and industry. Courses are designed to develop competent electronics technicians who may take their place as an assistant to an engineer, or as a liaison between the engineer and the skilled craftsman.

Job Description

The electronics technician may start in one or more of the following areas: research, design, development, production, maintenance or sales. He may be an assistant to an engineer, an engineering aide, laboratory technician, supervisor or equipment specialist. His training is similar to that of an engineer, but in less depth and more practical in application. He can function as a liaison between an engineer and the skilled craftsman.

Suggested Sequence of Required Courses

COURSE TITLE	Hours		Quarter Hours Credit
	Per Week Class	Lab.	
FIRST QUARTER			
T MAT 101 Technical Mathematics	5	0	5
T-PHY 101 Physics: Properties of matter	3	2	4
T-ENG 101 Speed Reading	2	0	0
T-DFT 107 General Drafting	2	3	3
T-ELC 110 Direct Current Electricity	5	6	8
	—	—	—
	17	11	20

SECOND QUARTER

T MAT	102	Technical Mathematics	5	0	5
T-PSY	102	Physics: Work, Energy, Power	3	2	4
T-ENG	102	Report Writing	3	0	3
T-ELC	111	Alternating Current Electricity	5	6	8
			—	—	—
			16	8	20

THIRD QUARTER

T-MAT	103	Technical Mathematics	5	0	5
T-ENG	103	Technical Report Writing	3	0	3
T-PSY	110	Applied Psychology	3	0	3
T-ELN	112	Electronics I	5	8	9
			—	—	—
			16	8	20

FOURTH QUARTER

T-MAT	204	Technical Mathematics	3	0	3
T-PHY	204	Physics: Light and Sound	3	2	4
T-ENG	207	Fundamentals of Oral Communications	3	0	3
T-ELN	213	Electronics II	8	8	12
			—	—	—
			17	10	22

FIFTH QUARTER

T-ISC	201	Industrial Organization and Management	3	0	3
T-ELN	216	Transistor Applications	5	4	7
T-ELN	217	Communications and Ultra High Frequency	2	4	4
T-ELN	218	Special Circuitry	5	4	7
			—	—	—
			15	12	21

SIXTH QUARTER

T-ECO	202	Economics	3	0	3
T-ELN	219	Instrumentation	5	6	8
T-ELN	220	Circuit Analysis and Maintenance	5	6	8
			—	—	—
			13	12	19

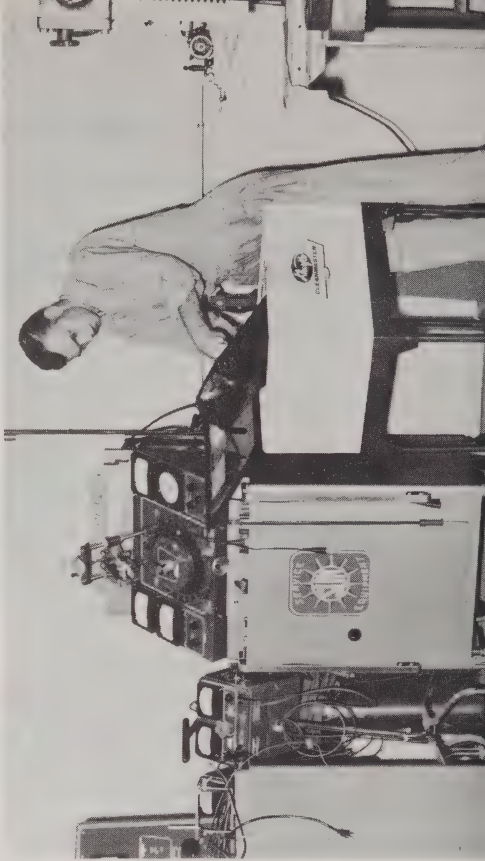
Course Description By Quarters

COURSE TITLE	Hours		Quarter Hours Credit
	Per Week Class	Lab.	
T-MAT 101 Technical Mathematics	5	0	5
<p>The real number systems developed as an extension of natural numbers. Number systems of various bases. Fundamental algebraic operations, the rectangular coordinate system, as well as fundamental trigonometric concepts and operations. Stress on the application of these principles in practical problems.</p>			
T-PHY 101 Physics: Properties of Matter	3	2	4
<p>A fundamental course covering several basic principles of physics. Solids and their characteristics, liquids in motion, gas laws, and applications. Laboratory experiments and specialized problems dealing with these topics.</p>			
T-ENG 101 Speed Reading	2	0	0
<p>A concentrated effort to improve the student's ability to comprehend what he reads by training him to read more rapidly and accurately.</p>			
T-DFT 107 General Drafting	2	3	3
<p>An introductory course of drawing principles and practices for reading and describing objects in the graphic language. The student is expected to gain basic skills in drawing with instruments, lettering, geometrical constructions, freehand sketching, and describing objects orthographically with principal views. Freehand sketching and orthographic reading are emphasized.</p>			
T-ELC 110 Direct Current Electricity	5	6	8
<p>Basic electricity subjects include structure of matter, electrical terminology and symbols, electrostatic theory of current flow, magnets and magnetic fields. Rigorous mathematical analysis of direct current resistive circuits. Ohm's Law, Kirchhoff's Law, Thevenin's Theorem, Norton's Theorem, the Superposition Principle and loop current method. Solution of complex resistive networks. Fundamental principles of inductors, capacitors, and time constant circuits are introduced.</p>			
T-MAT 102 Technical Mathematics	5	0	5
<p>A continuation of T-MAT 101. Advanced algebraic and trigonometric topics including quadratics, logarithms, determinants, progressions, the binomial expansion, complex numbers, solution of oblique triangles, and graphs of the trigonometric functions are studied in depth. Prerequisite: T-MAT 101.</p>			

