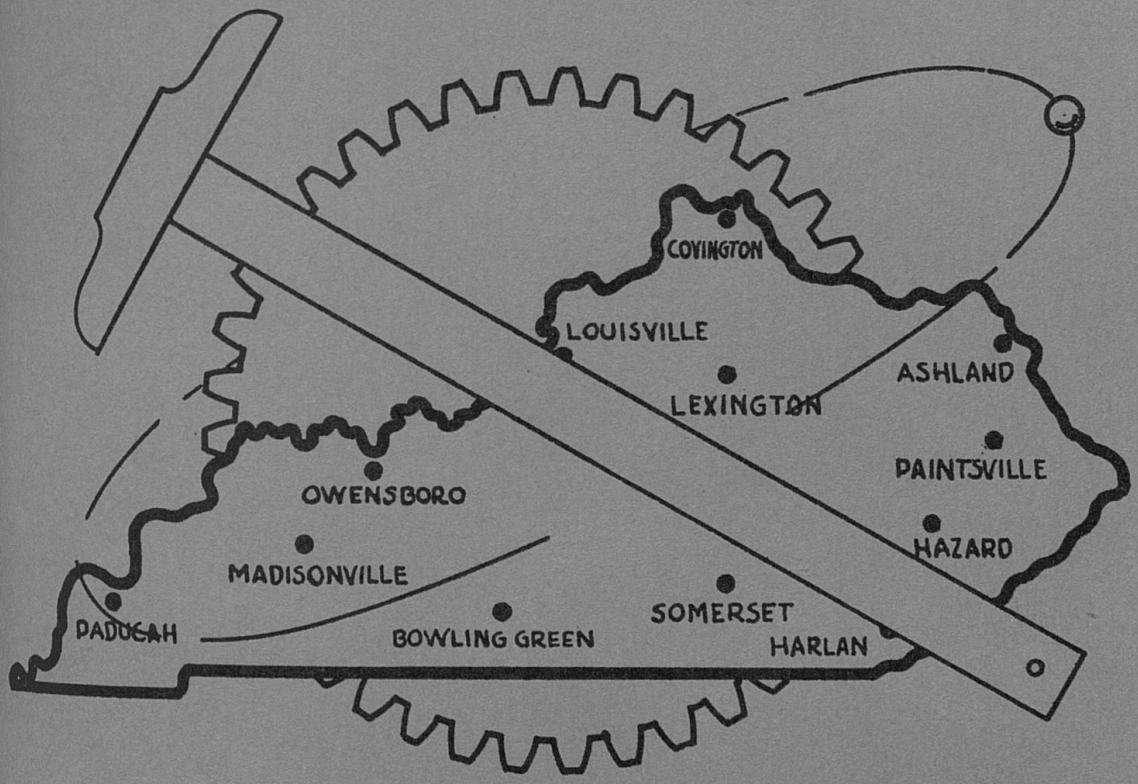
Commonwealth of Kentucky

EDUCATIONAL BULLETIN

VOCATIONAL INDUSTRIAL AND TECHNICAL EDUCATION



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Vocational Industial

and

Technical

Education

Division of Industrial & Technical Education
The State Department of Education
Frankfort, Kentucky

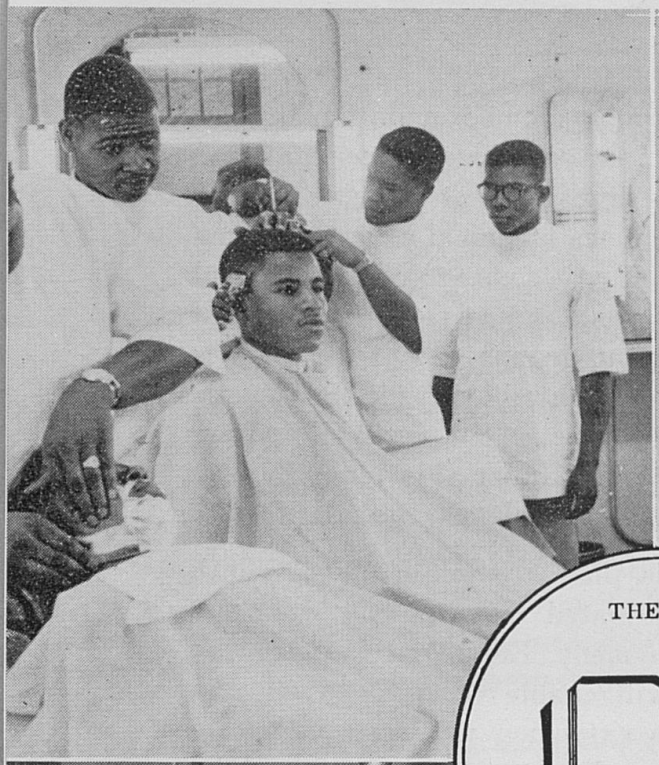
FOREWORD

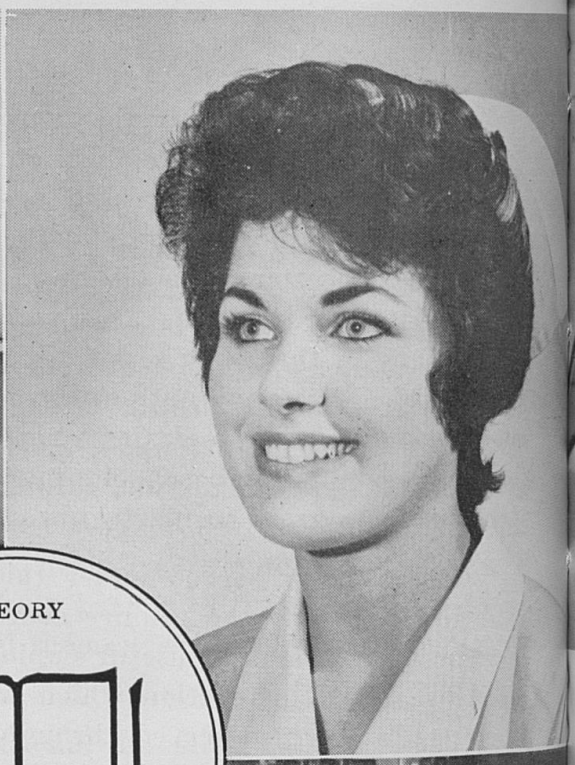
Kentucky's past economy has been based primarily upon agriculture. However, due to a centralized geographic location, an abundance of natural resources, and a surplus supply of manpower, the State is undergoing rapid changes and is making great strides toward industrialization. With the rapid development of industry within the State, many thousands of industrial and business jobs are being created. The increasing complexity of automation and technological advances are demanding more highly skilled employees who are better able to meet these changing needs. Programs for the training and retraining of industrial workers require critical evaluation and constant revision to keep pace with the changing technology for those who wish to avail themselves of the many opportunities in industrial occupations.

The State program of Vocational Industrial and Technical Education is an important means through which sound vocational training can be extended to an area beyond the boundaries of municipalities or districts. The area vocational schools, are strategically located in relation to geographic limitations and population centers. They aim to serve more adequately the needs of the increasing number of students, both youth and adults, who are constantly in need of adjustment to meet the demands of this age of changing social and economic conditions. Each area vocational school offers a variety of courses, broad enough in scope to provide training for the major occupational fields in which the residents of the area are engaged. Because they serve persons who need upgrading training as well as preparatory training for entrance into industrial and business occupations, these area schools are located mainly in urban centers made up of workers in industry and business.

With the increased emphasis upon a sound foundation in general education prior to specialization in a vocational or occupational pursuit, and with the increased age limitation at which a young adult may be employed, many of the more technical courses offered by the area vocational schools are rapidly becoming post-high school and adult programs. The area vocational schools operate as dual institutions in that they serve different groups of people. This is accomplished by providing services for high school students who can attend vocational shop classes a part of the school day while pursuing their regular high school programs. Under this plan the students may progress regularly toward high school graduation.

Other groups served under this plan are out-of-school youth and young adults who require coordinated training and work experience to fit them for useful employment. Employed workers who need organized instruction which will enable them to advance in their trade are also served through extension programs. Apprentices who need and must have planned instruction are served by part-time classes. At the end of the prescribed course of study, the student is awarded a certificate of completion.





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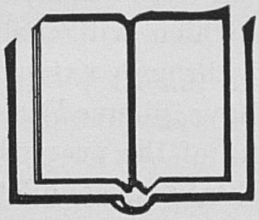

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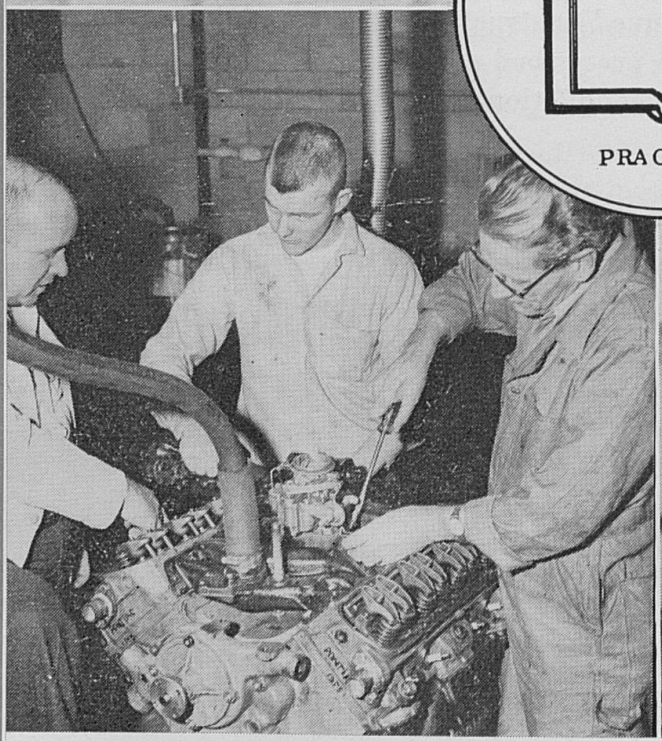
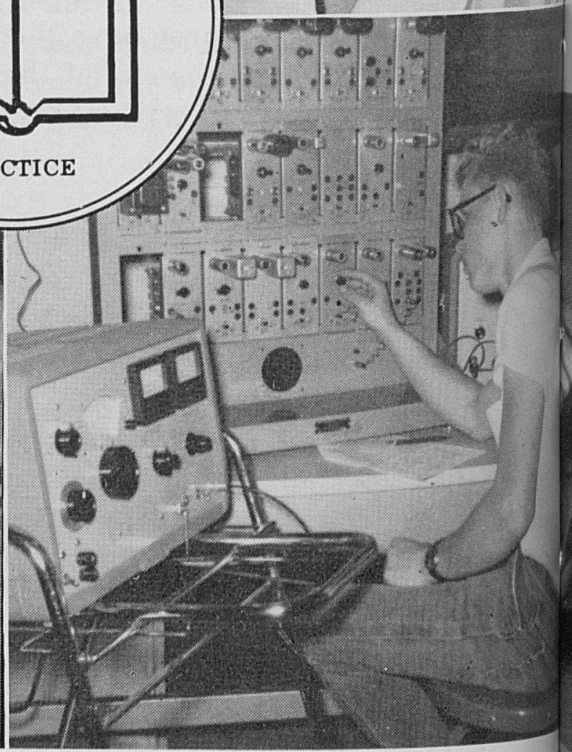
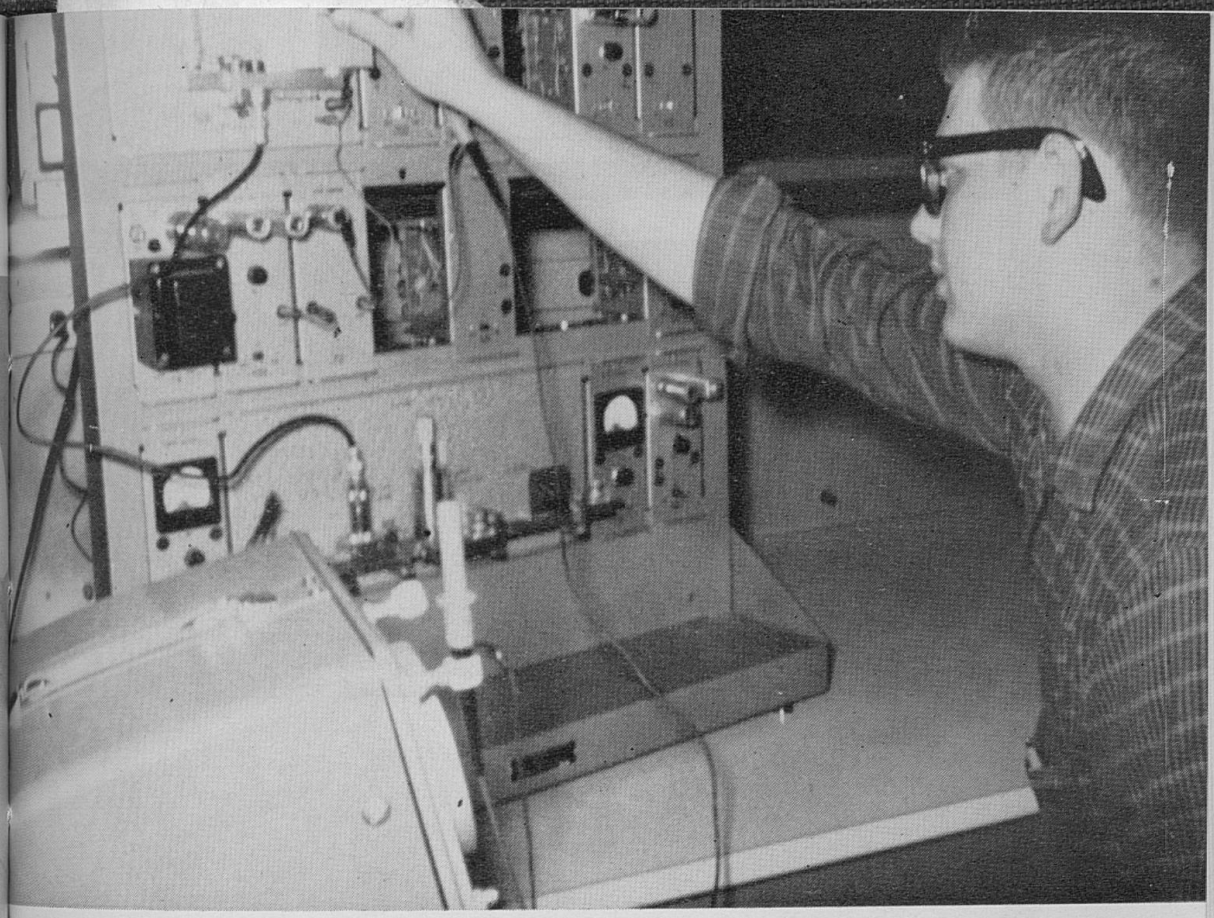
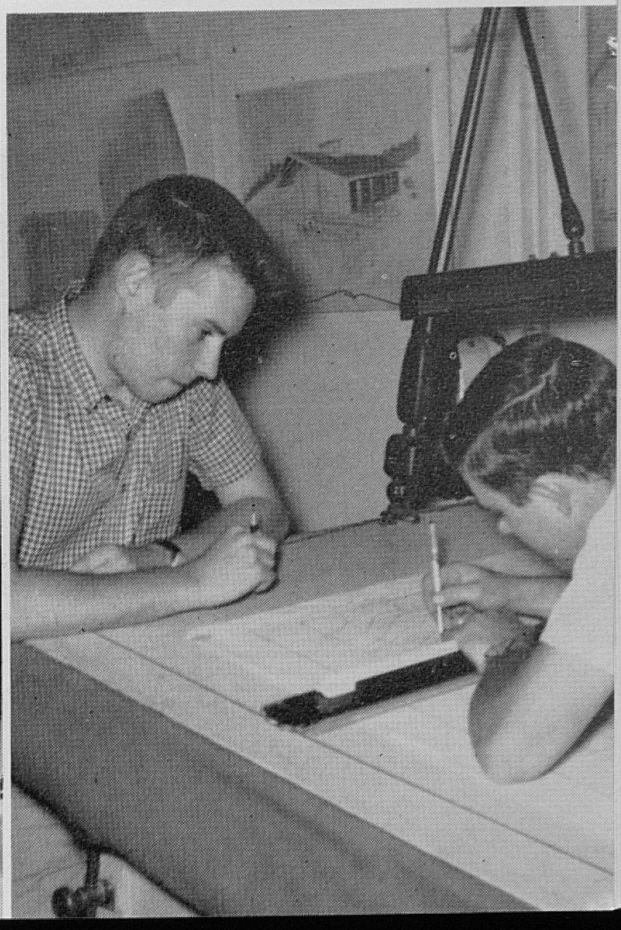
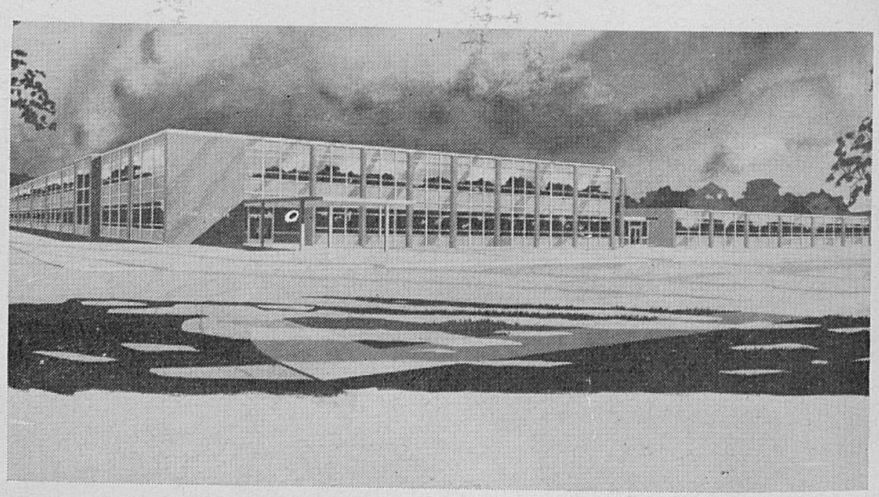