- T-PHY 102 Physics: Work, Energy, Power** 3 2 4
Includes such topics as statics, forces, center of gravity, and dynamics. Units of measurement and their applications. A practical approach is used in teaching students the use of essential mathematical formulas. Prerequisites: T MAT 101, T-PHY 101.
- T-ENG 102 Report Writing** 3 0 3
Designed to aid the student in the improvement of self-expression in business and technical composition. Emphasis of grammar, diction, sentence structure, punctuation, and spelling. Intended to stimulate students is applying the basic principles of English grammar in their day to day situations in industry and social life.
- T-ELC 111 Alternating Current Electricity** 5 6 8
Alternating current and voltage, alternatin current theory. Mathematical analysis of both sine and non-sine wave forms. Inductive reactance, capacitive reactance, and impedance characteristics of alternating current circuits. The use of vector and complex numbers in circuit impedance. Series and parallel resonant circuit conditions are compared, and practical application of these conditions explained. Prerequisites: T ELC 110, T-MAT 101, T-PHY 101.
- T-MAT 103 Technical Mathematics** 5 0 5
The fundamental concepts of analytical geometry and an introduction to differential and integral calculus. Topics included are graphing techniques, geometric and algebraic interpretation of the derivative, differentials, rate of change, the integral and basic integration techniques. Applications of these concepts to practical situations. Prerequisite: T-MAT 102.
- T-ENG 103 Technical Report Writing** 3 0 3
The fundamentals of English are utilized as a background for the organization and techniques of modern report writing. Exercises in developing typical reports, using writing techniques and graphic devices. Practical application in the preparation of a full-length report at the end of the term. Prerequisite: T ENG 102.
- T-PSY 110 Applied Psychology** 3 0 3
A study of the priciples of psychology that will be of assistance in the understanding of inter-personal relations on the job. Motivation, feelings, and emtions are considered with particular reference to on-the-job problems. Other topics are employee selection supervision, job satisfaction, and industrial conflicts. Attention is also given to personal and group dynamics so that the student may learn to apply the principles of mental hygiene to his adjustment problems as a worker and member of the community.

- | | | | |
|--------------------------------|---|---|---|
| T-ELN 112 Electronics I | 5 | 8 | 9 |
|--------------------------------|---|---|---|
- A treatment of electron tubes, semi-conductors and their associated circuitry; thermionic emission; diode, triode, tetrode, and pentode characteristics. Theory of semi-conductor diode and transistor operation is studied in detail. Application of vacuum tubes and semi-conductors in power supplies, voltage amplifiers, power amplifiers, and the advantages and disadvantages of each.
Prerequisites: T-ELC 110, T-MAT 101, T-PHY 101.
- | | | | |
|--|---|---|---|
| T-MAT 204 Technical Mathematics | 3 | 0 | 3 |
|--|---|---|---|
- Advanced concepts of differentiation and integration considered. Included are graphs and derivatives of the trigonometric functions, exponential and logarithmic differentiation and integration, advanced integration techniques, polar equations, parametric equations, and Fourier series.
Prerequisite: T-MAT 103.
- | | | | |
|---|---|---|---|
| T-PHY 204 Physics: Light and Sound | 3 | 2 | 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.
Prerequisite: T-MAT 101.
- | | | | |
|---|---|---|---|
| T-ENG 207 Fundamentals of Oral Communication | 3 | 0 | 3 |
|---|---|---|---|
- Principles of effective communication with emphasis upon self-expression is conversation, interviewing, delegating and accepting, understanding, listening, questioning, conferences, and vocabulary.
- | | | | |
|---------------------------------|---|---|----|
| T-ELN 215 Electronics II | 8 | 8 | 12 |
|---------------------------------|---|---|----|
- Design and analysis of vacuum tube and transistor oscillators, radio frequency analysis and intermediate frequency amplifiers. Frequency response, stage gain, distortion, noise characteristics, and frequency stability will be explored.
Prerequisites: ELN 112T, T MAT 103.
- | | | | |
|---|---|---|---|
| T-ISC 201 Industrial Organization and Management | 3 | 0 | 3 |
|---|---|---|---|
- A survey of the business world with particular attention devoted to the structure of the various types of business organizations, methods of financing, internal organization, and management.
- | | | | |
|---|---|---|---|
| T-ELN 216 Transistor Application | 5 | 4 | 7 |
|---|---|---|---|
- Transistor circuitry and design problems. Junction diodes, transistor triodes, tunnel, and zener diodes with associated circuitry. Temperature variation, transit time, and frequency response are studied in detail.
Prerequisites: ELN 213T, T-MAT 204.

- T-ELN 217 Communications and Ultra High Frequency** 2 4 4
- Application of previously studied circuits to the broad field of communications and ultra high frequency. Amplitude and frequency modulated transmitters, receivers, wave guides, cavity resonators, klystron, magnetron, and traveling wave tubes.
Prerequisite: T ELN 213.
- T-ELN 218 Special Circuitry** 5 4 7
- The design and analysis of special circuitry: wave shaping, pulse techniques, broad-band amplifiers, diode switches, multivibrators, gates, magnetic amplifiers, chopper amplifiers, clipper and clamping circuits, synchro and servo systems, photo control devices, step counters, and other specific applications circuitry.
Prerequisite: T-ELN 216.
- T-ECO 202 Economics** 3 0 3
- Basic economics with attention to current problems of price, competition, and money; supply and demand; business organizations; firm and family income; labor and industrial relations; government and the economy; gross national product; relationship of income to expenditures business cycles.
- T-ELN 219 Instrumentation** 5 6 8
- A basic study of sensory devices for detecting changes in pressure, temperatures, sound, light and electricity; the associated circuitry and indicating devices.
Prerequisites: T ELN 216, T-ELN 218.
- T-ELN 220 Circuit Analysis and Maintenance** 5 6 8
- Systematic analysis of complex circuitry. Methods of locating and correcting malfunctions. Troubleshooting by voltage measurements; resistance measurements and wave-form observations. Schematic reading and interpretation.
Prerequisites: T ELN 219, T-MAT 204, T-PHY 204.







Trade
Education

AUTOMOTIVE MECHANICS

INTRODUCTION

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, buses 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 buses. In some communities and rural areas they also may service tractors or marine engines and other gasoline-powered equipment. Mechanics inspect and test to determine the causes of faulty operation. They repair or replace defective parts to restore the vehicle or machine to proper operating condition. 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 automobile 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.

Suggested Curriculum By Quarters

COURSE TITLE			Hours		Quarter Hours Credit
			Per Week Class	Lab.	
FIRST QUARTER					
AUT	1121	Automotive Engines	4	12	8
ENG	1101	Speed Reading	2	0	0
MAT	1120	Shop Mathematics	3	0	3
WLD	1112	Welding	0	3	1
PHY	1110	Shop Science I: Matter and Electricity	2	2	3
			—	—	—
			11	17	15
SECOND QUARTER					
AUT	1122E	Electricity and Ignition	4	9	7
AUT	1122F	Carburetor and Fuel Systems	2	3	3
MAT	1120B	Shop Mathematics	3	0	3
PHY	1111	Shop Science II: Mechanics and Heat	2	2	3
ENG	1102	Shop Communications	2	0	2
			—	—	—
			13	14	18
THIRD QUARTER					
AUT	1123	Automotive Chassis and Suspension	2	6	4
SOC	1101	Human Relations	2	0	2
AUT	1124	Automotive Power Train Systems	4	12	8
DFT	1121	Blueprint Reading	3	0	3
			—	—	—
			11	18	17
FOURTH QUARTER					
AUT	2125G	Auto Garage	0	15	5
AUT	2125T	Auto Testing	1	3	2
AUT	2101	Automotive Air Conditioning	1	3	2
SOC	2103	Management Procedures	3	0	3
			—	—	—
			5	21	12