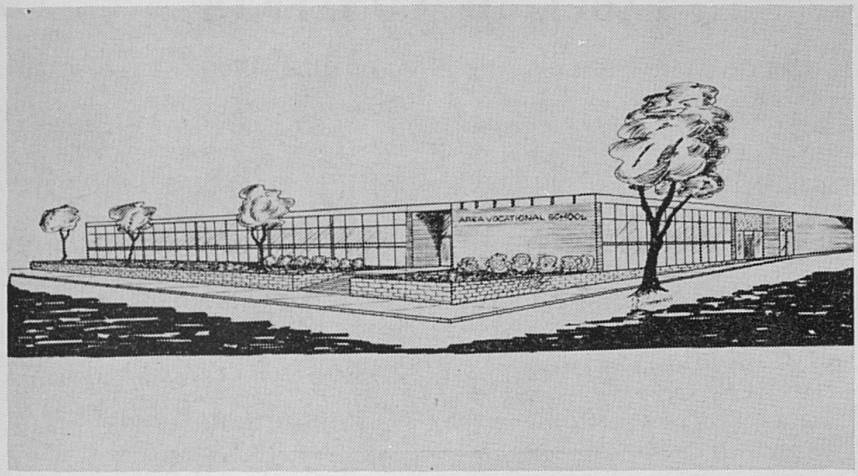






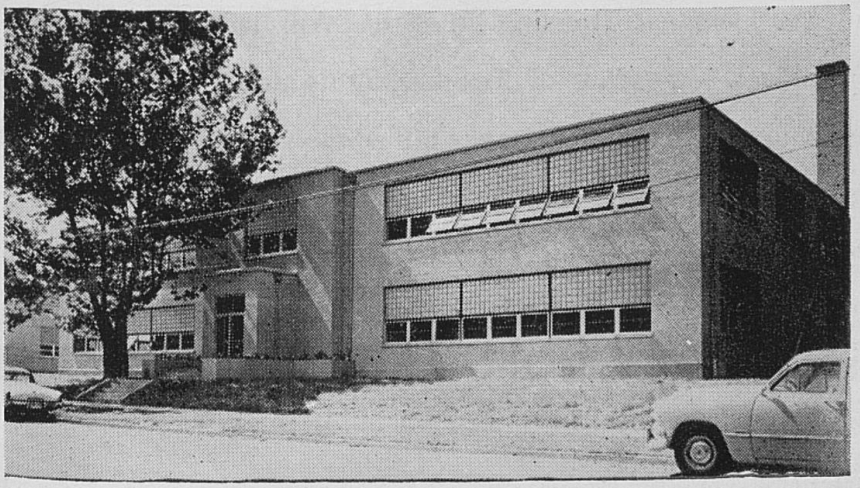
Typical Area Vocational Schools





- - - - - - - Serving High School Youth,

Out-Of-School Youth and Adults



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GENERAL INFORMATION

The Division of Industrial and Technical Education through its system of Area Vocational Schools throughout the state offers a comprehensive program of full-time and part-time education of a nature that prepares people for entrance into industrial and technical occupations, or that enables those already employed to advance in their occupations. This educational program is designed to serve adults, regularly enrolled high school students, and out-of-school youth who need and desire specific vocational training and/or retraining for job advancement.

PURPOSE AND PHILOSOPHY

The controlling purpose of the Area Vocational-Technical Schools is to fit students for useful employment and to increase the knowledge and skills of employed workers. The vocational-technical education program gives purpose and meaning to education by relating academic work to a specific occupational goal. The curriculum is organized to give more than training for specific job skills—it develops abilities, understandings, attitudes, working habits, and appreciation which contribute to a satisfying and productive life.

The schools strive to provide a well-rounded program of studies aimed at developing competent workers, the ultimate goal of which is an American worker-citizen who is competent vocationally, economically, socially, emotionally, and physically.

The program of vocational-technical education in Kentucky is not offered in lieu of general academic education, but grows out of it, supplementing and enhancing it. Vocational-technical education is an integral part of the total education program. Both vocational-technical education and academic education programs are administered under the auspices of the legally constituted state and local authorities, who recognize their responsibilities for providing adequate educational opportunities for all people.

OBJECTIVES

Increase the performance skills, including those relating to safety and technical knowledge of persons already employed in industry, through extension or supplemental courses which will improve their job skills and give them additional technical information.

Develop basic manipulative skills, including those relating to safety, job judgment, technical knowledge and related industrial information that will best enable persons to secure employment and advance in skilled trades, industrial, technical, distributive, or practical nursing occupation.

TYPES OF PROGRAMS OFFERED

Pre-employment training: Out-of-school youth and adult students attend vocational classes and receive intensive training for entrance into employment in a specific industrial job or retraining the worker for a new position.

Day trade preparatory: High school students attend vocational classes a minimum of three clock hours daily to prepare for entrance into useful employment in an industrial occupation and at the same time continue their general academic courses leading to a high school diploma.

Part time: Students in school who are legally employed and working at least one-half time as learners in an industrial occupation. Part-time apprenticeship classes are organized by the area vocational schools in cooperation with the Apprentice Training Service to give the necessary related theory pertaining to the trade.

Trade Extension: Trade extension courses may be offered to employed persons desiring to be upgraded in their occupations.

POLICIES

ADMISSION PROCEDURE AND REQUIREMENTS

Students desiring admission to the Area Vocational-Technical Schools should obtain application blanks from the school of their choice, preferably in person. If this is not possible, application blanks will be mailed upon request. When an application is received and is found to contain all information requested, a tentative reservation is made for the applicant to appear at the school for pre-enrollment interview and guidance.

Enrollment in all classes is open to persons over 16 years of age who may profit from the instruction offered.

WHO MAY ENROLL

The Area Vocational-Technical Schools offer opportunities for vocational distributive, trade and industrial and technical education to the following groups of students:

High School Youth: High school youth who meet the entrance requirements of the Vocational-Technical Schools and are sent by local boards of education. High school credit is given by the high school enrolling the student and not by the Vocational Schools.

High School Graduates: An increasing number of high school graduates who wish to prepare for the skilled trades or to become technicians are taking advantage of the educational opportunities offered by the Area Vocational-Technical Schools.

Out-of-School Youth: Persons between 16 and 21 years of age who have completed or have dropped out of the regular school program.

Veterans: The Area Vocational-Technical Schools are approved for the education and training of veterans or eligible veterans' dependents.

Physically Handicapped Students: Physically handicapped people are admitted to the Area Vocational-Technical Schools. Kentucky, through the Bureau of Vocational Rehabilitation, gives financial assistance to physically handicapped people while attending the Area Vocational-Technical Schools.

Adults: Any adult who desires and can profit from the instruction given is eligible to enroll providing he can meet the standards established by the schools for enrollment.

CREDIT FOR PREVIOUS TRAINING

A student wishing to transfer from one vocational-technical school to another should complete the regular application for admission and present a transcript or certificate of work already completed. Evidence of satisfactory attendance and honorable dismissal will also be required.

Full credit for previous education and training may be given provided satisfactory progress has been made. Satisfactory progress means that the student will have progressed at an average rate of speed in the work completed at the former school. The schools reserve the right to evaluate previous training in keeping with their prescribed courses of study.

REGISTRATION

High school students who wish to attend a vocational school in their junior and senior years are registered at the time they complete their class schedule for high school registration.

Out-of-school youth and adults are registered on a continuous basis at any time during the school year.

WITHDRAWAL AND RE-ENTRANCE

If a student is dismissed because of unsatisfactory progress, he may be permitted to review the part of the course in which he did unsatisfactory work. Upon demonstrating his ability to successfully master the work, he may be permitted to continue.

CERTIFICATES

A certificate of completion is granted to students who successfully complete the prescribed course.

TUITION AND FEES

Tuition and fees are set by the State Board of Education. These fees are nominal and vary by types of students and courses pursued. Specific information should be obtained from the school to which application is made.

REFUND POLICY

Tuition refunds will be made on the basis of tuition paid, less days of enrollment. This policy may vary in different schools.

BOOKS AND SUPPLIES

Textbooks and other supplies are available to students at cost. These are obtainable through the school.

GENERAL REGULATIONS

CONDUCT

Students are required to maintain the customary rules of good conduct. They are considered mature individuals; their behavior, in school and out, is expected to be dignified and honorable.

ATTENDANCE POLICIES

Students are required to attend classes regularly with only emergency situations accepted in cases of absence. Unexcused absence will not be accepted and will result in dismissal.

RATING SYSTEM

Ratings are based on citizenship, including industry and cooperation, laboratory work, technical skill, related subjects, and attendance.

SPECIAL SERVICE AND FACILITIES

COUNSELING AND TESTING

The Area Vocational-Technical Schools conduct testing programs which enable the faculty counselor to assist students in making occupational choices.

The school programs are devised to prepare a student for a specific vocation. It is extremely important that the student, in so far as possible, make an intelligent choice based on his interest, abilities, and capacities. Students who find it difficult to make a vocational decision can make arrangements through the faculty counselors to visit and observe the courses in operation. They can also receive first hand information from the students and instructors.

Testing facilities are made available at the schools. Faculty counselors are available on a scheduled basis to administer interest inventories, aptitude tests, and test batteries which will give indications of probable success in the occupations covered by the school program.

SIUDENT PLACEMENT

The placement of competent graduates in the occupations for which they have been trained is a paramount desire of the Area Vocational-Technical Schools. To this end these schools work constantly and cooperatively with industry and all governmental agencies concerned with employment and placement of workers in industry.

HOUSING FACILITIES

The Area Vocational-Technical Schools do not guarantee living quarters for out-of-town students. Assistance is given in every way possible in locating comfortable and convenient living accommodations. In some schools dormitory space is available.

APPLIED SUPPLEMENTAL SUBJECTS

In all schools required supplemental classes are given daily in Shop Sciences, Mathematics, Blueprint Reading, Sketching, and Safety for all full-time students. The work is organized on an individual basis with the intent of taking the student as far as possible in the time available.

PROGRAM OF TEACHER TRAINING

The University of Kentucky, Lexington, Kentucky, is the designated institution for teacher training. Other public institutions of higher learning may be designated by the State Board of Education as future needs may demand.

Both pre-service and in-service types of teacher training programs are conducted in residence or by extension through the approved teacher training institution and are carried out by means of a cooperative arrangement between industry, the Division of Trade and Industrial and Technical Education, and the designated teacher training institution. Such a plan provides for both professional and technical preparation necessary to meet certification requirements as established by the State Board of Education.

REGULATIONS GOVERNING ISSUANCE AND RENEWAL OF CERTIFICATES IN THE FIELD OF TRADE AND INDUSTRIAL EDUCATION (WHICH ALSO INCLUDES DIVERSIFIED OCCUPATIONS EDUCATION) AND DISTRIBUTIVE EDUCATION

1. **Issuance of Yearly Certificates**

A certificate valid for one year shall be issued when the general requirements as set forth in the State Plan of Vocational Education in the field of trade and industrial and distributive education have been met and when the applicant has completed a course in theory, methods, and practices in teaching of vocational industrial education in high schools, trade schools, and area vocational schools. Such a course shall ordinarily be required prior to the time that a person begins his teaching; however, in the event he is employed during the school year and is unable to complete the course before beginning his teaching, this person shall successfully complete the course prior to the reissuance of the yearly certificate.

2. **Renewal of Yearly Certificates**

The yearly certificate for full-time instructors may be renewed upon a full year of satisfactory teaching experience gained during the life of the certificate and upon completion of two semester hours in Trade and Industrial or Distributive Education earned in residence at a teacher training institution designated in the State Plan for Vocational Education as an approved institution for training Trade and Industrial or Distributive Education teachers. If the

applicant has not completed the course in theory, methods, and practices in teaching ordinarily required of all beginning teachers, this course must also be completed in addition to the year of experience before the renewal may be granted. If the applicant has already completed all course requirements for a certificate, experience only will be required for renewal.

3. **Issuance of Four-Year Certificates**

When a person has completed 24 semester hours in teacher training courses in Trade and Industrial or Distributive Education, if an undergraduate, or has completed 16 semester hours, if a graduate, and has served four years in a program of Trade and Industrial or Distributive Education, he may be issued a certificate valid for four years. Trade Analysis, Teaching Methods, and Principles and Philosophy of Vocational Education are required courses for all applicants. One half of the credits may be earned by extension or correspondence courses.

4. **Renewal of Four-Year Certificates**

This certificate may be renewed every four years upon three years of successful experience in a program of Trade and Industrial or Distributive Education operated under the State Plan for Vocational Education, provided the applicant can show that he has kept abreast of modern practices in the trade and distributive subjects he is teaching and has taken special courses when requested to do so by the Director of Trade and Industrial and Distributive Education. It may also be renewed upon completion of one-half year of additional college work. One half of the college work should be in Vocational Education.

5. **Endorsement of Regular High School Certificates for Vocational Subjects**

When requirements have been met for the issuance or renewal of a one-year or a four-year certificate in the field of Trade and Industrial and Distributive Education, a holder of a high school certificate may have that certificate validated for the same subject and for the same length of time

as provided for under regulations for issuance or renewal of the certificate for Trade and Industrial or Distributive Education.

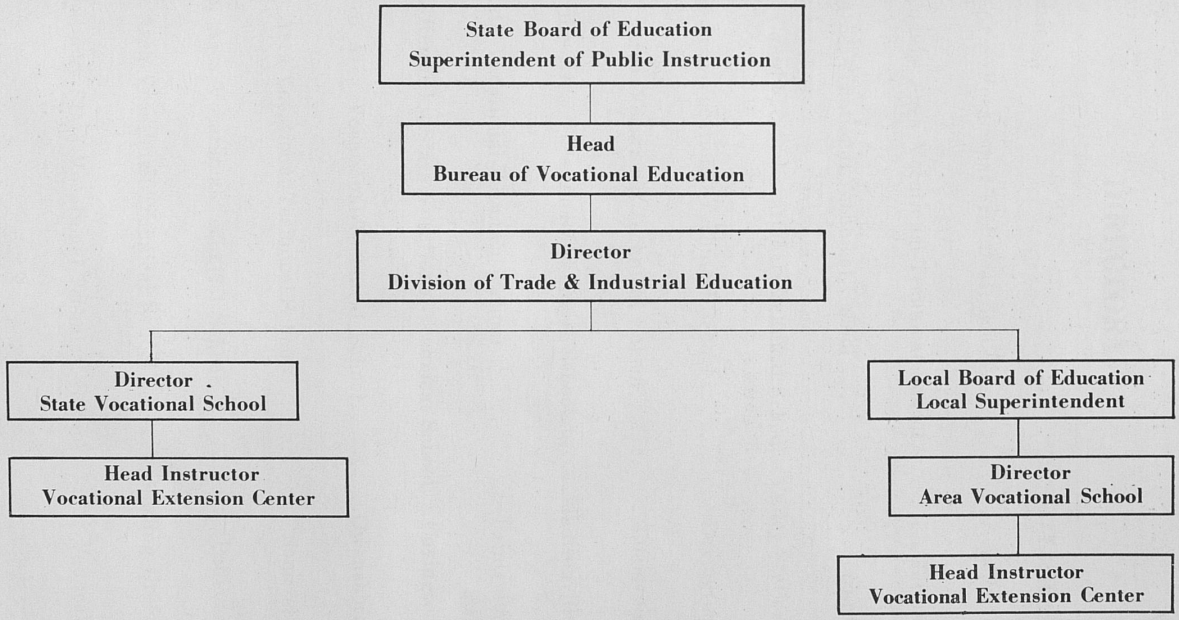
6. **Issuance of Yearly Special Part-Time Certificate**

A special certificate, valid for one year and for teaching part-time and extension classes in the field of trade and distributive occupations in the subject stated on the face of the certificate, may be issued provided (1) that the applicant has at least three full years of experience of journeyman grade in a recognized trade or three years of successful experience in a distributive occupation and (2) that the applicant is to be employed in a program of Vocational Trade and Industrial or Distributive Education sponsored by the public school system in accordance with the State Plan for Vocational Education.