Course Descriptions

COURSE TITLE	Hours Per Week		Quarter
	Class	Lab.	Hours Credit
AUT 1121 Automotive Engines	4	12	8
<p>Development of a thorough knowledge and ability in using, maintaining, and storing the various hand tools and measuring devices needed in automotive repair work. Study of the construction and operation of components of automotive engines. Testing of engine performance; servicing and maintenance of pistons, valves, cams and camshafts; fuel and exhaust systems; cooling systems; proper lubrication and methods of testing, diagnosing, and repairing.</p>			
ENG 1101 Speed Reading	2	0	0
<p>A concentrated effort to improve the student's ability to comprehend what he reads by training him to read more rapidly and accurately. Special machines are used for class drill to broaden the span of recognition, to increase eye coordination and word group recognition, and to train for comprehension in larger units. Reading faults of the individual are analyzed for improvement, and principles of vocabulary building are stressed.</p>			
MAT 1120 Shop Mathematics	3	0	3
<p>Number theory, operations with common fractions and applications, operations with decimal fractions with applications, simple word problems involving fractions, determination of unknown dimensions on mechanical drawings. Also operations with signed numbers, definitions in algebra, grouping symbols, order of operations, axioms used in solving equations, solution of simple first degree equations, evaluation of a formula, ratio and proportion, compound ratios, tapers, and percentage. Solution of simple second degree equations by formula.</p>			
WLD 1112 Welding	0	3	1
<p>Welding demonstrations by the instructor and practice by students in the oxyacetylene welding shop. Safe and correct methods of assembling and operating the welding equipment. Practice will be given for surface welding, bronze welding, silver-soldering, and flame cutting methods applicable to mechanical repair work.</p>			
PHY 1110 Shop Science I: Matter and Electricity	2	2	3
<p>Introductory course in physics and its applications. Covers systems of measurement, properties of solids, liquids, and gases. Much emphasis is placed upon the principles of electricity, such as electron theory, magnetism and electromagnetism. The production, transmission, distribution, measurement, and specific applications of electrical energy constitute major areas of study.</p>			

- AUT 1122E Electricity and Ignition** 4 9 7
 A thorough study of the electrical system of the automobile, battery cranking mechanism, generator, ignition, accessories, and wiring. Special tools and testing equipment for the electrical system.
 Prerequisites: AUT 1121, PHY 1110, MAT 1120A.
- AUT 1122F Carburetor and Fuel Systems** 2 3 3
 A thorough study of the fuel system of the automobile including fuel pumps, carburetors, and fuel injectors. Characteristics of fuels, types of fuel systems, special tools, and testing equipment for the fuel systems. Prerequisites: AUT 1121, MAT 1120A.
- MAT 1120B Shop Mathematics** 3 0 3
 Operations with monomials and polynomials, removing a common factor, more advanced analysis of a formula, solution of a formula for an indicated unknown, and evaluation of the unknown. Includes an introduction to geometry and definitions. Instructor demonstrates and explains by examples about 40 selected propositions in geometry, with emphasis on applications of the propositions to problem solving on mechanical drawings. Formulas for areas of plane figures, surface areas of solids, and volumes of solids are developed with applications to problem solving. Prerequisite: MAT 1120A.
- PHY 1111 Shop Science: Mechanics and Heat** 2 2 3
 Principles of force, motion, work, energy, and power are treated extensively. The study of heat production, transmission, and its conversion into work are covered. Heat removal (refrigeration) is also introduced. Prerequisite: PHY 1110.
- ENG 1102 Shop Communications** 2 0 2
 Development of ability to communicate effectively through the medium of good language usage in speaking and writing. Organizing and presenting thoughts effectively in connection with problems.
- AUT 1123 Automotive Chassis and Suspension** 2 6 4
 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 end, and types and servicing of brakes. Prerequisite: AUT 1122.
- SOC 1101 Human Relations** 2 0 2
 Development of the understanding of relationships to other persons through some of the basic principles of human psychology. The problems of the individual and his work situation are studied in relation to the established organization of modern business and industry and in relation to government practices and labor organizations, with special emphasis on the operating responsibilities of good management.

AUT 1124 Automotive Power Train Systems 4 12 8

Principles and functions of automotive power train systems, clutches, transmission, gears, torque converters, drive shaft assemblies, rear axles, and differentials. Identification of troubles, servicing, and repair. Prerequisites: PHY 1111, MAT 1120A, AUT 1122F.

DFT 1121 Blueprint Reading 3 0 3

Development of ability to read and interpret blueprints, charts, instruction and service manuals, and wiring diagrams. Information on the basic principles of lines, views, dimensioning procedures, and notes.

AUT 2125G Auto Garage 0 15 5

Emphasis 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. Prerequisite: AUT 1123.

AUT 2125T Auto Testing 1 3 2

The necessary procedures are studied in determining the troubles in automobiles which are brought to a garage. A full range of analysis and testing methods is developed in order to quickly troubleshoot an automobile. Understanding the test equipment and procedures will be stressed. Prerequisite: AUT 1123.

AHR 2101 Automotive Air Conditioning 1 3 2

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 1111.

SOC 2105 Management Procedures 3 0 3

An introduction to the business world, problems of small business operation, basic business law, business forms and records.

MACHINIST

INTRODUCTION

Purpose 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.

This guide is designed to give learners the opportunity to acquire basic skills and the related technical information necessary to gain employment and build a profitable career in the machine shop industry in the State. It is comprised of the joint views of committees responsible for its development.

Job Description

The machinist is a skilled metal worker who shapes metal parts by using machine tools and hand tools. His training and experience enable him to plan and carry through all the operations needed in turning out a machined product and to switch 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 can complete the finished work according to blueprint or written specifications. He makes standard shop computations relating to dimensions of work, tooling, feeds, and speeds of machining. He often uses precision measuring instruments such as micrometers and gages to measure the accuracy of his 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 can heat and quench cutting tools and parts to improve machinability. His wide knowledge enables him to turn a block of metal into an intricate, precise part.