The yearly certificate for part-time instructors may be renewed upon evidence of successful teaching in a part-time course during the school year for which the certificate is valid. Persons who do not meet renewal requirements of the certificate may be issued a new certificate upon application.

Note: These regulations are subject to change at any time by the State Board of Education.

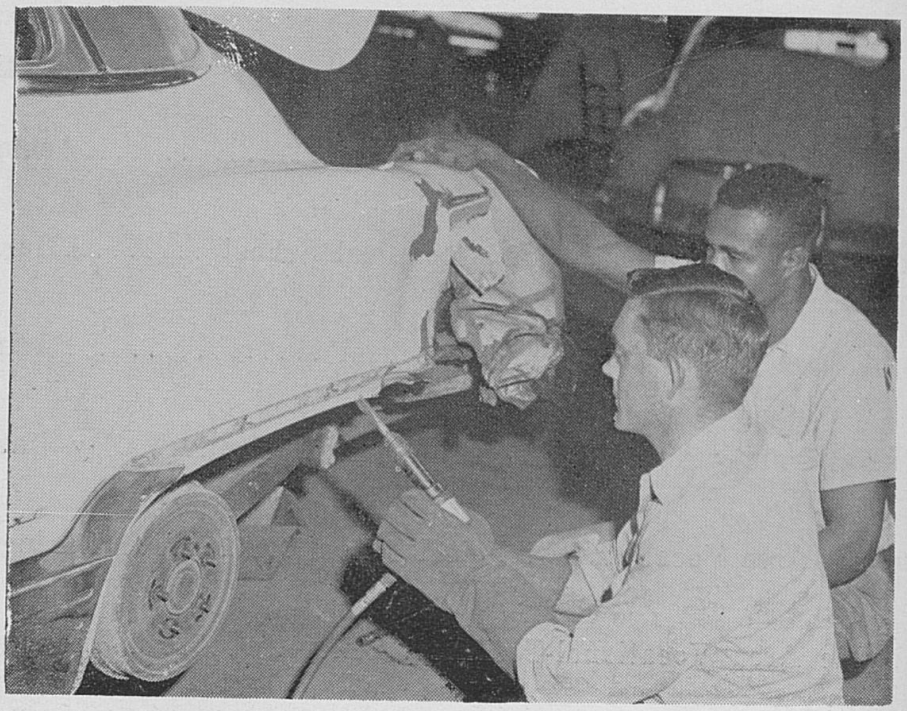
ORGANIZATIONAL CHART
FOR THE ADMINISTRATION OF
INDUSTRIAL AND TECHNICAL EDUCATION PROGRAMS IN KENTUCKY



DIRECTORY

School	Location
Ashland Area Vocational-Technical School	Ashland
Harlan County Area Vocational-Technical School	Harlan
Hazard Area Vocational-Technical School	Hazard
Jefferson County Area Vocational-Technical School	Valley Station
Lafayette Area Vocational-Technical School	Lexington
Louisville Area Vocational-Technical School	Louisville
Madisonville Area Vocational-Technical School	Madisonville
Mayo State Vocational-Technical School	Paintsville
Northern Kentucky State Vocational-Technical School	Covington
Owensboro Area Vocational-Technical School	Owensboro
Somerset Area Vocational-Technical School	Somerset
Tilghman Area Vocational-Technical School	Paducah
Western Area Vocational-Technical School	Bowling Green
West Kentucky State Vocational-Technical School	Paducah

AUTO BODY REPAIR AND REFINISHING



Each Repair Job Requires a Separate Analysis

The smooth flowing lines of the modern automobile are an auto body repairman's dream. Once these contours are damaged, the services of a highly skilled auto body mechanic are required.

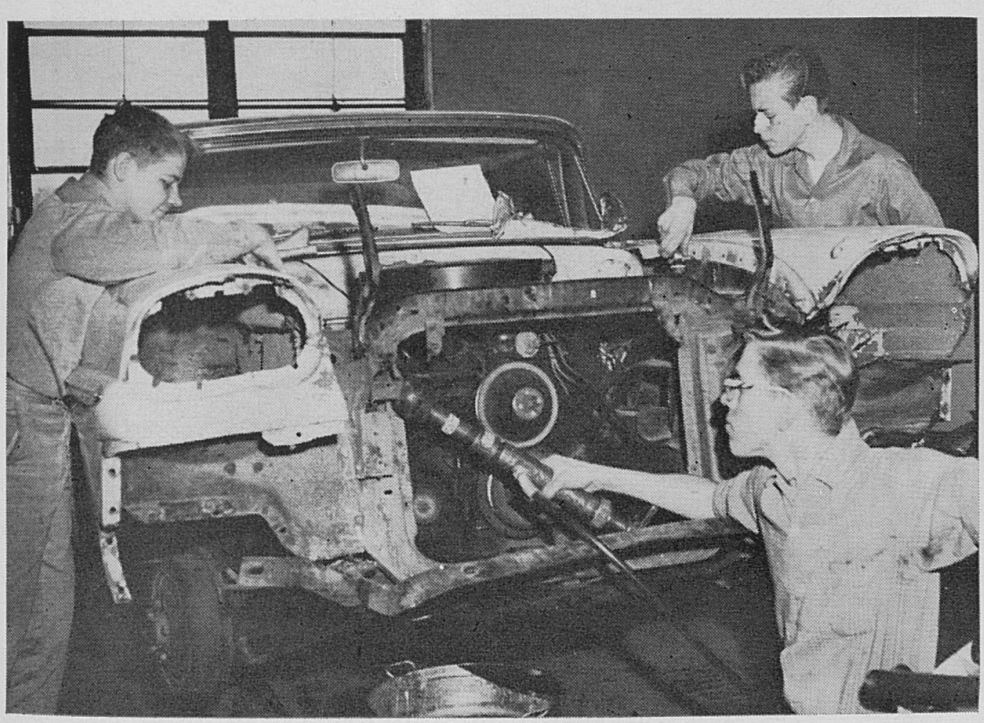
Auto body mechanics enjoy steady work at a relatively high rate of pay. The skilled man will find it easy to go into business for himself after a few years of experience in a well organized shop.

In the Area Vocational School, instruction is given on body and fender repairs extending from small dents to complete rebuilding of wrecked or damaged automobiles. Students are carefully supervised in all phases of the work. Finished jobs must adhere to commercial standards.

The auto body training includes welding, grinding, assembling, straightening, alignment, painting, salvage, estimating and shop operation. Many students elect to specialize in either metal working or painting.

Shops in the area vocational schools are well equipped with modern tools of the trade. Success in this line of work is largely dependent on the skill, knowledge, and resourcefulness of the individual student.

Training in Auto Body Mechanics provides an ample return for time and money spent, and students who apply themselves are usually rewarded with immediate employment.



Basic Course Outline for AUTO BODY MECHANICS
Course Length—22 Months

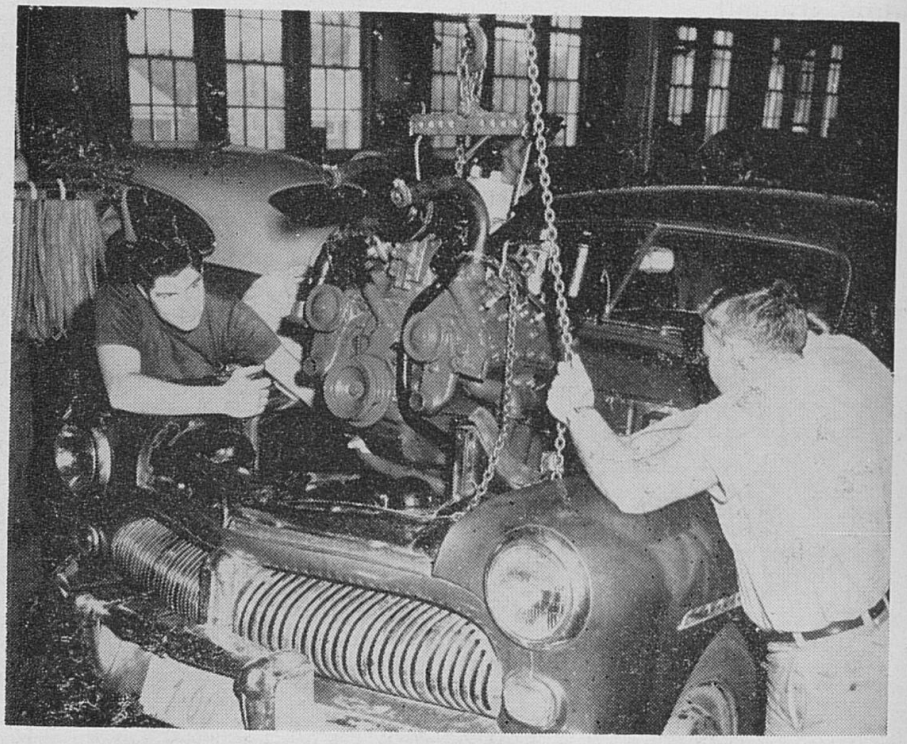
Auto Body Painting
- Cleaning, sanding and repairing rust spots
- Masking and spraying
- Rolling and polishing finish coats of lacquer
- Patch, repair and paint blending

Auto Chassis
- Front end alignment
- Frame straightening
- Radiator repair

Auto Body Repair
- Welding, brazing, grinding and sanding
- Solder—spraying and torch
- Patching
- Removing dents
- Body alignment
- Paneling

Trimming
- Chrome trim
- Installing locks and glass
- Upholstery and trim

AUTO MECHANICS



Motor Overhaul—A Major Phase of the Auto Mechanic's Training

Millions of new cars are produced every year and each one will need the services of a skilled mechanic on several occasions before its useful life is ended.

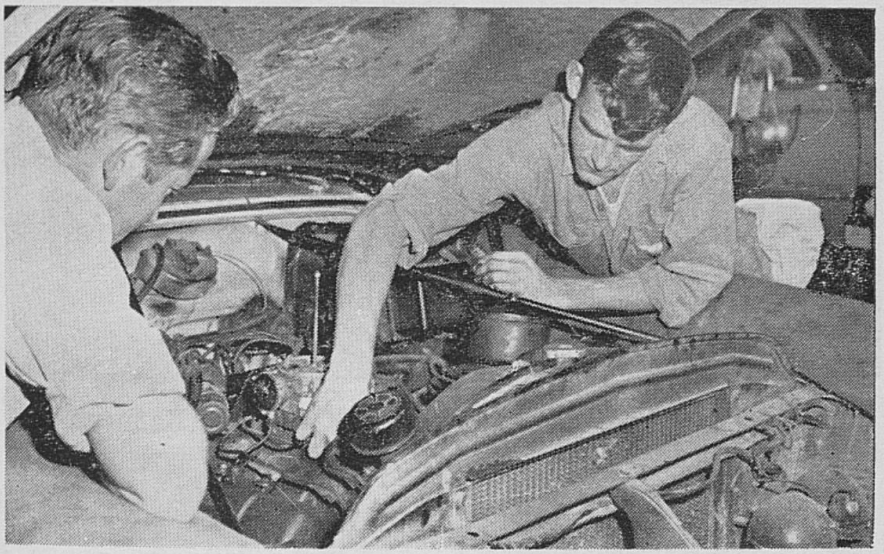
Increased use of the automobile, coupled with its intricate mechanisms, has taken the repair job away from the "do-it-yourself" mechanic. The skilled auto mechanic has become an important person on the American scene.

In the Area Vocational School, students are given practical experience on live jobs, concurrently with technical information on how each sub-assembly works, and how it may best be repaired. Use of trade manuals, specification charts, circuit tracing, and a working knowledge of parts and repair manuals are a part of every repair job.

Carefully supervised instruction is given on diagnosis of faults and analysis of repair procedures. This entails complete training on electrical, cooling, ignition, and braking systems.

Special emphasis is given to automatic transmissions and the common ills of high compression engines. Film strips, moving pictures, charts, mock-ups, as well as real jobs, provide opportunities to develop skills and knowledges that enable the student to enter and progress on the job by himself at the end of his training period. Equipment is modern and complete so that transition from the school shop is an easy step.

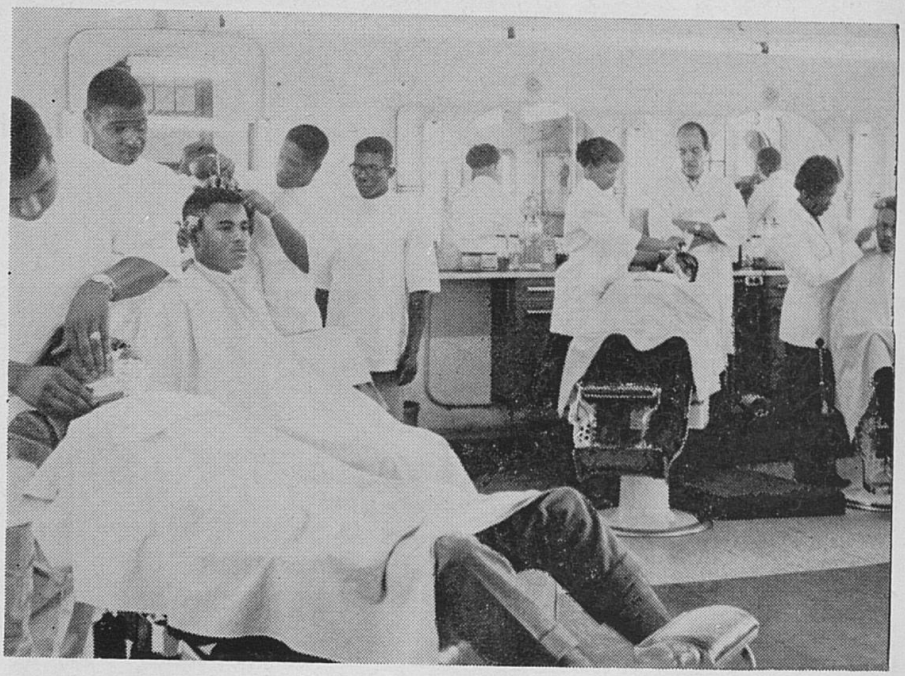
Students who can analyze, diagnose, and produce in the shop usually find ready employment.



Basic Course Outline for AUTO MECHANICS
Course Length—22 Months

Tools and Equipment
Engine—Operation, Maintenance, and Repair
Clutch—Operation, Maintenance, and Repair
Transmission—Operation, Maintenance, and Repair
Chassis—Construction and Maintenance
Brakes—Operation, Maintenance, and Repair
Steering Systems
Front End Axle Systems—Operation, Maintenance, and Repair
Cooling Systems
Electrical Systems
Fuel Systems
Differentials
Universal Joints and Drive Shafts
Body and Accessories

BARBERING



Both Men and Women Train for a Career in Barbering

We commonly think of barbering more specifically as the art of cutting hair; however, much more is included in this modern day service occupation. Skills today include scientific methods of shaving and hair cutting, facials and scalp massage, treatments with oils, creams, lotions, or other preparations, either by hand or mechanical appliances. Also included are such services as singeing, shampooing, arranging, dressing, dyeing or applying tonics to the hair. The application of cosmetics, preparations, oils, powders, clay or lotions, to the scalp, face, neck or upper part of the body is likewise a vital part of the training. Sterilization and sanitation are empahsized throughout the training period in the Area Vocational School.

The Kentucky State Board of Barber and Beautician Examiners require all who enter the course to be at least 16½ years of age and to have completed at least two years of high school. At the end of the course, which requires a minimum of 1,500 clock hours, the student is required to pass an apprentice examination and work as such for one year. At the termination of the apprenticeship period the student may take an examination for a Master Barber's License.