Suggested Curriculum By Quarters

COURSE TITLE			Hours		Quarter Hours Credit
			Per Week Class	Lab.	
FIRST QUARTER					
MEC	1121	Machine Shop Theory and Practice	4	12	8
MAT	1120A	Shop Mathematics	3	0	3
DFT	1122	Blueprint Reading	3	0	3
PHY	1110	Shop Science I: Matter and Electricity	2	2	3
SOC	1101	Human Relations	2	0	2
ENG	1101	Speed Reading	2	0	0
			—	—	—
			16	14	19
SECOND QUARTER					
MEC	1122	Machine Shop Theory and Practice	4	12	8
MAT	1120B	Shop Mathematics	3	0	3
DFT	1122B	Blueprint Reading	3	0	3
PHY	1111	Shop Science II: Mechanics and Heat	2	2	3
MEC	1124	Structure of Metals	3	2	4
			—	—	—
			15	16	21
THIRD QUARTER					
MEC	1123	Machine Shop Theory and Practice	4	12	8
MAT	1801	Geometry and Right Triangle Trigonometry	5	0	5
DFT	1123A	Blueprint Reading	3	0	3
MEC	1112	Welding	0	3	1
MEC	1126	Heat Treating Practice	0	3	1
			—	—	—
			12	18	18
FOURTH QUARTER					
MEC	2125	Machine Shop Theory and Practice	4	15	9
MAT	2123	Machinist Mathematics	3	0	3
DFT	2123B	Blueprint Reading	3	0	3
ENG	2102	Shop Communications	2	0	2
SOC	2103	Management Procedures	3	0	3
			—	—	—
			15	15	20

Course Descriptions

COURSE TITLE	Hours Per Week		Quarter
	Class	Lab.	Hours Credit
MEC 1121 Machine Shop Theory and Practice	4	12	8
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 practice.			
MAT 1120A Shop Mathematics	3	0	3
Number theory, operations with common fractions and applications, operations with decimal fractions with applications, simple word problems involving fractions, determination of unknown dimensions on mechanical drawings. Also operations with signed numbers, definitions in algebra, grouping symbols, order of operations, axioms used in solving equations, solution of simple first degree equations, evaluation of a formula, ratio and proportion, compound ratios, tapers, and percentage. Solution of simple second degree equations by formula.			
DFT 1122A Blueprint Reading	3	0	3
First part of interpretation and reading of blueprints. Information on the basic principles of the blueprint, lines, views, dimensioning procedures, and notes.			
PHY 1110 Shop Science I—Matter and Electricity	2	2	3
Introductory course in physics and its applications. Covers systems of measurement and properties of solids, liquids, and gases. Much emphasis is placed upon the principles of electricity such as electron theory, magnetism, electromagnetism. The production, transmission, distribution, measurement, and specific applications of electrical energy constitute major areas of study.			
SOC 1101 Human Relations	2	0	2
Development of understanding of relationships to other persons through some of the basic principles of human psychology. The problems of the individual and his work situation are studied in relation to the established organization of modern business and industry and in relation to government practices and labor organization, with special emphasis on the operating responsibilities of good management.			
ENG 1101 Speed Reading	2	0	0
A concentrated effort to improve the student's ability to comprehend what he reads by training him to read more rapidly and accurately.			

MEC 1122 Machine Shop Theory and Practice 4 12 8

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 1121.

MAT 1120B Shop Mathematics 3 0 3

Operations with monomials and polynomials, removing a common factor, more advanced analysis of a formula, solution of a formula for an indicated unknown, and evaluation of the unknown. Includes an introduction to geometry and definitions. Instructor demonstrates and explains by examples about 40 selected propositions in geometry, with emphasis on applications of the propositions to problem solving on mechanical drawings. Formulas for areas of plane figures, surface areas of solids, and volumes of solids are developed with applications to problem solving.

DFT 1122B Blueprint Reading 3 0 3

Second part of interpretation and reading of blueprints. Information on the basic principles of the blueprint, lines, views, dimensioning procedures, and notes. Prerequisite: DFT 1122A.

PHY 1111 Shop Science II: Mechanics and Heat 2 2 3

Principles of force, motion, work, energy, and power are treated extensively. The study of heat production, transmission, and its conversion into work are covered. Heat removal (refrigeration) is also introduced. Prerequisite: PHY 1110.

MEC 1124 Structure of Metals 3 2 4

Structure of metals as applied in heat treating demonstrations and lab analysis using elementary and practical approach to metals, their structure, markings, classifications, and uses. Interpretation of properties and specifications of steels by use of manuals, catalogs, charts, etc.

MEC 1123 Machine Shop Theory and Practice 4 12 8

Advanced work on the engine lathe, turning, boring and threading machines, grinders, milling machine, and shaper. Introduction to basic indexing and terminology with additional processes on calculating, cutting and measuring of spur, helical, and worm gears and wheels. The trainee will use precision tools and measuring instruments such as vernier height gages, protractors, comparators. Basic exercises will be given on the turret lathe and on the tool and cutter grinder. Prerequisite: MEC 1122.

MAT 1801 Geometry and Right Triangle Trigonometry 5 0 5

Logarithms are taught as a computational aid. Review of more important propositions in geometry. Theory of right triangle trigonometry. Application of right triangle trigonometry to the solution of mechanical drawing problems.

DFT 1123A Blueprint Reading 3 0 3

First part of practice in interpretation of blueprints as they are used in industry, study of prints supplied by industry; making plans of operations; introduction to drafting room procedures; sketching as a means of passing on ideas, information and processes. Prerequisite: DFT 1122B.

WLD 1112 Welding 0 3 1

Welding demonstrations by the instructor and practice by students in the oxyacetylene welding shop. Safe and correct methods of assembling and operating the welding equipment. Practice will be given for surface welding, bronze welding, silver-soldering, and flame cutting methods applicable to mechanical repair work.

MEC 1126 Heat Treating Practice 0 3 1

Working knowledge of the methods of treating ferrous and nonferrous metals. The effect 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 1124.

MEC 2125 Machine Shop Theory and Practice 4 15 9

Development of class projects using previously learned procedures in planning, blueprint reading, machine operations, final assembly, and inspection. Additional processes on the turret lathes, 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 1123.

MAT 2123 Machinist Mathematics 3 0 3

Theory of oblique triangle trigonometry. Solution of problems involving oblique triangles by 1) reduction to right triangles; 2) sine law; 3) cosine law; 4) cotangent law. Application of these procedures to the solution of problems on mechanical drawings. Prerequisite: MAT 1801.

DFT 2123B Blueprint Reading 3 0 3

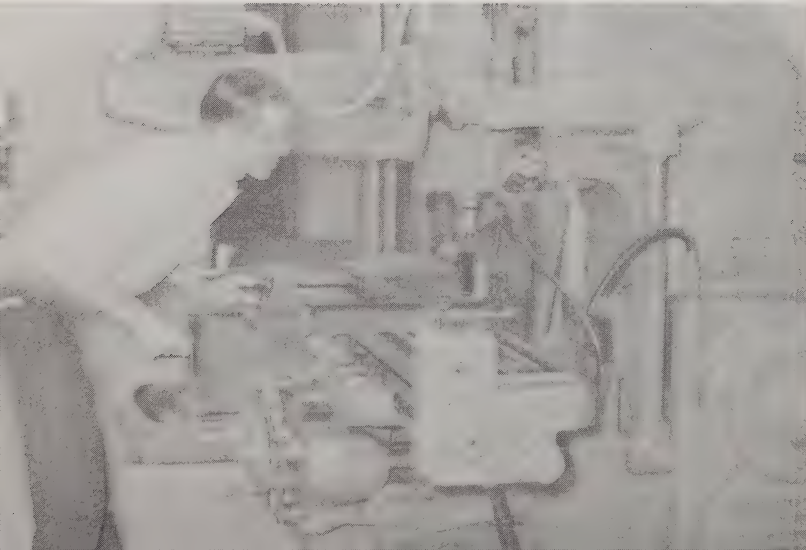
Further practice in interpretation of blueprints as they are used in industry; a study of prints supplied by industry; making plans of operations; introduction to drafting room procedures; sketching as a means of passing on ideas, information, and processes. Prerequisite: DFT 1123A.

ENG 2102 Shop Communication 2 0 2

Development of ability to communicate effectively through the medium of good language usage in speaking and writing. Organizing and presenting thoughts effectively in connection with problems.

SOC 2103 Management Procedures 3 0 3

An introduction to the business world, problems of small business operations, basic business law, business forms and records, financial problems, ordering and inventorying, layout of equipment and offices, methods of improving business, and employer-employee relations.



PRACTICAL NURSING

Roanoke Rapids Hospital

Washington-Beaufort Hospital

INTRODUCTION

Purpose of Curriculum

The accelerated growth of population in North Carolina and rapid advancement in medical technology demand an increased number of well-trained personnel for health services. Realizing this need, the North Carolina Department of Community Colleges, in conjunction with local hospitals, administers programs of practical nurse education throughout the state.

The aim of the Practical Nurse Education Program is to prepare qualified persons for participation in care of patients of all ages, in various states of dependency, and with a variety of illness conditions.

Students are selected on the basis of demonstrated aptitude for nursing, as determined by pre-entrance tests, interviews with faculty members, high school record, character references, and reports of medical and dental examinations.

Throughout the one-year program the student is expected to continuously acquire knowledge and understandings related to nursing and the biological and social sciences and to develop skills related to nursing practice, communications, inter-personal relations, and use of good judgment. Evaluation of student performance consists of tests on all phases of course content, evaluation of clinical performance, and evaluation of adjustments to the responsibilities of nursing. A passing score is required on all graded work, plus demonstrated progress in application of nursing skills to actual patient care.

Graduates of accredited programs of practical nurse education are eligible to take the licensing examinations given by the North Carolina Board of Nursing. This examination is given twice each year, usually in April and September. A passing score entitles the individual to receive a license and to use a legal title "Licensed Practical Nurse." The license must be renewed annually. The Licensed Practical Nurse can apply for a licensure in other states on the basis of a satisfactory examination score, without repeating the examination.

Job Description

The LPN is prepared to function in a variety of situations: hospitals of all types, nursing homes, clinics, doctors' and den-

tists' offices and, in some localities, public health facilities. In all situations the LPN functions under supervision of a registered nurse and/or licensed physician. This supervision may be minimal in situations where the patient's condition is stable and not complex; or it may consist of continuous direction in situations requiring the knowledge and skills of the registered nurse or physician. In the latter situation, the LPN may function in an assisting role in order to avoid assuming responsibility beyond that for which the one-year program can prepare the individual.

Job requirements for the Licensed Practical Nurse include suitable characteristics, ability to adapt knowledge and understandings of nursing principles to a variety of situations, technical skills for performance of bedside nursing, appreciation for differences of people and for the worth of every individual, a desire to serve and help others, and readiness to conform to the requirements of nursing ethics and hospital policies.

The Curriculum Design

The practical nursing curriculum is designed as a core curriculum (fused course content) with the focus on nursing elements; concepts and facts from other subject areas are presented as they relate to specific units of nursing. The purpose of this design is to facilitate student application of learnings to nursing practice, i.e. to promote transfer of learning from related subjects to nursing theory and from classroom study to clinical application. Quarter hours of credit have not been assigned, in that this design does not lend itself to such an hourly and credit breakdown. Instead the minimum contact hours needed for adequate coverage of course material is indicated for class and laboratory, (including clinical) experiences; these weekly contact hours are approximate and are averages, as there is necessarily some variation from week to week, especially during the first quarter. It is the prerogative of the local institution, however, to allocate credit hours if this is desired for administrative purposes.

Organizing elements for the core curriculum includes communications and human relations, as well as certain elements from nursing practice such as ethics, legal aspects, standards of practice, and role perception. If subjects such as English or Human Relations are to be required as separate courses, care must be taken to avoid deletion of nursing content. The allotted times provide for learning experiences with multiple objectives, to include communications and human relations skills as well as nursing skills. The addition of other courses, though justifiable

in terms of educational standards for one-year programs, create the hazards of excessively heavy student load or omission of important nursing content.

Each Practical Nurse Education Program must necessarily make certain adaptations in the curriculum design, because of differences in institutional policies and because of the wide diversity in facilities utilized for the clinical phase of the programs. If administrative personnel of the practical nursing faculty prefer a subject-oriented curriculum, such an organizational plan can readily be prepared from teacher-made outlines or from the core curriculum course materials. In making adaptations, administrators and faculty members are cautioned to keep in mind that the core design incorporates sound educational principles: units are based on specific nursing content and relevant basic information from other subject areas, so that relationships are readily understood by the student; sequences are planned for definite progression from simple or familiar concepts to more complex and unfamiliar ones; and units progress from normal, to moderate deviations from normal, to serious deviations. The seven units of the first quarter are relatively fixed, with each building on preceding units to a great extent. Beginning in the second quarter, unit sequence is flexible and should be carefully planned by each teacher to adapt the instructional plan to the local situation. This planning, however, should result in a progression of units that will be conducive to effective learning.

Suggested Curriculum By Quarters

COURSE TITLE	Hours		Contact Hours Per Quarter
	Per Week Class*	Lab.*	
FIRST QUARTER			
NUR 1001 Practical Nursing I	28	2	330
SECOND QUARTER			
NUR 1002 Practical Nursing II	12	24	396
THIRD QUARTER			
NUR 1003 Practical Nursing III	12	24	396
FOURTH QUARTER			
NUR 1004 Practical Nursing IV	12	24	396
	Total		1518

*Figures given are averages as there will be some variation from week to week.