Basic Course Outline for Barbering

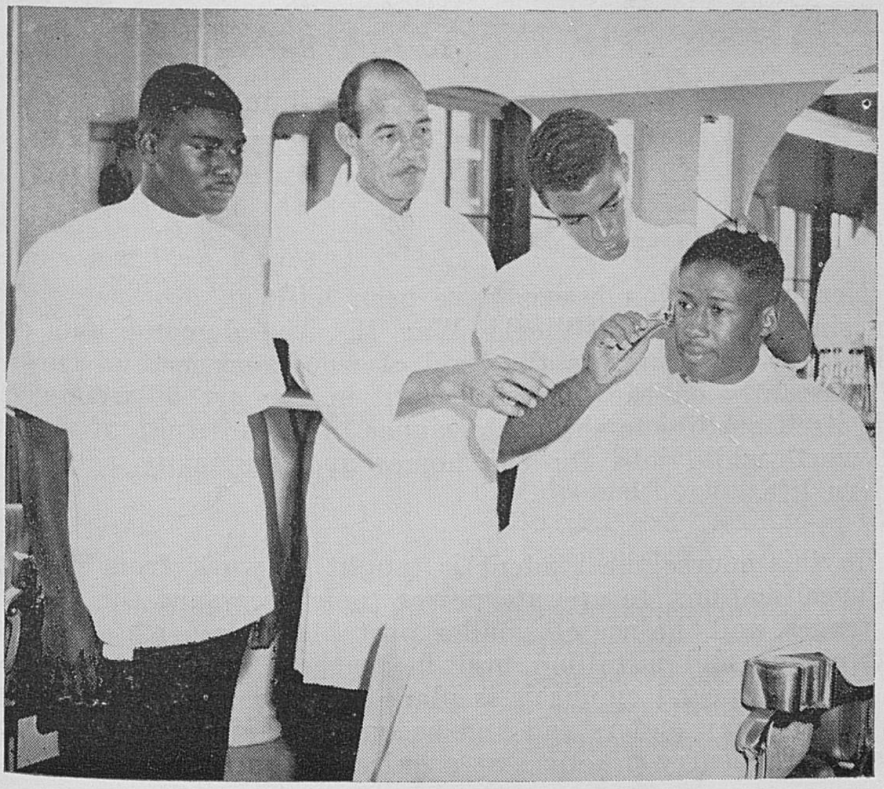
Course Length—1500 Hours

Practical Instruction:

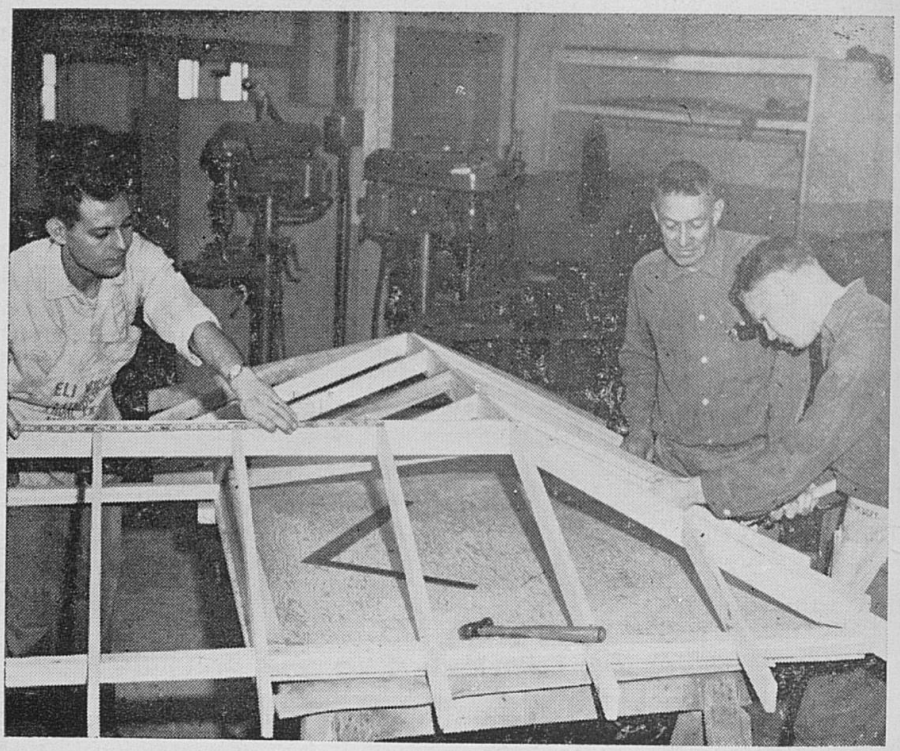
History, Professional Ethics, and Shop Management
Use of Barbering Implements
Care and Maintenance of Tools
Technique of Practical Barbering
Application of Tonics, Creams, and Lotions
Shaving
Haircutting
Massaging
Facials (with and without lights)
Champooing
Scalp Treatments (with and without lights)
Hair Coloring

Science:

Bacteriology
Sterilization and Sanitation
Hygiene
Skin and Scalp Disorders
Anatomy and Physiology
Electricity
Light Therapy (as applied to barbering)
Chemistry and Pharmacology
Psychology



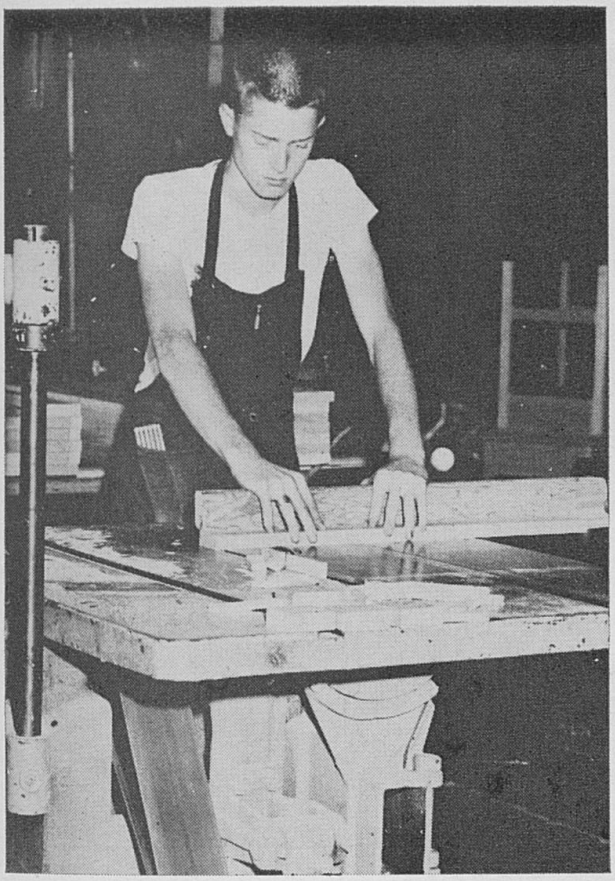
CARPENTRY



Mock-ups Serve As Live Training Aids Prior to On-the-Job Experiences

Nearly a million homes have been built in our country each year since the end of World War II. The demand and opportunities for tradesmen in the field of woodworking and carpentry are constantly on the increase. Skill in the art of woodworking lends itself readily to the performance of a multitude of necessary and worth-while jobs for the homes and for many activities of modern life.

In this course the student is taught to work from blueprints and specifications, to operate power tools necessary for the building trades, and the use of smaller portable tools in the finer work of trimming and installing built-in features of the modern home and office. Special emphasis is placed on the proper technique so the learner may understand and become acquainted with generally accepted carpentry practices as required to build substantial frame



residences that combine good construction, good design, efficient floor plans, and the use of proper building materials.

Woodworking and carpentry offer a rich variety of experiences and great opportunities for those who acquire knowledge and skills of the trade. Graduates who show initiative and ability are often promoted to foremen or supervisors, or they may become contractors or operators of their own production shops.

Basic Course Outline for CARPENTRY
Course Length—22 Months

Building Layout and Concrete Form Construction
- Layout of Building Lines
- Building Footing and Foundation Wall Forms
- Building Forms for Concrete Steps

Framing and Sheathing
- Floor Framing
- Wall Framing and Sheathing
- Roof Framing
- Special Framing Problems

Exterior Trim
- Cornices
- Roofing
- Frames (Door and Window)
- Side-Wall Coverings

Interior Trim
- Grounds and Furring
- Plaster Base
- Door and Window Trim
- Dry-Wall Construction
- Flooring

Stair Building

Masonry
- Mortar Mixtures
- Concrete Block Construction
- Cinder Block Construction
- Mortar Joints and Facings
- Brick Structures
- Sills and Copings
- Setting and Cleaning of Stone
- Construction of Chimneys

Related Information
- Mathematics
- Science (Applied)
- Blueprint Reading
- Human Relations

CHEF COOKING

More than 75 million Americans eat daily in commercial establishments. With air travel an increasing means of transportation; resort spots of the world expanding at unprecedented rates; tourist sites, motels, and "drive-ins" dotting the horizon for the motor-minded millions; with "in-plant" feeding and "on location" catering necessary to America's industrial way of life—commercial cooking has become a highly desirable trade, challenging the ambitious young man or woman.

Hors d' Oeuvres . . . Plat du Jour . . . Wiener Schnitzel a la Holstein . . . Pompano en Papillote—these and thousands of other words having culinary connotation are transformed into basic operations and skills in the everyday life of the commercial food handler.

There is very little unemployment for those trained in this field. Trained food handlers find numerous opportunities for advancement as caterers, bakers, chef cooks, waiters, or waitresses.

Almost without exception, our future restaurant managers and operators will be persons who have at one time or another availed themselves of the advantages of formal training.

In the Area Vocational School, the student is given the basic essentials of the trade through practice in meat cutting, quantity cooking, custom baking, catering, and serving.

Many graduates of food trade courses have in a short time risen to managerial positions with leading catering operations.

Basic Course Outline for FOOD TRADES

Course Length—22 Months

Equipment and Cooking Utensils

Meats—Cuts

Cooking Meats

Cooking Vegetables

Cooking Poultry

Cooking Seafood

Soups

Salads

Baking

Serving Meals

Menus

Estimating

Catering

CONSTRUCTION EQUIPMENT OPERATION AND MAINTENANCE

In man's efforts to create an environment according to his desire and needs, heavy equipment is one of his indispensable tools. Creating roads over the mountains, transforming swamps into building sites, erecting and swinging tons of steel with a flick of a finger, moving yards of earth in minutes, fitting precisely ground parts together in a machine, and operating a machine so rugged that giant trees will topple in its path are the thrilling life and work of a heavy equipment mechanic and operator.

The heavy equipment mechanic and operator can expect to be in the open spaces with an industry that is humming with activity. Road and dam building projects are pyramiding with long range planning which assures a steady demand for those with the necessary skills. Opportunities are almost unlimited, ranging from dozer and shovel men for strip and auger mines to crane operators and mechanics in mills and plants. All major earth moving projects require heavy equipment mechanics and operators.

Efficient mechanics and operators in this field must acquire considerable technical knowledge. Good mechanical aptitude is essential to properly apply the technical knowledge to its practical application. One should have, or acquire, sufficient education to read and understand technical descriptions and diagrams.

Units of instruction in this course cover such areas as ignition, cooling systems, fuel systems, clutches, steering, chassis, lubrication, transmissions, engines, differentials, and brakes in the mechanical field. As an operator, one must master the operation of such machines as dozers, shovels, cranes, graders, clam shells, drag lines, dump trucks, tractor-trailer units, pans, loaders, and turnapulls. Technical information and related subjects are made available in the classroom. Live jobs are utilized to the greatest practical extent.

The heavy equipment mechanic and operator gives routine maintenance as well as makes major repairs on gasoline and diesel machinery. He works with huge castings and very small, precisely ground parts. He repairs and operates electrical, hydraulic, and mechanical machinery requiring extensive technical knowledge, ingenuity, and skill. His associates range from engineers to laborers.

Industrial As Well As Residential Sites Are Enhanced by the Bulldozer's Blade

Basic Course Outline for HEAVY EQUIPMENT OPERATION AND MAINTENANCE MECHANICS

Course Length—22 Months

Ignition and Electric Systems	Engine
Cooling System	Transmission
Fuel System	Differential
Clutch	Brakes
Steering	Shop Cleanliness and Safety
Chassis	Welding
Lubrication	Related Instruction

Practice in Operating Heavy Equipment

COSMETOLOGY

Personal beauty service is recognized as a necessity by most women today. Performance of this service can be satisfactorily rendered only by the operators who possess the skills and knowledges of the trade, and who are adept at social courtesies. Many advanced high school students, men and women, have completed the course and are now profitably employed in shops throughout Kentucky.

To be eligible for the course in Beauty Culture, one must have completed two years of high school and be at least 16 years of age. A state registration is required for apprentices and the examination is open to all who have completed 1500 clock hours in the study of physiology, chemistry, and other technical information pertaining to the trade. This study is accomplished by training and practical experience in accepted practices relative to hair, skin, scalp, and nails.

A year of successful operation as an apprentice qualifies the person for the final examination to an operator's license.

Basic Course Outline for COSMETOLOGY
Course Length—1500 Hours

Professional Ethics

Hygiene and Personality

Bacteriology

Sterilization and Sanitation

First Aid

Anatomy and Physiology

Diseases of the Skin, Scalp and Hair

Electricity and Light Therapy

Chemistry

Theory of Massage

Shampoos and Rinses

Scalp Treatment

Haircutting

Manicuring

Finger Waving

Hair Styling

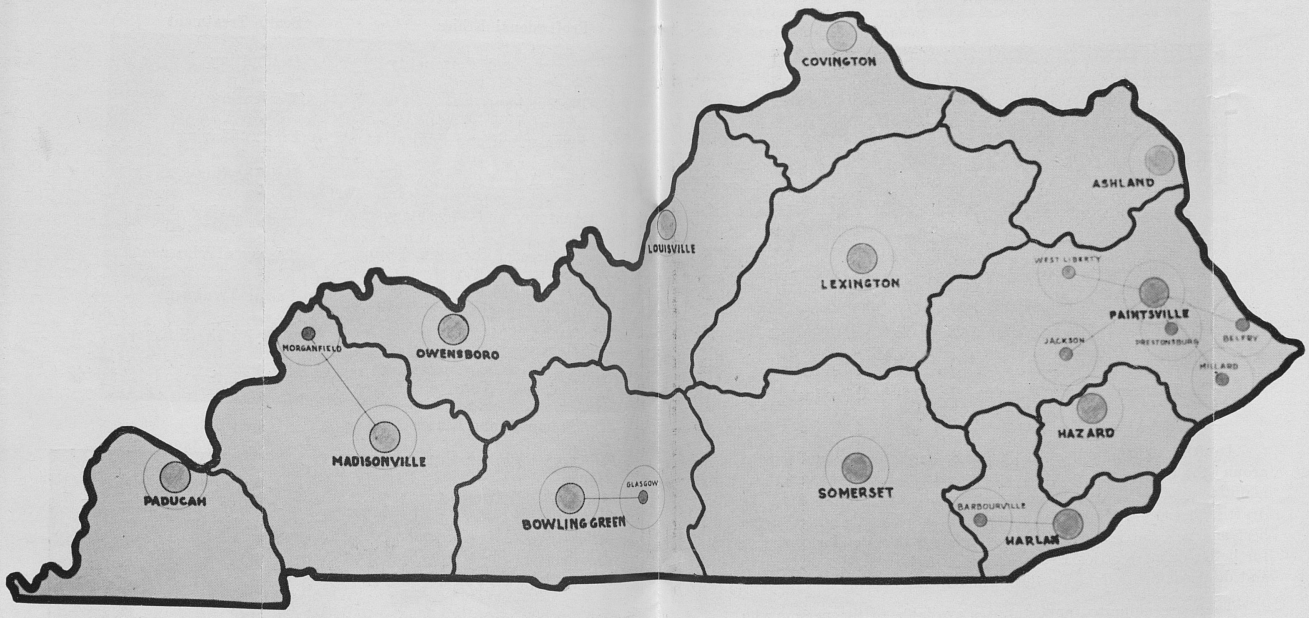
Cold Waving

Theory of Massage

Facial Treatment

Facial Make-Up

Hair Tinting and Bleaching

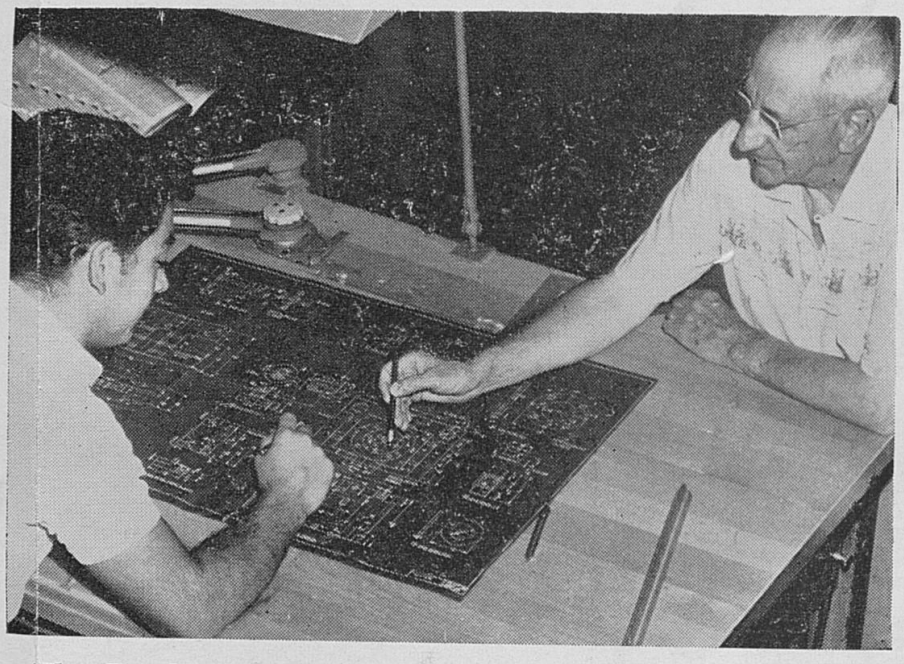


KENTUCKY
AREA VOCATIONAL-TECHNICAL SCHOOLS AND EXTENSION CENTERS

EACH CIRCLE REPRESENTS AN AREA OF 25 MILES DIAMETER

LARGE DOT SIGNIFIES TRADE SCHOOL CENTER—SMALL DOT SIGNIFIES EXTENSION CENTER

DRAFTING AND DESIGN



The Draftsman Must Visualize the Finished Product

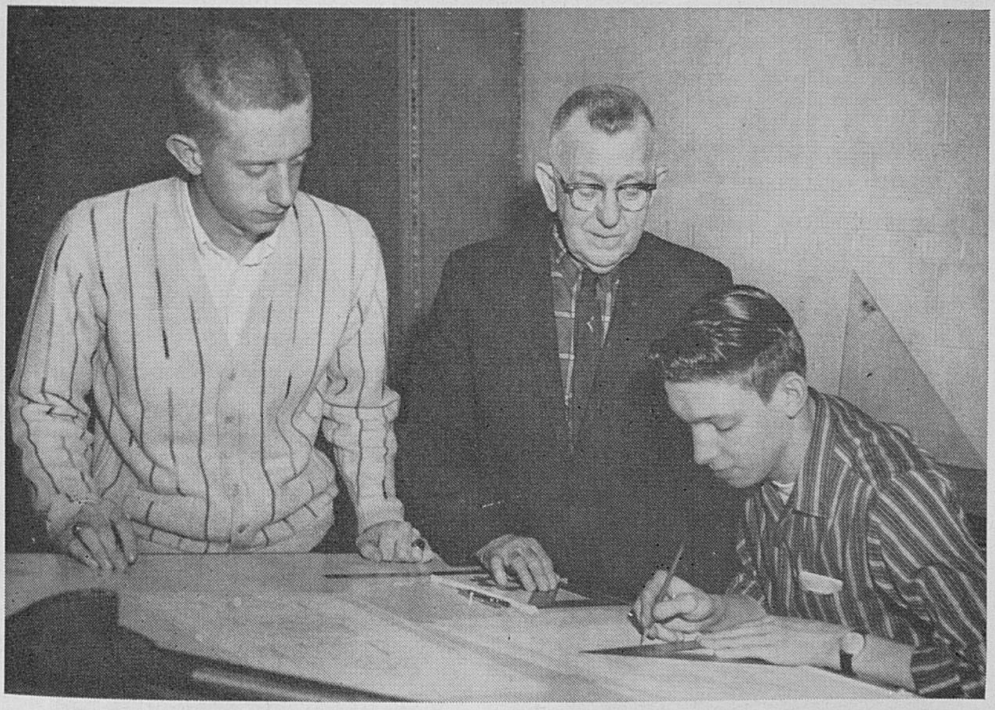
Drafting is the universal language of industry understood around the world. Few of us stop to realize that almost everything manufactured in modern industry, at some phase, appeared on the drafting board. Not only is this true of new products, but even the best and most advanced machine is being studied and redesigned for better or more efficient operation. A major part of that study and design is being done by the technical draftsman.

There are unlimited opportunities available to the person who wishes to pursue this occupation. A person with ideas, imagination, and intelligence may find that the drawing board affords an outlet for original thinking. "Want ads" in daily newspapers indicate industry's overwhelming demand for qualified draftsmen.

Instruction in fundamentals may include units in machine, architectural, aeronautical, and topographical drafting, as well as problems in industrial illustrating, and civil and municipal planning. Particular emphasis is placed upon speed, accuracy, and neatness. It is desirable that a student considering technical drafting have a

strong background in mathematics and science. The student's instruction in related subjects will not only include units in science and mathematics, but may include instruction in human relations, job interviews and placement, and other similar units. The student works on real jobs brought into the classroom, as well as problems from reference texts. The technical drafting student should be prepared to study for at least two years. Instruction is provided by men who are familiar with methods and techniques used by modern industry.

The field of drafting offers employment in an interesting and challenging occupation, with advancements limited only by the desire, ability, and ambition of the draftsman.



Basic Course Outline for DRAFTING
Course Length—22 Mos.

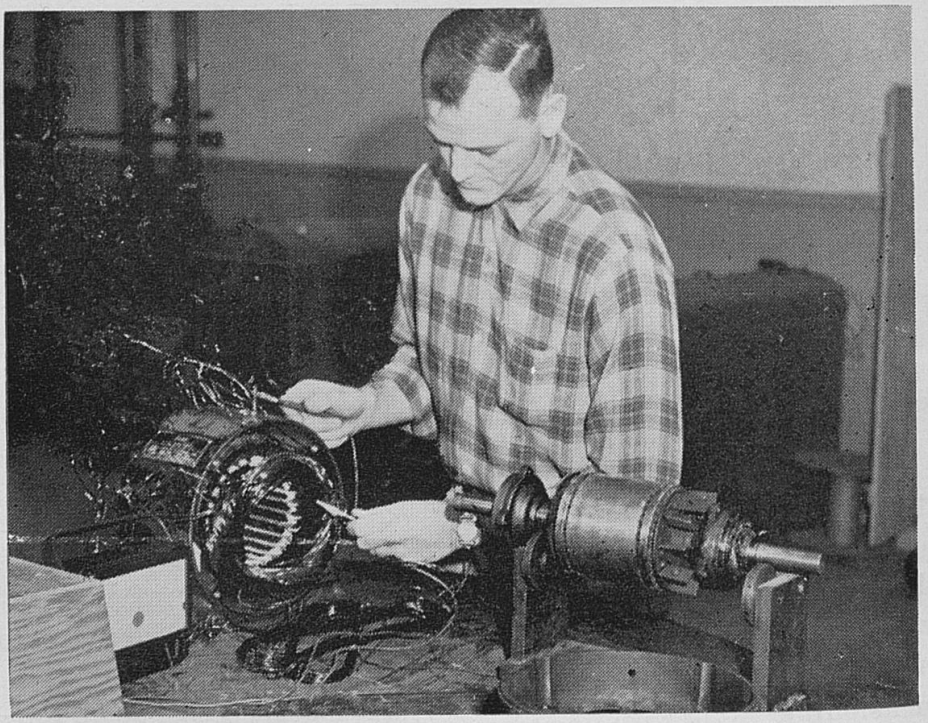
Lettering
Geometric Construction
Orthographic Projection
Revolutions
Working Drawing
Dimensioning
Technical Sketching
Pictorial Drawings
Architectural Drafting
Graphic Charts and Diagrams
Machine Drawing
Intersection and Developments
Blue Print Reading

ELECTRICITY

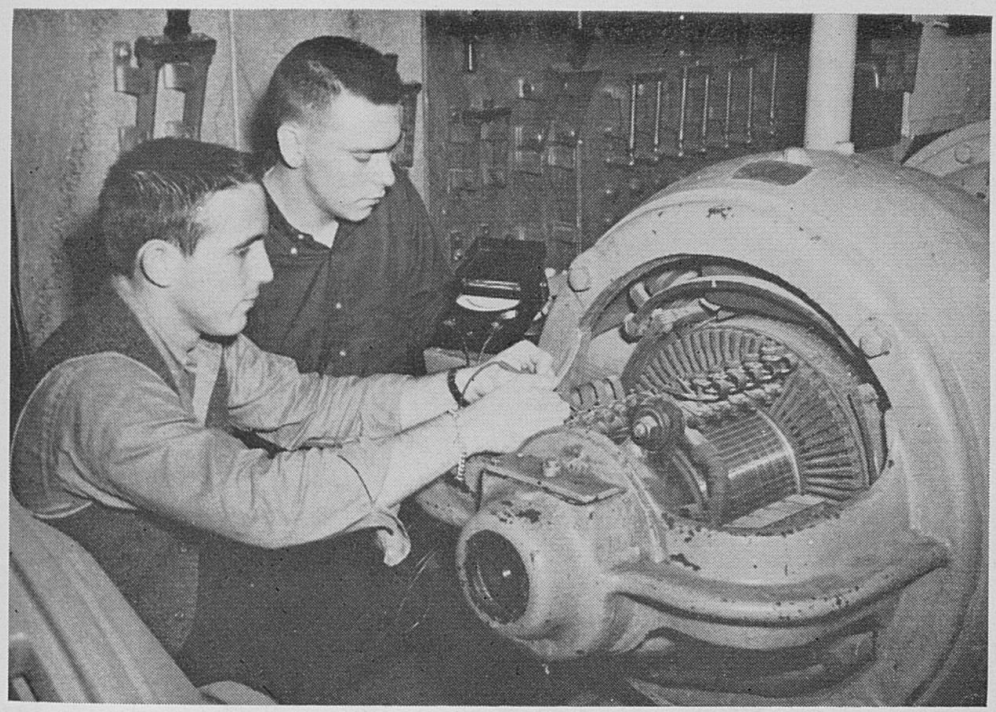
Electricity benefits everyone in one way or another. It may cook our meals, heat our homes, pump our water, freeze our foods, cut our grass, wash our clothes, and furnish power for modern industry. The need for electricity increases at a staggering rate. Employment possibilities in the future appear to be exceedingly good for the trained electrical worker.

The Area Vocational Schools of Kentucky offer the individual an opportunity to become occupationally competent in many electrical fields. Live jobs in the trade consume the student's training time while in school. Related instruction is given throughout the course in the form of mathematics, physics, sketching, and trade theory from selected references and texts.

Electricity is a broad field and offers varied types of employment opportunities. Areas covered in the course of study include motor winding and repair, appliance repair, residential and farmstead wiring, industrial wiring, bell and signal wiring, lineman training, industrial electronics, and equipment maintenance.



Expert Motor Rewinding Renews Power



Basic Course Outline for ELECTRICITY
Course Length—22 Mos.

Fundamentals of Electricity

Construction Wiring

Interior Electrical Wiring—Residential
- Electrical fundamentals applying to wiring
- Cable wiring
- Wiring electric ranges and water heating appliances
- Residential furnace controls
- Remote control wiring

Interior Electrical Wiring—Industrial
- Industrial methods
- Non-residential lighting
- Wiring for motors
- Power and feeder service
- Transformers, capacitors, industrial power distribution
- Special circuits and application

Motor Repair
- Split phase motors
- Capacitor motors
- Repulsion type motors
- Polyphase motors

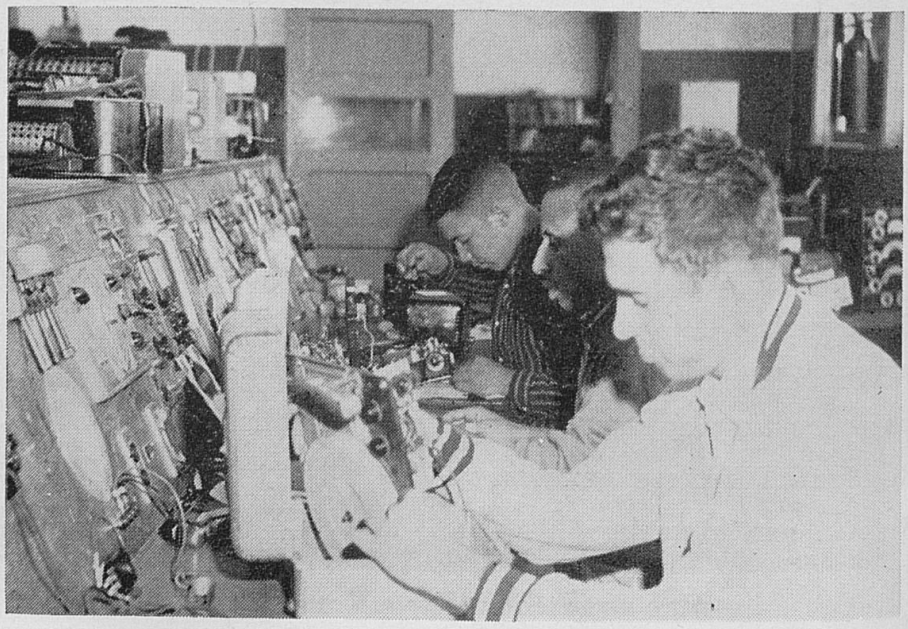
ELECTRONICS

The sky is the limit on career opportunities in the Industrial Electronics field for those who are willing to study and apply themselves.

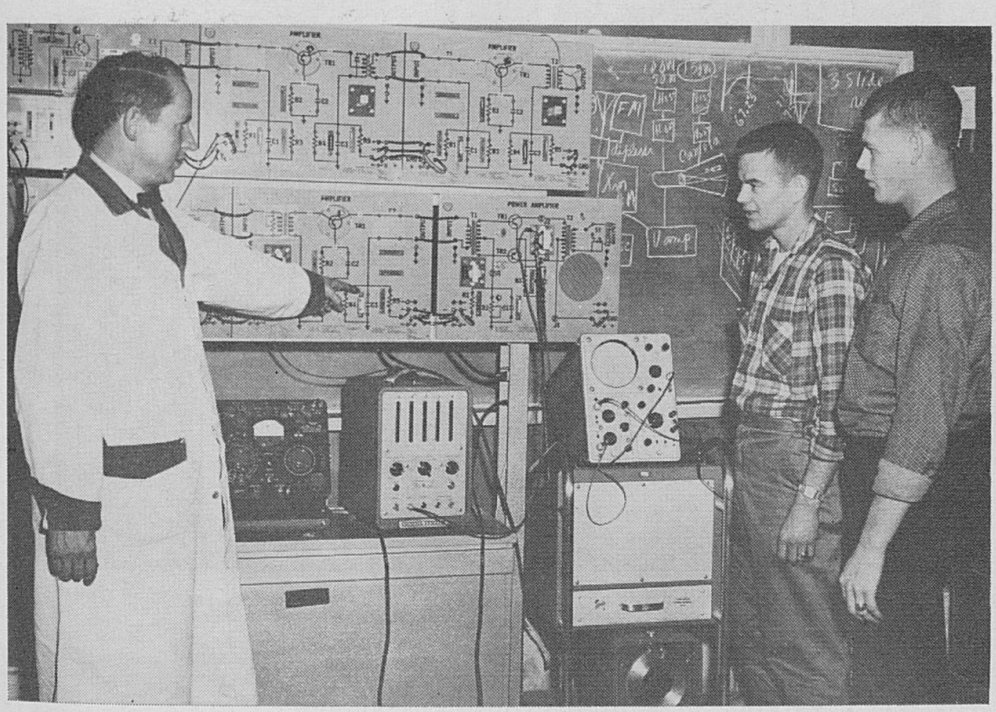
The electronics industry is a rapidly expanding occupational field. Technicians who design, build, service, and trouble-shoot electronics equipment have available to them a wide variety of employment opportunities throughout the nation.

The variety of work and excellent opportunities for advancement, plus a high rate of pay, make employment in this field very attractive.

Those who wish to prepare themselves for this trade should have at least a high school education and possess an aptitude for the work. Major units of instruction involve fundamentals of electricity, bell and signal circuits, industrial electronics, switchboards, A. C. motors, D. C. motors, generators, D. C. and A. C. controllers, transformers, fundamentals of electronics, electronic measuring instruments, industrial electronic controls and devices, technical mathematics, technical science, and related subjects.



The electronics departments in area vocational schools are equipped with tools and testing equipment necessary for thorough instruction. Individual work stations, and areas for group instruction and demonstrations, are provided. Teaching methods include group instruction as well as individual instruction based on the progress of the individual.



Basic Course Outline for INDUSTRIAL ELECTRONICS

Course Length—22 Mos.