Course Descriptions By Quarters

FIRST QUARTER	Hours		Contact
	Per Week	Per Week	Hours Per
	Class	Lab.	Quarter
NUR 1001 <i>Practical Nursing I</i>	28	2	330

Designed to assist students in acquiring the knowledge, understandings, appreciations, and attitudes basic to effective nursing of patients of all ages and backgrounds. Emphasis is on nursing needs arising both from the individuality of the patient and from inability for self-care as a result of a health deviation. Patient-centered studies include analysis of patient needs, both through classroom study of hypothetical patient situations and through planned experiences in the clinical environment. Beginning skills in nursing methods are developed through planned laboratory practice and supervised patient care.

OBJECTIVES: To assist beginning students in practical nursing to acquire basic knowledge from nursing and related subject areas and to begin to develop the skills needed for safe and effective bedside care of patients in a state of dependency due to health deviations.

COURSE MATERIAL: Nursing—History
 Introduction to Patient Care
 Health—Personal, Physical and Mental
 Family
 Community
 Basic Science—Body Structure and Function
 Bacteriology
 Basic Nutrition
 Vocational Adjustments—Introduction to Ethics
 Legal Aspects of Nursing
 Communications and Human Relations

Prerequisite: Admission requirements.

SECOND QUARTER

NUR 1002 <i>Practical Nursing II</i>	12	24	396
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Designed to introduce the student to deviations from normal, to nursing methods and therapeutic procedures, and to the clinical specialties. Continued patient-centered study, with introduction of the illness condition as an additional source of nursing needs. Increased emphasis on clinical activities and selected patient care.

OBJECTIVES: To assist practical nursing students to acquire further knowledge and understanding and to develop further skills needed for rendering safe and effective nursing care to selected patients of all ages.

COURSE MATERIAL: Medical Surgical Nursing—Patient Care

Therapeutic Methods, including administration of oral medications

Introduction to Maternity Nursing

Introduction to Nursing the Sick Child

Communications and Human Relations

Prerequisite: NUR 1001.

THIRD QUARTER

NUR 1003 Practical Nursing III 12 24 396

Designed to acquaint the student with common illness conditions, related nursing needs and therapeutic methods, and role of the practical nurse in care of patients with specific conditions. Learning situations are selected to illustrate commonalities with a wide variety of similar conditions and to promote student awareness of similarities and differences. Clinical practice emphasizes student experience in care of subacutely ill patients with a wide variety of illnesses, correlated with classroom studies insofar as possible.

OBJECTIVES: To assist practical nursing students to acquire knowledge of common disease conditions and to develop beginning skills in rendering nursing care to patients of all ages with specific needs arising from the illness and/or therapy.

COURSE MATERIAL: Common Medical-Surgical Conditions

Care of the Subacutely Ill Child

Care of Maternity Patients and Newborn Infants with Complications

Prerequisite: NUR 1002.

FOURTH QUARTER

NUR 1004 Practical Nursing IV 12 24 396

Designed to introduce the student to care of patients with complex nursing needs and to the assisting role of the practical nurse in situations requiring judgments based on depth of knowledge. Clinical practice includes supervised care of labor patients and seriously ill adults and children.

OBJECTIVES: To assist advanced practical nursing students to acquire knowledge of needs of seriously ill patients, to develop beginning skills in assisting the registered nurse and/or physician in complex nursing situations, and to make the transition to the role of graduate practical nurse.

COURSE MATERIAL: Needs of the Seriously Ill Patient

Needs of Patients in immediate Post-Operative Period

Needs of the Labor Patient

Needs of the Seriously Ill Child

Assuming the Role of Graduate Practical Nurse

Prerequisite: NUR 1003.

RADIO AND TELEVISION SERVICING

INTRODUCTION

Purpose of Curriculum

Within recent years improved electronic techniques have provided expanded entertainment and educational facilities in the form of monochrome and color television, frequency modulated radio, high fidelity amplifiers and stereophonic sound equipment. These developments require expanded knowledge and skill of the individual who would qualify as a competent and up-to-date serviceman.

This curriculum guide provides a training program which will provide the basic knowledge and skills involved in the installation, maintenance and servicing of radio, television and sound amplifier system. A large portion of time is spent in the laboratory verifying electronic principles and developing servicing techniques.

Job Description

A radio and television serviceman may be required to install, maintain and service amplitude modulated and frequency modulated home and auto radios, transistorized radios, monochrome and color television sets, intercommunication, public address and paging systems, high fidelity and stereophonic amplifiers, record players and tape recorders.

His work will require meeting the public both in the repair shop and on service calls. A serviceman who establishes his own business will also need to know how to maintain business records and inventory.

Suggested Curriculum By Quarters

Course Title	Course Hours Per Week			Quarter Hours	
	Class	Lab.	Shop Prac.		
FIRST QUARTER					
MAT 1125	Electrical Mathematics	5	0	0	5
ELC 1122	Direct and Alternating Current	7	8	3	12
ENG 1101	Reading Improvement	2	0	0	2
		14	8	3	19

SECOND QUARTER

ELN	1122	Vacuum Tubes and Circuits	5	10	0	10
ELN	1123	Amplifier Systems	2	0	6	4
ENG	1102	Communication Skills	2	0	0	2
SOC	1101	Human Relations	2	0	0	2
			—	—	—	—
			11	10	6	18

THIRD QUARTER

ELN	1124	Vacuum Tubes and Circuits	4	4	0	6
ELN	1125	Radio Receiver Servicing	2	0	6	4
ELN	1126	Transistor Theory and Circuits	5	4	0	7
SOC	1103	Management Procedures	3	0	0	3
			—	—	—	—
			14	8	6	20

FOURTH QUARTER

ELN	2127	Television Receiver Circuits and Servicing	10	0	15	15
or		Television Receiver Circuits and Servicing	5	0	12	9
ELN	2128	Elective (1)	5	0	6	7
			—	—	—	—
			10	0	18	16

ELECTIVE

ELN	1129	Single Side-Band Systems	5	0	6	7
ELN	1130	Two Way Mobile Maintenance	5	0	6	7