Electric and Electronic Fundamentals
- DC Components and Circuits
- AC Components and Circuits
- Fundamentals of Electronics

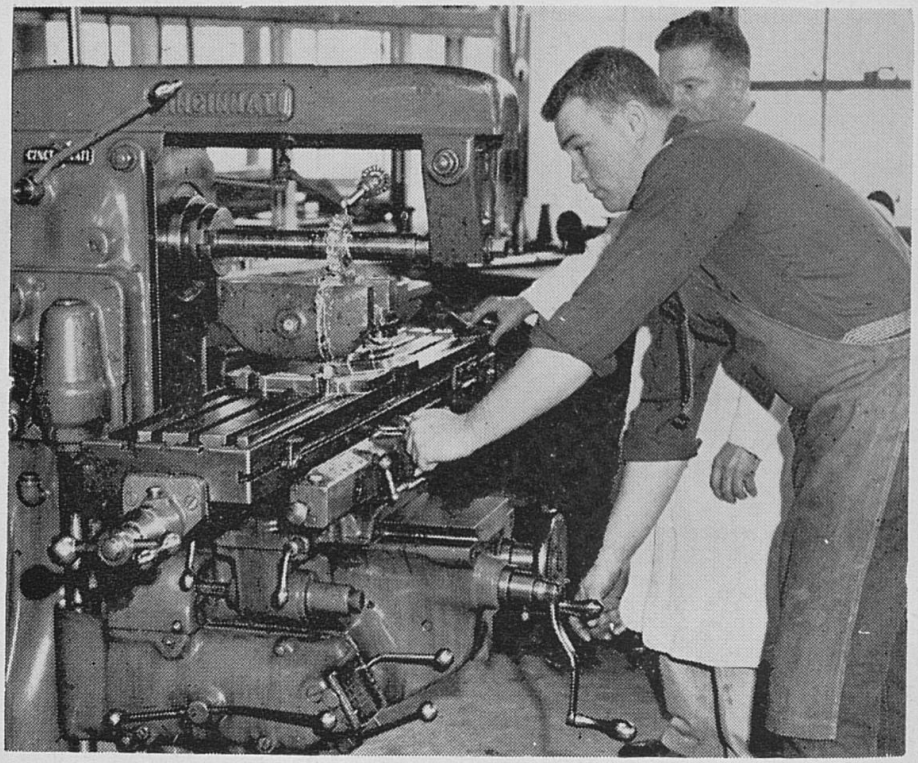
Basic Electronic Systems
- Power Supplies
- Audio Amplifiers
- Transmitters, A.M.
- Radio Receivers
- Antennas
- Frequency Modulation
- Laboratory Reports

Advance Electronic Systems
- Time Constants
- Radar
- Synchros
- Microwave
- Ultrasonics
- Computer Technology
- Television

Related Subjects
- Technical Math
- Technical Science
- Electronic Drafting

General Subjects
- Business and Industrial
- Mechanical Laboratory

MACHINE SHOP PRACTICE



"Take .015 of an Inch on the Next Cut"

We are living in a highly mechanical age. Practically everything is done with the push of a button or the flick of a lever. These ingenious mechanical and electronic devices are built of accurately and carefully made parts. Basically, the machinist is the key to all trades. His job is so essential to everyday life that his mark is on every phase of industry. The machinist plays a very important part in manufacturing because it is he who translates the ideas of the designer and inventor into practical and efficient machinery. The machinist fabricates, repairs, or makes parts for every conceivable piece of equipment used by modern manufacturing plants. The machinist trade takes on added importance in this world of science and invention and will continue to do so as long as science and industry continue to grow. This occupation represents the largest single group of skilled jobs in manufacturing.

Employment in this trade is found in every section of the country. The work of a machinist is becoming more important

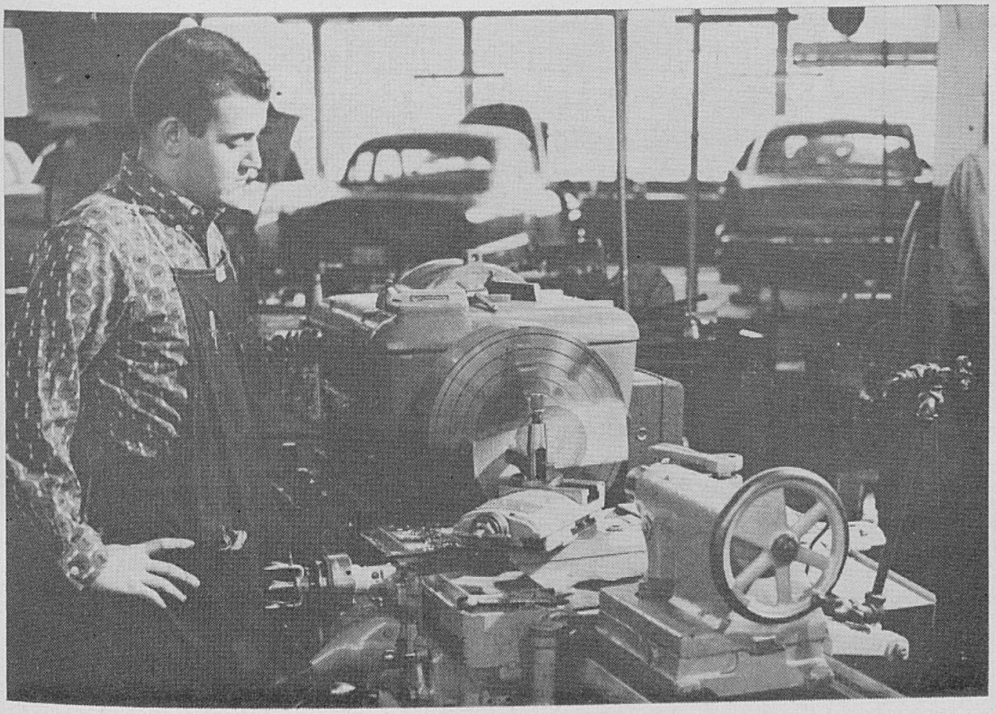
and exacting as close tolerances are created in manufacturing satellites, rockets, and atomic devices. Most machinists work in modern surroundings with modern equipment, and receive a salary commensurate to those paid in the highest skilled occupations.

Those desiring to become machinists should possess, or develop, a thorough understanding of basic mathematics, physics, and science. They should also have a somewhat above-average mechanical aptitude by virtue of the fact that the greater percentage of a machinist's work is done with precision tools such as the engine lathe, turret lathe, grinders of all types, planers, shapers, milling machines, etc. In addition, all types of precision measuring instruments must be utilized.

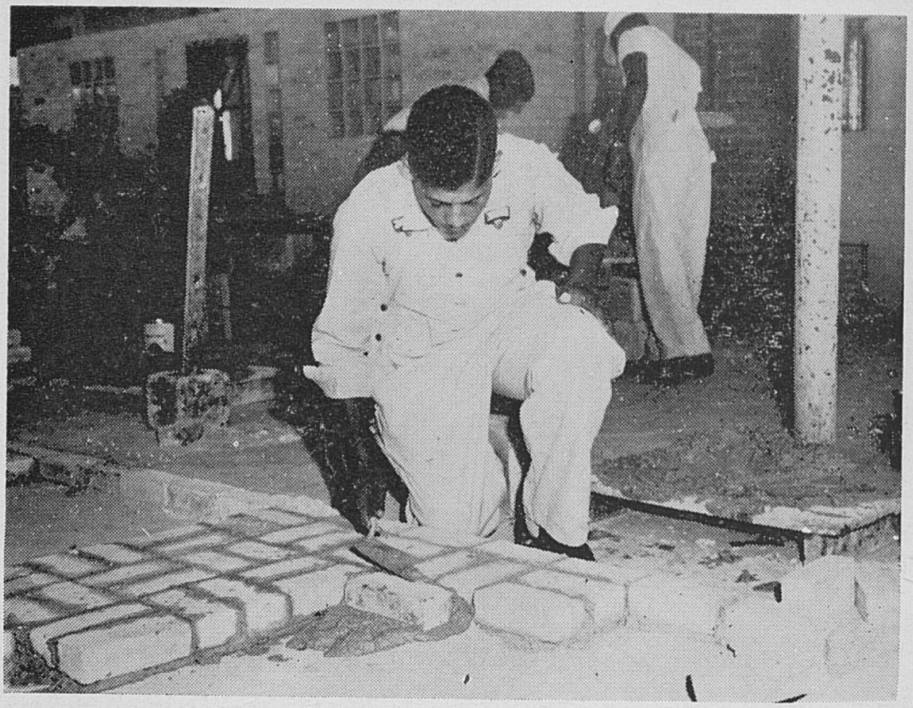
Basic Course Outline for MACHINE SHOP

Course Length—22 Mos.

Bench Work
Lathe Work
Drill Press Work
Milling
Shaping
Planing
Grinding
General Maintenance and Repair
Heat Treating
Related Subjects



MASONRY



Learning to Trowel Is a Key Mystery of the Trade

Masonry, in the field of building construction, is as old as civilization itself. Recent statistics indicate a great demand for skillful, intelligent, and energetic men who are interested in masonry as a phase of building construction.

This course, requiring mental as well as manipulative skill, gives the student a general understanding of brick and stone work as it is applied to the building trades. Not only are the necessary trade procedures taught and emphasized, but sufficient practical experience and related information are included to provide understandings of structural design and construction.

Included in the course are such trade procedures as design and construction of footings, foundations and waterproofing, beams and lintels and their uses, walls and partition construction, chimney and fireplace design and construction. General knowledge of the use and application of glass brick and concrete block in masonry construction is also included.

During these years of rapid expansion, our progress in building residential, industrial, and defense structures continues to increase. Masonry represents one of the finest aspects of our culture in the building trades. Perhaps no other worker reaps so much satisfaction from his labors as the skilled craftsman who combines grace, beauty, and security in buildings for tomorrow.

Basic Course Outline for MASONRY

Course Length—22 Mos.

Building Footings

Laying Bricks

Laying Blocks

Laying Stone

Laying Tile

Pointing Up

Fireplace Construction

Lining Flues

Layout

Estimating

OFFICE MACHINE REPAIR AND MAINTENANCE

Office Equipment Requires Repair As Well As Preventive Maintenance

Office automation has given a new prominence to the work of the office machine repairman. The need for skilled workmen in this area grows each day as offices consign more of their routine chores to machines, and as manufacturers build new kinds and types of office equipment to perform repetitive tasks.

Skill and technical know-how are requirements of the trade as the repairman arranges and adjusts the modern typewriter which is composed of more than 2,000 component parts. Specialized skill in the use of tools, technical manuals, and test equipment is learned through carefully planned shop and class work centered around all types of office equipment.

Students receive practical experience in repairing typewriters, adding machines, comptometers, calculators, and duplicating equipment of all makes and models. Experience extends from simple adjustments to major overhaul and rebuilding.

Many graduates have successfully set up their own shops and are operating profitable businesses. Students enrolled in this course often secure a promise of employment several weeks before training is completed. Many physically handicapped people have been successfully trained in this course.

Basic Course Outline for OFFICE MACHINE REPAIR
Course Length—22 Mos.

Typewriters
- Dismantling
- Main Frame Servicing
- Segment Servicing
- Main Carriage Servicing
- Main Spring and Related Parts Servicing

Adding Machines
- Dismantling
- Main Carriage Servicing
- Main Frame Servicing
- Keyboard Servicing

General Office and Equipment
- Mimeograph and Duplicator
- Cash Registers
- Miscellaneous Office Equipment

Related Theory
- Business Relations (Sale)
- Servicing Problems
- Business Management Problems
- Safety Precautions
- Personal Characteristics

Related Subjects
- Mathematics, etc.

PRACTICAL NURSING

There is opportunity in Kentucky for both men and women to become valuable members of the health team. A graduate of one of the approved schools of practical nursing plays an important part in providing adequate nursing care for the community, in hospitals, clinics, private homes, industries, doctors' offices and public health agencies, under the supervision of a licensed physician or a registered professional nurse.

Students must be at least seventeen years of age and have successfully completed one year of high school or its equivalent. They must have evidence of good health as shown by a physical examination.

The one-year program of instruction emphasizes gaining basic knowledge and developing attitudes and skills through instruction and carefully planned supervised practical experience.

All students have experiences in the following patient areas of an accredited hospital: medical, surgical, obstetrical (mothers and newborn babies), pediatrics (children), and care of the aged. Many of the students receive additional nursing experiences in such special areas as tuberculosis and psychiatry. Graduates of the course are eligible to take the examination to become Licensed Practical Nurses.

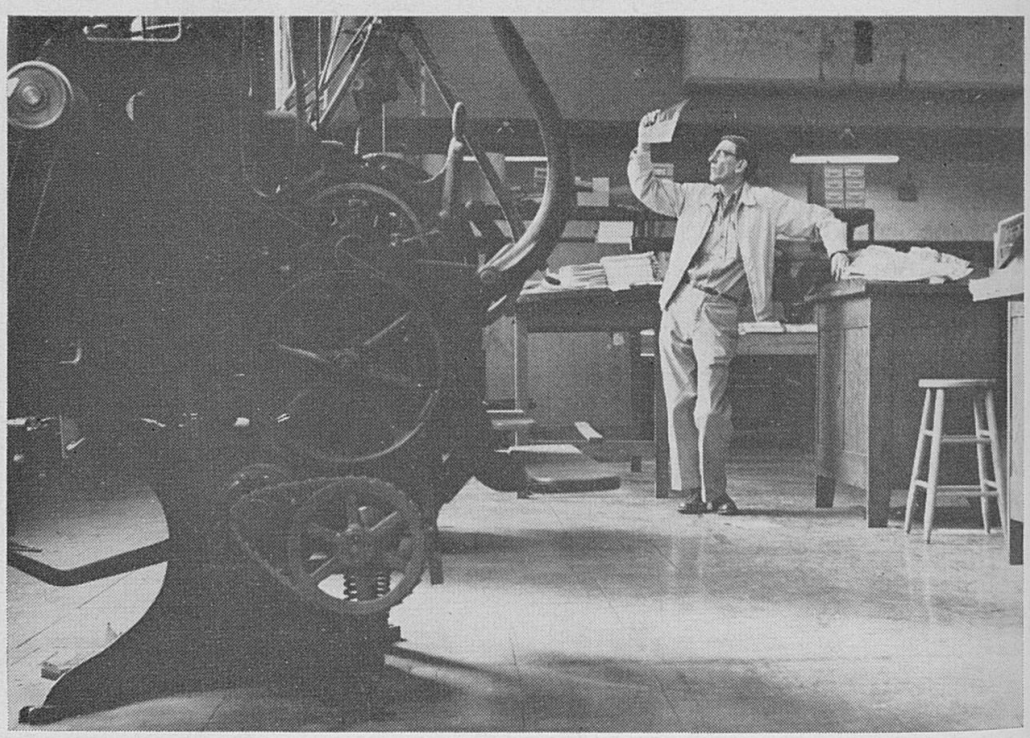
Practical nursing offers a career of achievement and satisfaction. It represents an inspiring opportunity to contribute to the welfare of mankind.

Basic Course Outline for PRACTICAL NURSING
Course Length—12 Months

Planned Instruction
- Anatomy and Physiology
- Personal and Vocational Relationships
- Community Health
- Nutrition
- Dosage and Medications
- Introduction to Conditions of Illness
- Nursing Arts

Supervised Nursing Practice
- Medical Nursing
- Surgical Nursing
- Obstetrical Nursing
- Pediatric Nursing
- Long Term Illness Nursing

PRINTING



The modern way of living would be a thing of the past if we should suddenly find ourselves without the printing trade.

In the wealth of printed matter about us, it is hard to conceive of trying to record for future reference or generations, the happenings of today by a means other than printing.

The printed word, today's newspaper, the Bible on the pulpit, and even this booklet are accumulations resulting from Gutenberg's humble beginning.

Today's printers number in thousands, while each new year introduces revolutionary processes and procedures that open thousands of additional jobs.

The student, having learned the basic skills required, can branch out into almost a hundred facets of the Graphic Arts industry, letter-press work, lithography, engraving, bookbinding, and many others. Seasonal work is unknown to the printer; a never-

ending stream of circulars, newspapers, periodicals, signs, posters, can labels, and thousands of other printed products roll off the printer's presses daily.

A printer should have a substantial background in English, spelling, mathematics, and an interest in the trade. Many handicapped persons are ideal employees in certain phases of the printing industry.

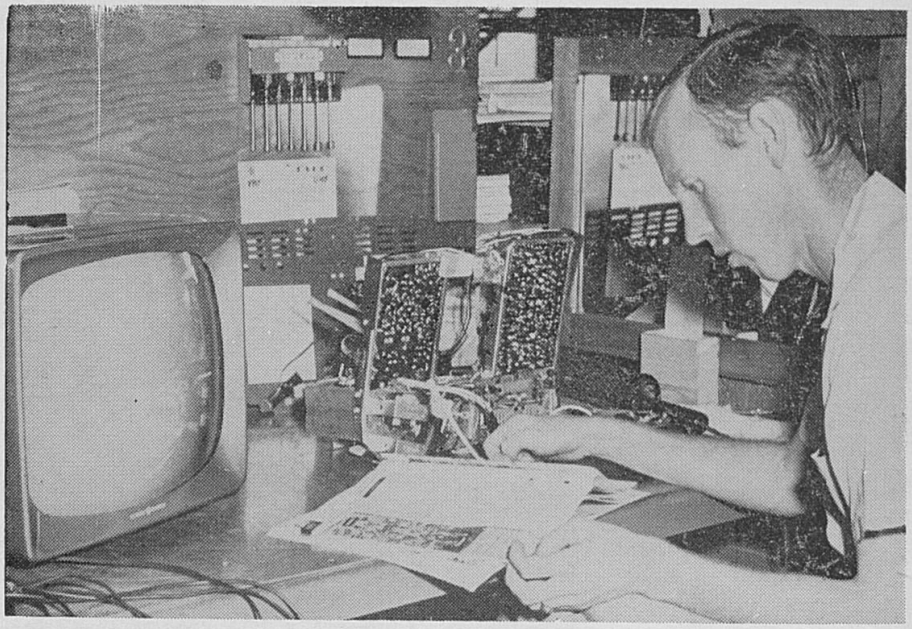
In this course the student learns to perform the basic operations of type setting and presswork, methods used in printing books, magazines, and newspapers in addition to the operation of the various machines used in the printing industry.

Basic Course Outline for PRINTING

Course Length—22 Mos.

Hand Composition
Machine Composition
Store Work
Platen Press
Proof Reading
Layout and Design
Cylinder Press
Type Styles and Faces
Stockroom
Paper-Cutting
Bindery Work
Ink Mixing and Composition
Maintenance and Repair of Printing Equipment

RADIO AND TELEVISION MAINTENANCE AND REPAIR



Up-To-Date Service Manuals Are Tools-In-Trade Of The Radio and T. V. Repairman

The terrific growth of the television industry and the development of color television and transistor sets have greatly increased the demand for well-trained television technicians. Color may even replace our black and white system. As future developments result in greater use of electronic equipment, this interesting field of work will offer an even greater variety of opportunities.

Television screens for face-to-face telephone conversations could become a reality in a few years.

In this course, actual television and radio repair work is performed as a basis for realistic instruction in the proper use of the television and radio test equipment. Other instruction includes the study of sound and wave motion, light, color, and electricity. Related mathematics is also offered for students who may need help in this field.

A good television and radio serviceman can find employment in most localities. Many television and radio repairmen become television and radio dealers and operate their own businesses.

Upon successful completion of this course, the student will have the technical knowledge and skill necessary for a bright future in the television and radio industry.

Basic Course Outline for RADIO AND TELEVISION

Course Length—22 Mos.

Safety
Electricity
- Motor Repair
- Circuiting
- Wiring Methods—Radio

Basic Radio
- Electricity and Vacuum Tubes
- Amplifiers
- Trouble Shooting
- Transmitters
- Receivers

Frequency Modulation and Television
- F. M.
- Television

Related Instruction
- Mathematics
- Science
- Blueprint Reading

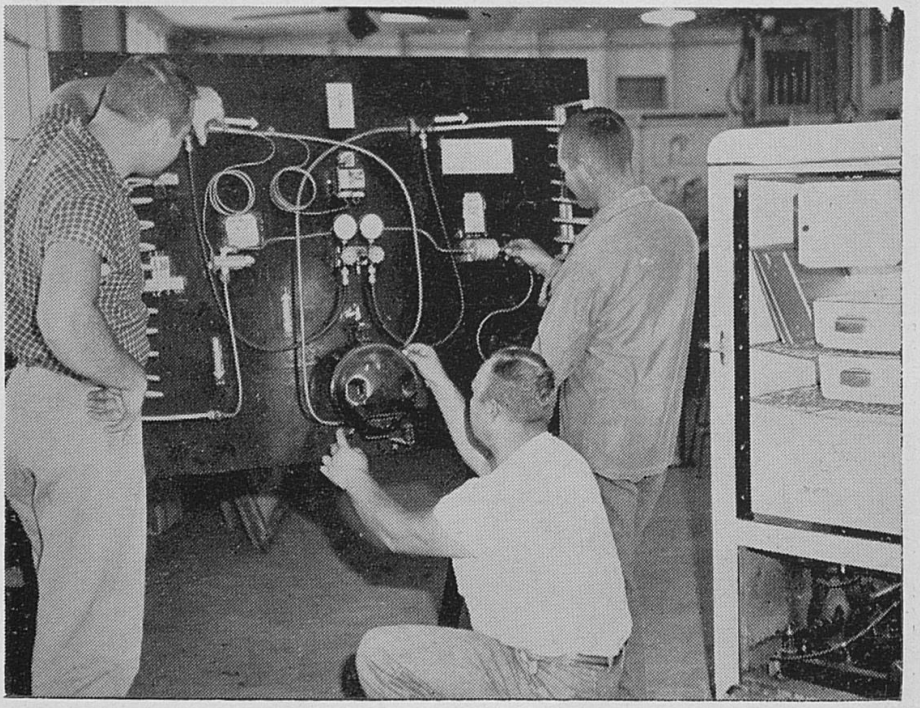
Amplitude Modulation

Special Skills and Knowledge are Needed by the Television Repairman

REFRIGERATION AND AIR CONDITIONING MECHANICS

Refrigeration and air conditioning, as applied in modern day living, afford unlimited opportunity to the individual who likes the challenge of something new and a profitable vocation. To apply this trade, one must have an aptitude for mechanics and an understanding of the laws of physics as they apply to pressures. A knowledge of simple uses of electricity, ability to calculate simple formulas of physics and mathematics, and a knowledge of blueprint reading are highly helpful.

Instruction in refrigeration and air conditioning deals with the fundamentals of theory and the applications of theory in actual practice. This course has enabled many to secure interesting and profitable employment.



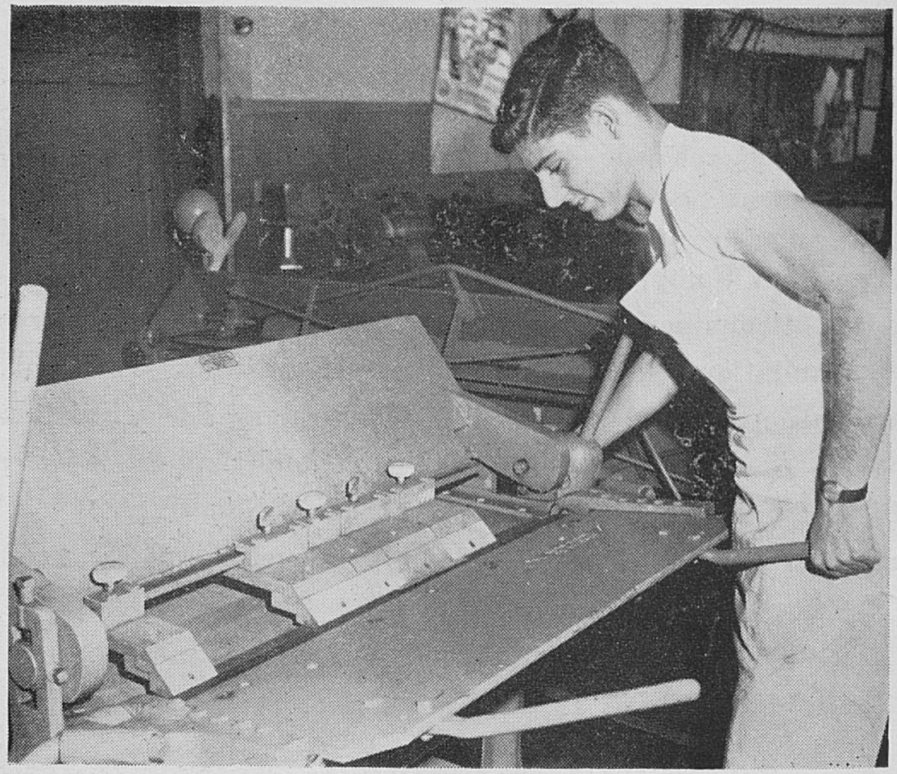
The Principles of Refrigeration Are More Easily Understood Through the Use of Live Demonstration Panels

Basic Course Outline for REFRIGERATION AND AIR CONDITIONING

Course Length—22 Mos.

Refrigeration Theory
Mathematics, Science, Tests, and Reviews
Refrigerants
Tubing
Refrigeration Compressors
Standard Components, Assembly, and Construction
Refrigeration Controls
Valves
Multiple Systems
Repair and Trouble Shooting
Designing and Constructing Systems
Air Conditioning Principles and Theory
Air Conditioning Blueprint and Diagram Reading
Air Conditioning Compressors
Air Conditioning Controls
Motors and Electrical Circuits
Air Conditioning Repair and Trouble Shooting
Instruments and Measurements

SHEET METAL



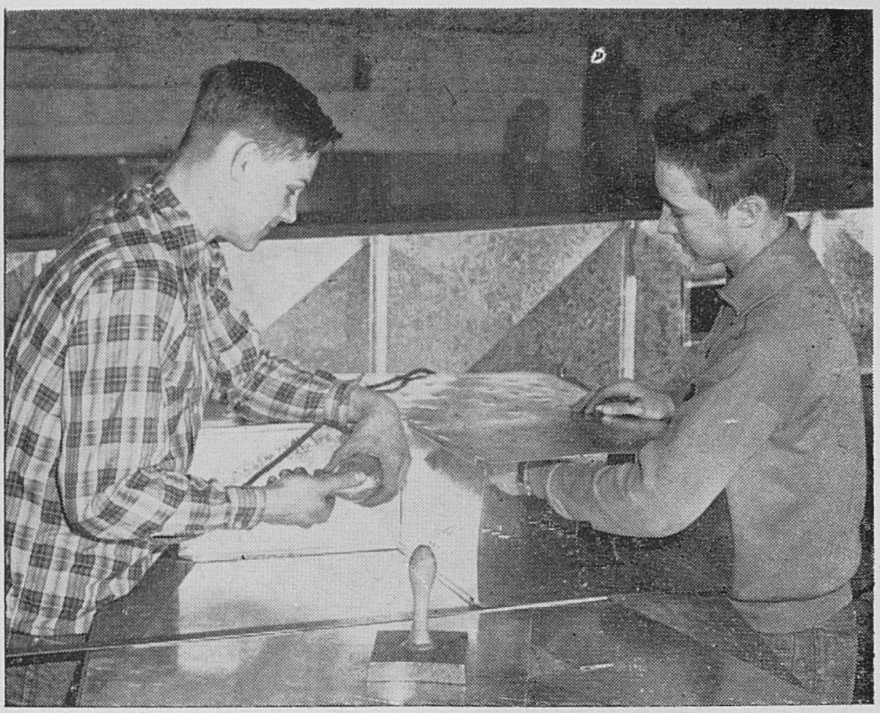
Many Parts of Sheet-Metal Projects Must be Bent and Formed to Make a Hem or Stiffen an Edge

Industrial developments and public demand for modern conveniences have made sheet metal work indispensable. Statistics show that of every ten persons gainfully employed in the United States, one is an employee in some capacity in the metal working industry.

The worker in this trade makes and repairs many things; such as, stove and furnace pipes, furnaces, air conditioners, signs, eave troughs, metal roofs and ceilings, metal doors and windows, automobile and airplane bodies.

Sheet metal, in many instances, is now used instead of wood and other industrial materials. These products are used on the farm, in the home, offices, and shops. The number of articles which can be made from sheet metal is limited only by the worker's own ingenuity, imagination, and resourcefulness.

In this course, the student learns to rivet, solder, cut, drill,



The Building of Sheet Metal Duct Work Assumes New Importance in the Era of Central Heating and Air Conditioning

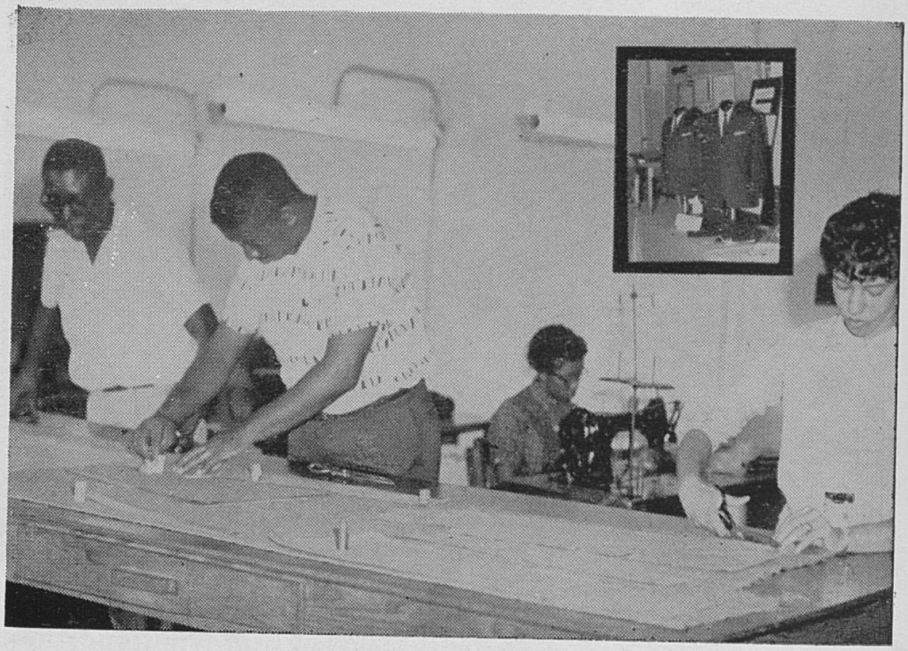
roll, bend, and weld. He also learns the working characteristics of individual metals and the purposes for which each is best suited.

Basic Course Outline for SHEET METAL

Course Length—22 Mos.

Uses of Sheet Metals
Geometric Developments
Duct Work
Methods of Fastening
Layout Work
Sizing
Calculations for Air Changing
Methods of Heating
Methods of Cooling
Molding and Guttering
Estimating

TAILORING



"Dress up, look well, and feel better" is the slogan being used by the clothing industry. Become a tailor and make this slogan a reality by helping to clothe America.

The tailor should have a knowledge of the latest styles at all times. When new styles are introduced, he should be one of the first to know, and he should be familiar with the many types of clothing and fabrics being used.

Before entering the field of tailoring, a high school education is important. Opportunities are greater for those who meet these qualifications.

Some of the basic units taught in tailoring are: Fabrics and their construction, designing, cutting, hand stitching, trouser making, and skirt and coat making. In this field, like other fields, there are specialists, who may, if they so desire, specialize in one or more of the areas.

There is a great demand for well-trained tailors. The opportunities are great as a small business, a big business, and in self-employment as well. The working conditions are desirable, the hours are good and pay is equitable.

Basic Course Outline for TAILORING

Course Length—22 Mos.