Course Descriptions

Course Title	Course Hours Per Week			Quarter Hours Credit
	Class	Lab.	Shop Prac.	
MAT 1125 Electrical Mathematics	5	0	0	5
<p>An introductory algebra course with trigonometry and vectors needed in alternating current; algebraic operations of addition, subtraction, multiplication, and division; use of letters and signs, grouping, factoring, exponents, ratios and proportions; algebraic and graphic solutions of first-degree equations; introduction to trigonometric functions, their graphs and applications to right triangles. Addition, subtraction, and resolution of vector quantities.</p>				
ELC 1122 Direct and Alternating Current	7	8	3	12
<p>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.</p>				
ENG 1101 Reading Improvement	2	0	0	2
<p>A concentrated effort to improve the student's ability to comprehend what he reads by training him to read more rapidly and accurately.</p>				
ELN 1122 Vacuum Tubes and Circuits	5	10	0	10
<p>An introduction to vacuum tubes and their development; the theory, characteristics and operation of vacuum diodes, semi-conductor diodes, rectifier circuits, filter circuits, triodes, and simple voltage amplifier circuits. Prerequisite: ELC 1122, MAT 1125.</p>				
ELN 1123 Amplifier Systems	2	0	6	4
<p>An introduction to commonly used servicing techniques as applied to monophonic and stereophonic high fidelity amplifier systems and auxiliary equipment. The operation and servicing of inter-communication amplifiers and switching circuits will also be taught. Prerequisites: MAT 1125, ELC 1122.</p>				
ENG 1102 Communication Skills	2	0	0	2
<p>Development of ability to communicate effectively through the medium of good language usage in speaking and writing. Organizing and presenting thoughts effectively in connection with problems.</p>				

SOC 1101	Human Relations	2	0	0	2
	Development of understanding of relationships to other persons through some of the basic principles of human psychology. The problems of the individual and his work situation are studied in relation to the established organization of modern business and industry and in relation to government practices and labor organization, with special emphasis on the operating responsibilities of good management.				
ELN 1124	Vacuum Tubes and Circuits	4	4	0	6
	A continuing study of tubes and circuits; the theory, characteristics, and operation of the tetrode and pentode tubes, voltage and power amplifiers, tunable RF amplifiers, oscillators, and demodulator circuits. Prerequisites: ELN 1123, ELN 1122.				
ELN 1125	Radio Receiver Servicing	2	0	6	4
	Principles of radio reception and practices of servicing; included are block diagrams of radio receivers, servicing techniques of AM and FM receivers by resistance measurements, signal injection, voltage analysis, oscilloscope methods of locating faulty stages and components, and the alignments of AM and FM receivers. Prerequisite: ELN 1123, ELN 1122.				
ELN 1126	Transistor Theory and Circuits	5	4	0	7
	Transistor theory, operation, characteristics, and their application to audio and radio frequency amplifier and oscillator circuits. Prerequisite: ELN 1123.				
SOC 1103	Management Procedures	3	0	0	3
	An introduction to the business world, problems of small business operation, basic business law, business forms and records, financial problems, ordering and inventorying, layout of equipment and offices, methods of improving business, and employer-employee relations.				
ELN 2127	Television Receiver Circuits and Servicing	10	0	15	15
	A study of principles of television receivers, alignments of radio and intermediate frequency amplifiers; and adjustment of horizontal and vertical sweep circuits. Techniques of troubleshooting and repair of TV receivers with the proper use of associated test equipment will be stressed. Additional study of more specialized servicing techniques and oscilloscope waveform analysis will be used in the adjustment, troubleshooting, and repair of the color television circuits. Prerequisites: ELN 1126, ELN 1125.				

**ELN 2128 Television Receiver Circuits
and Servicing**

5 0 12 9

This course, taught in conjunction with an elective, will be a shortened version of ELN 1127. Prerequisites: ELN 1126, ELN 1125.

ELECTIVE:**ELN 1129 Single Side-Band Systems**

5 0 6 7

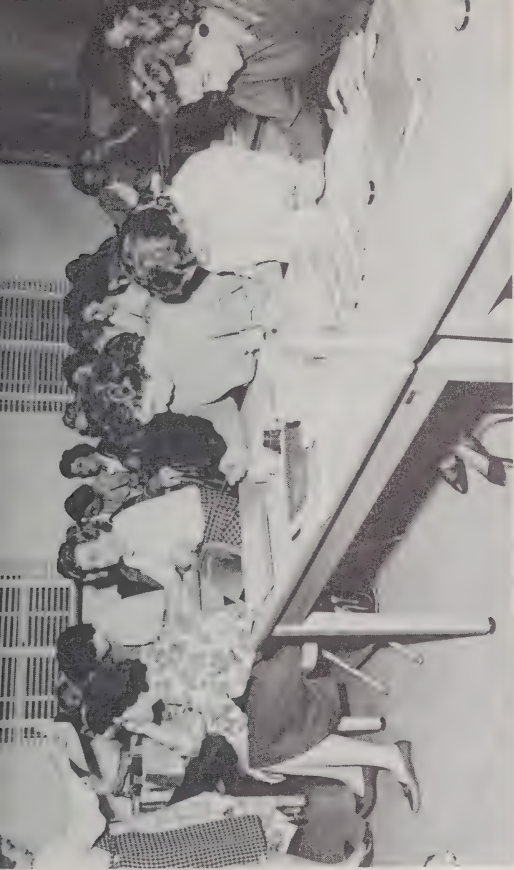
An introductory course of single side-band transmission system with or without frequency and the associated balanced modulator of phasing system used to produce this type of transmission. Time will be allotted also to the necessary circuitry in the receiver to receive this type transmission. Prerequisites: ELN 1126, ELN 1125.

ELN 1130 Two-Way Mobile Maintenance

5 0 6 7

A course to acquaint the student with the theory and maintenance of fixed station and mobile station transmitters and receivers. Except for radio laws, sufficient information will be given to qualify the student to take the FCC second class radio-telephone license examination. Prerequisites: ELN 1126, ELN 1125.







**Short
Term
Evening and Extension
Programs**

Adult Education Division—Extension Courses

The Institute offers extensive evening programs providing a variety of opportunities especially planned to meet the needs of adults and out-of-school youth 18 years of age and over. Work is available for which pre-high school and high school credits may be earned. Home and family courses and general interest subjects are also offered.

Extension courses may be taken for the purpose of self-improvement, or individual courses, where applicable, may apply to the diploma or degree program. Most of the courses are conducted on an evening schedule with individual classes usually meeting one or two evenings per week. A quarterly schedule is followed in the extension program with new courses beginning at the start of each quarter. Schedules of extension courses may be secured in the Student Personnel Office.

Extension courses are offered in the following areas of training:

1. Vocational-Technical
2. Business Education
3. Agricultural Extension
4. Supervisory Development Training
5. Apprenticeship Training
6. Fire Service Training
7. New Industry Training
8. Peace Officer Training

There will be no tuition or registration fees for extension courses except in the case of certain self-supporting programs. Instructional material fees may be charged in some programs.

CLASSES FOR ADULTS

Classes are available in BASIC EDUCATION for grades 1-8 at no cost to the adult.

HIGH SCHOOL courses for grades 9-12 are offered for only the cost of books. The high school preparation can lead to the high school equivalency certificate which is equal to the high school diploma and is awarded by the North Carolina State Department of Public Instruction upon qualification.

GENERAL ADULT and COMMUNITY SERVICE courses are offered when 15 interested persons are available for the course.

VOCATIONAL classes may be started with 12 members. The cost of Vocational and most General Adult courses is ten cents (10¢) per hour of instruction and the cost of a book if one is required.

Classes usually meet two nights per week for 2½ or 3 hours at the Pitt Technical Institute or on extension in cooperating public school facilities.

Some of the classes available are:

FUNDAMENTAL LEARNING	HOURS
Basic Education (Grades 1-4)	120
Basic Education (Grades 5-8)	120
High School Equivalency Preparation I	120
High School Equivalency Preparation II	120
Applied Business Arithmetic	80
Algebra I, II	80 ea.
Geometry (Plane & Solid)	80
Trigonometry (Plane)	80
Speed Reading	30
High School English Refresher	80
General Science	80
Biology	80
Physics	80
Chemistry	80
Public Speaking	30
Modern Math for Parents	30
AGRICULTURAL TECHNOLOGY	HOURS
Tractor Preventive Maintenance	40
Combines (Harvest Machines)	40
Ornamental Horticulture	40
Pesticides	20
Small Gasoline Engine Repairs	40
Basic Arc Welding	40
Advanced Welding	40
Fertilizers & Limes	20
Farm Record Keeping	20
Farm Forestry Management	20
Farm Credit & Appraisal	20

BUSINESS EDUCATION*HOURS**

Personal Typing I, II	80 ea.
Bookkeeping 1	80
Shorthand	80
Stenoscrypt (Speed Writing)	60

*In Pitt County only Curriculum Credit courses in business are available at Pitt Technical Institute.

HOMEMAKING**HOURS**

Home Sewing	40
Tailoring	40
Knitting	30
Flower Arranging	30
Interior Decorating	30
Furniture Upholstery & Refinishing	60

AUTOMOTIVE**HOURS**

Auto Engine Mechanics	125
Service & Tune-Up	50
Wheel Alignment & Balancing	50
Auto Care for Women	40
Drivers Training	54

OTHER VOCATIONAL**HOURS**

Plumbing I, II, III	80 ea.
Basic Electricity I, II, III	80 ea.
Cabinet Making I, II, III	80 ea.
Sheet Metal Mechanics I, II, III	80 ea.
Blueprint Reading for	
A. Plumbing	55
B. Carpentry	55
C. Electricity	55
D. Sheet Metal Mechanics I, II, III	80 ea.
Bricklaying I, II, III	140 ea.
Electric Theory & Code	80
Supervisory Development Training	
Firemanship Training	
Police Training	

CURRICULUM CREDIT COURSES

Automotive & Related courses
 Machine Shop & Related courses
 Architectural Drafting & Related courses
 Radio & TV & Related courses
 Secretarial & Related courses
 Electronics & Related courses
 Agricultural Business & Related Courses

Contact PITT TECHNICAL INSTITUTE for other information concerning courses.

PITT TECHNICAL INSTITUTE

Highway 11—South

P. O. Box 97

Telephone 756-3130

Greenville, N. C.

SHORT TERM COURSES

Auctioneering	4 Weeks
Fire Service Training	
Tobacco Ticket Marking	4 Weeks
Farriering (Horseshoeing)	3 Months
Operating Room Assistants.....	6 Months
(Pitt Memorial Hospital)	
Nurses' Aid	12 Weeks

PENDING PROGRAMS

The following curriculum programs may be offered at Pitt Technical Institute within the next two years.

In the event these programs become available, brochures of each program will be printed and distributed to all schools in the area.

2 Year Agricultural Chemicals Technology
 2 Year Police Officers Training Technology



BEAUFORT COUNTY UNIT-INDUSTRIAL EDUCATION CENTER

WASHINGTON, NORTH CAROLINA

Administration

Director—Charles Byrd

Director of Evening Programs—Thomas Umphlett

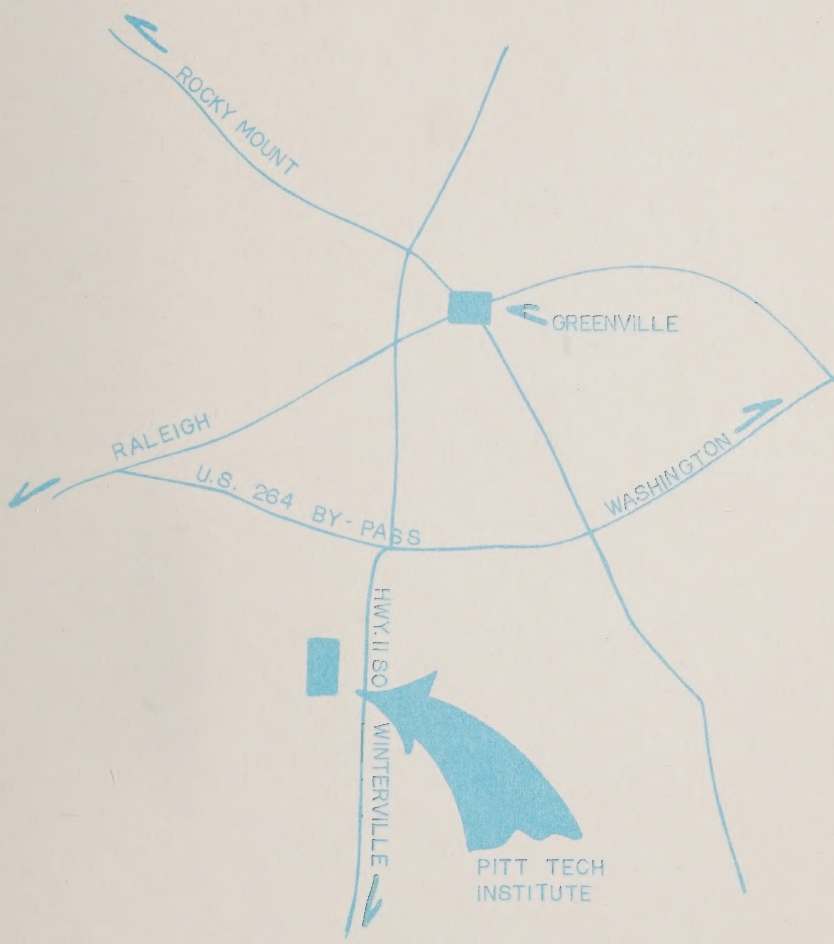
Faculty

Mrs. Katie Paul—Practical Nurse Education

Mrs. Alma Parker—Practical Nurse Education

Mr. Richard Harris—Automobile Mechanics

In addition to the two full-time day programs, The Beaufort I.E.C. conducts numerous classes in General Adult Education through its extension division. Several classes are continually being activated in industry as the need arises.



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PITT. TECHNICAL INSTITUTE
GREENVILLE, NORTH CAROLINA

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