Tools and Equipment
- Opening, closing, and threading machine
- Using and caring for seam gauge machine
- Regulating tension and length of stitch
- Using a seam presser, binder, tailor's chalk, and pounding block

Seams—Types and Uses
- Making and finishing plain seams
- Staggering seam edges
- Making French, lapped or flat felt seams
- Making corded seams
- Binding Seams

Fitting Garments
- Fitting skirt and blouse
- Fitting ready made garments

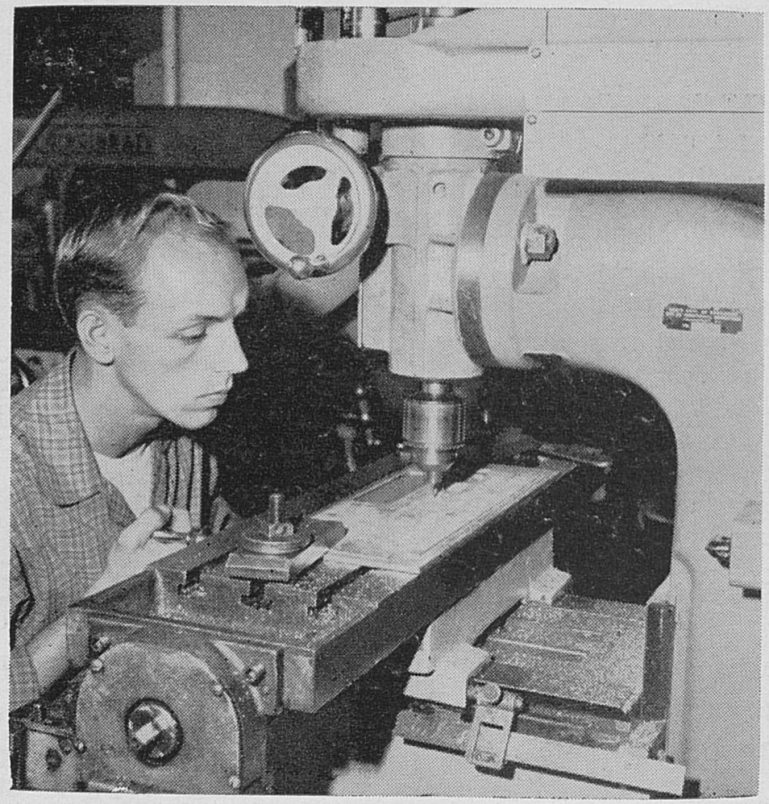
Stitching Garments
- Stay stitching
- Machine and hand basting
- Stitching and pressing darts
- Stitching for gathering

Pockets, Hems and Other Finishes
- Making and attaching patch pockets
- Making set-in and/or slash pockets
- Putting in a straight hem
- Machine and hand hemming
- Applying hemming tape

Pattern, Marking and Cutting Garments
- Selecting a pattern-size, etc.
- Changing pattern sizes
- Marking and using tracing wheel and tailor's chalk
- Using pattern layout for cutting
- Cutting figured patterns
- Cutting napped or striped materials

Garment Construction — Trousers, Vests, Coats
- Straight seaming
- Neck and sleeve finishes
- Facings and interfacings
- Linings

TOOL AND DIE MAKING



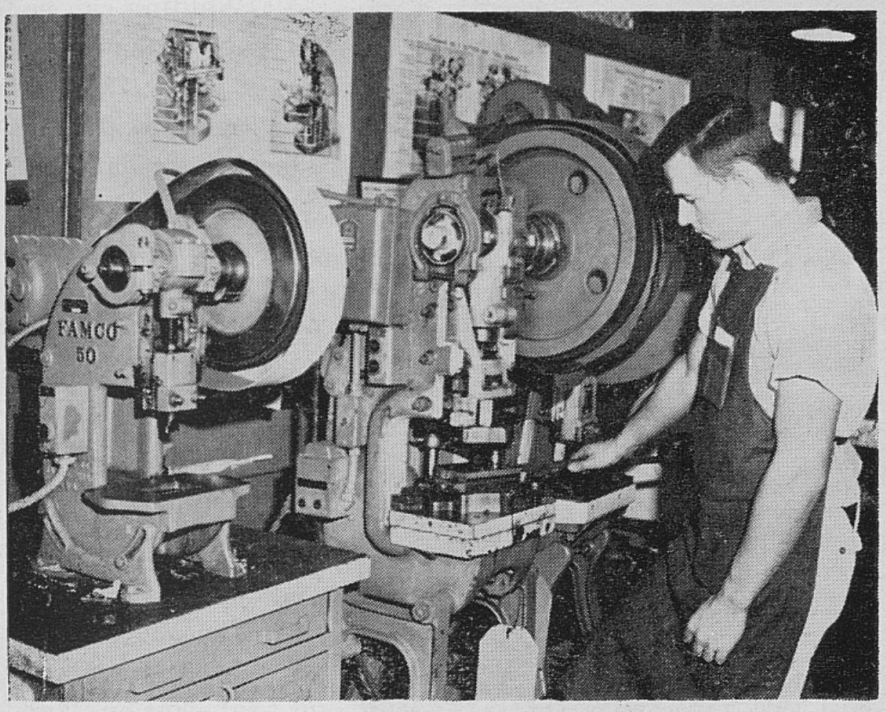
Precision and Skill are Musts for the Die Maker

A journeyman in the trade of Tool and Die Making is highly skilled in the use of precision machines and instruments for building intricate mechanisms. This type of work is highly specialized and forms the basis of production as well as the quality of the products manufactured.

Tool and Die Making encompasses the building of tools, jigs, and fixtures, dies, gauges and special productive mechanisms. Knowledge of metallurgy and the heat treatment of various metals are used extensively by the die maker.

For those entering this highly specialized field, a high school education, or the equivalent, is essential. This is particularly true since the course of instruction requires a broad knowledge of mathematics, drafting and blueprint reading, physics, and science of metallurgy.

Opportunities in this occupation are practically unlimited for those posesssing the skills and knowledges required of successful workers in this field.



No Short-Cuts in this Highly Skilled Occupation

Basic Course Outline for TOOL AND DIE MAKING

Course Length—11 Mos.

Introduction
- Mechanical Drawing
- Free Hand Sketching
- Materials anl Heat Treatment
- Tool Design
- Tool Assembly Drawings
- Fixed Gauges
- Cutting Die Design
- Forming Die Design
- Multiple Operation Dies
- Bench Work

Machine Operations
- Drill Press
- Lathe
- Shaper
- Mill
- Planer

Press Operations
- Punching
- Blanking
- Forming
- Broaching
- Shearing

WELDING

Welding can be found in every phase of industry today. On-the-job construction, metal and steel fabrication, and maintenance work provide ample opportunities for the craftsman skilled in welding. It is perhaps one of the greatest contributors to our mass production superiority, and the field is expanding as rapidly as competent welders can be found.

The development of new metals and methods of fabrication and construction make it necessary for the welder to have a broad background of the basic knowledges and skills. To be a successful welder the operator must have a good basic understanding of the properties and characteristics of metals. New welding processes have been developed which call for a high degree of technical knowledge and operative skills. The trade calls for a mechanical aptitude and interest, with special emphasis on peculiar aspects of welding as related to the other trades. Educational and occupational experiences have shown that the welding student benefits by having previously had general science, general mathematics, and some experience in the field of metals.

The course of instruction in oxy-acetylene and electric arc welding is based on a study of the welding industry with particular emphasis upon the requirements of the commercial metal shops. Starting with the groundwork of fundamentals, the student learns the welding equipment and its uses, the character of the flame, and

the techniques of the method of application. Instruction includes both the flame and electric processes. Emphasis is placed on the proper techniques in welding in order that the learner may understand and practice correct welding procedures. The student learns the various methods of fabricating and assembling metal so that he may acquire sufficient knowledge and manipulative skills to prepare him to enter any one of the several metal trades. A great portion of the class instruction is given on actual productions jobs.

Through the development of the art of welding we now have all-steel bodies for automobiles, metal trains, bridges, buildings, boats, and innumerable other articles of all metal welded construction. In this modern steel age there is much in our high standard of living that we owe to the indispensable process of welding.

There is an ever constant demand for welders in all industries, and the expansion of modern industry will assure the trained individual regular employment.

Basic Course Outline for WELDING

Course Length—11 Mos.

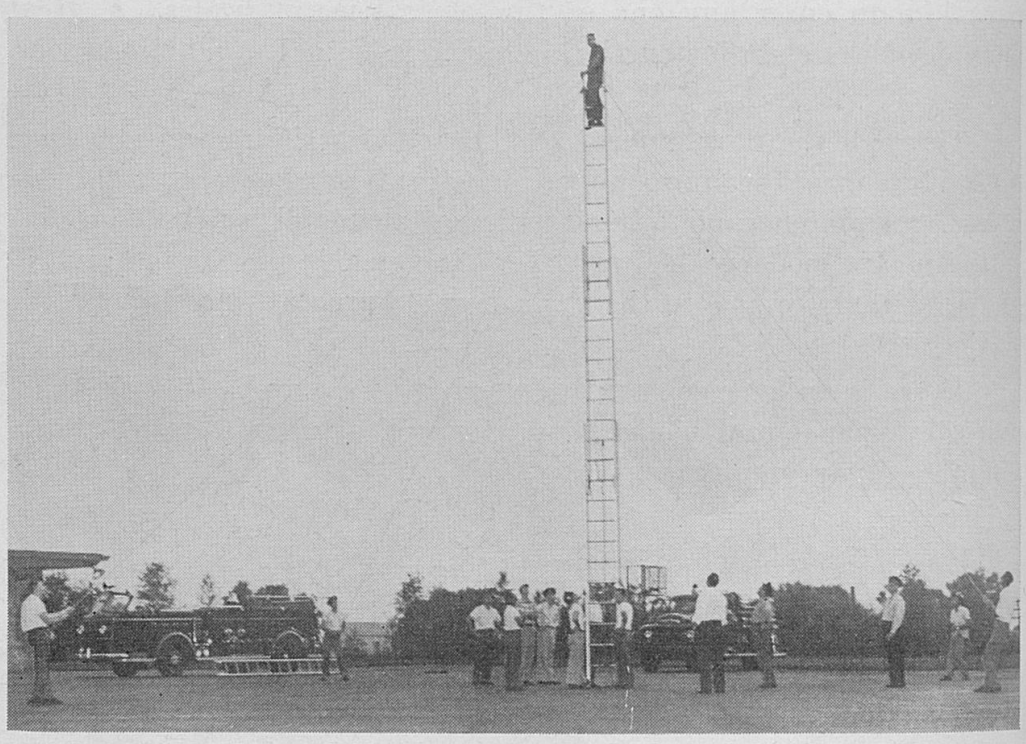
Oxy-acetylene Cutting
- Layout Work
- Hand and Machine Cutting
- Grinding, Polishing, Shaping and Filing

Oxy-acetylene Welding
- Flat Welding
- Horizontal Welding
- Brazing
- Maintenance Welding
- Hard-Surfacing
- Overhead Welding
- Pipe Welding
- Testing

Electric Welding
- Flat Welding
- Horizontal Welding
- Vertical Welding
- Overhead Welding
- Cast Iron Welding
- Hard-Surfacing
- Pipe Welding
- Heat Treating
- Tempering
- Testing

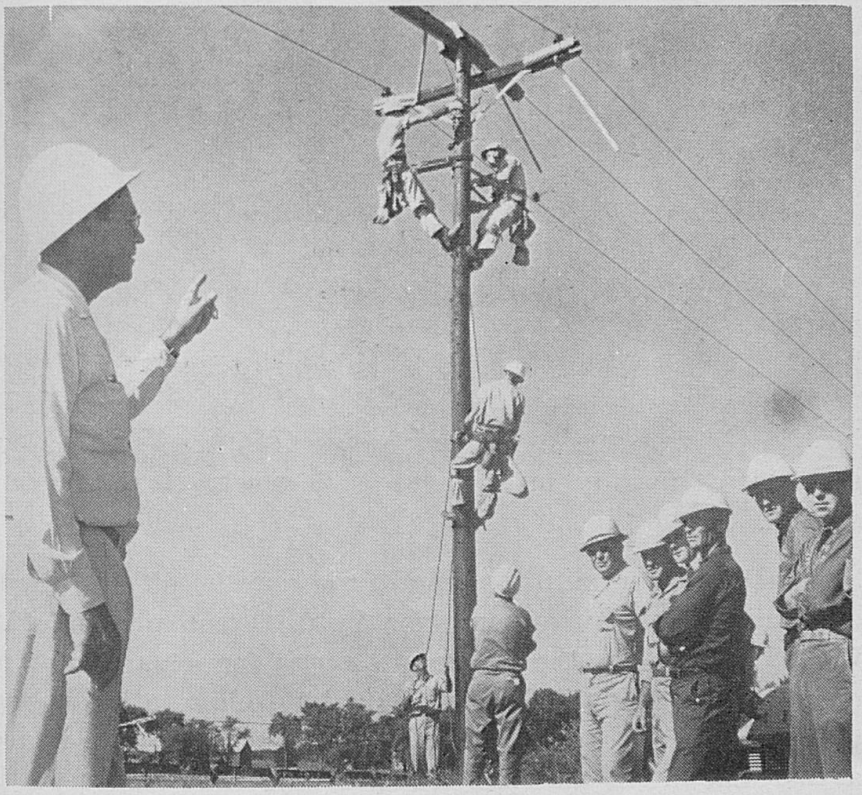
Heliarc and Aircomatic Welding
- Aluminum and Hard Facing Alloys
- Mild Steel, Stainless and Alloys
- Copper, Brass, and Bronze

PUBLIC SERVICE OCCUPATIONS
FIREMEN TRAINING



The program of itinerant instruction operated by the Division of Trade and Industrial Education provides training of an extensive nature to local fire departments throughout the state. These services are provided by two full-time itinerant instructors on the state staff and coordinated with and supplemented by part-time staff members employed by the vocational school serving the area. These courses are provided by offering a series of units ranging from basic fundamentals to advance methods of firefighting to local fire department personnel. Each unit consists of twenty hours of instruction, and as many of the units may be offered as a department feels it has need of at a given time.

JOB SAFETY TRAINING
PUBLIC UTILITIES



"Hot Stick" School in Process

The rapid expansion of rural electrification has created an overwhelming demand for workmen trained in "hot line" work. The program of job safety training operated by the Division of Trade and Industrial Education in conjunction with the Rural Electrification Cooperative Corporation and the vocational school serving the area offers planned job training and safety instruction in all phases of line work. This course includes right-of-way clearing, tree trimming, digging holes, setting poles, handling and firing dynamite, techniques of tying knots, splicing ropes, installing and connecting switches, meters, and transformers. Instruction includes both class work and on-the-job direction and observation.

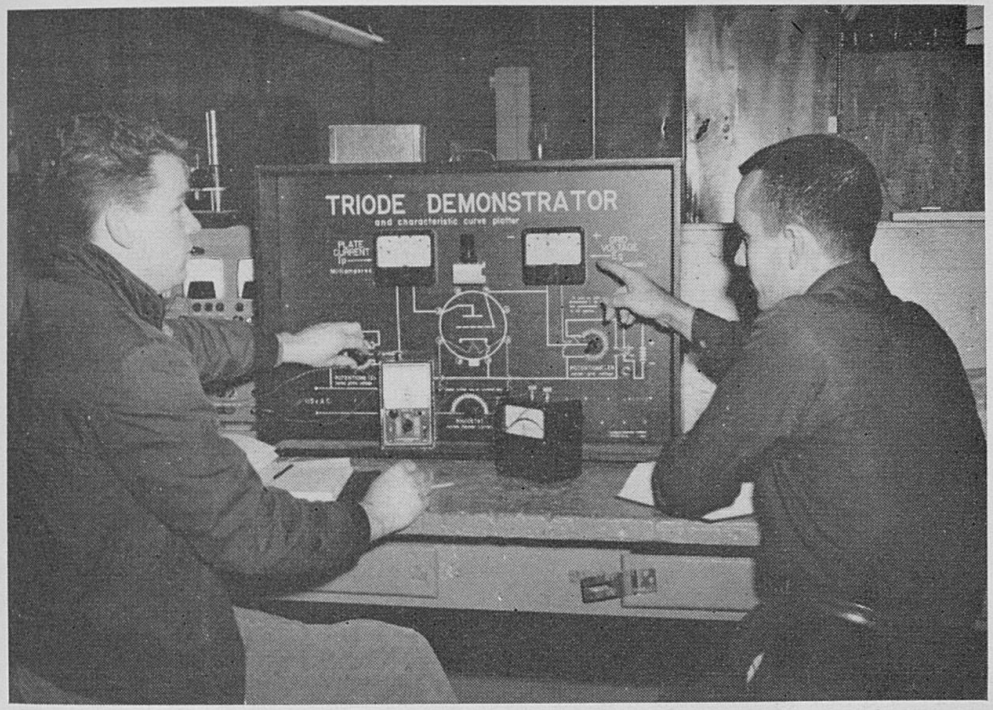
EXTENSION CLASSES

Trade Extension Classes: The Area Vocational-Technical Schools of Kentucky offer a comprehensive program of trade extension courses of a supplementary nature. These courses are offered to those who are employed or temporarily unemployed in industrial and technical occupations and who need to increase the skills and knowledge used in their daily employment.

Such courses may be conducted at any location in the state, and for any amount of time necessary to do the specific type of training needed by a specific group of workers. For example, a trade extension course for carpenters might consist of innumerable short units; such as, blueprint reading, sketching, mathematics, roof framing, use of steel square, or stair building. Each short unit usually consists of three to ten lessons, and classes usually meet twice each week, three hours each session.

Several short units in the same trade may be offered for those desiring to improve themselves in different phases of their work. This allows the worker to enroll for a particular phase of training which will be most valuable to him in his immediate progress in his occupation without being forced to go through a vast amount of material which at the time is not pertinent to his immediate needs. On whatever basis they are offered, they must be supplemental to the daily employment of those in the group.

Part-time Apprentice Classes: Part-time trade extension classes are provided for apprentices at any location where a sufficient number can be enrolled to justify the cost of instruction. These courses are operated for the purpose of providing necessary related technical knowledge to young apprentice workers in any industrial occupation. In addition to working on the job, the apprentice attends evening classes for a minimum of 144 hours per year where he learns mathematics, blueprint reading, science, and theory pertaining to his trade. Apprenticeship training permits one to "earn while he learns" his trade in an organized course designed for his special needs.



TECHNICAL EDUCATION

The program of technical education is designed to prepare individuals for various technical positions in such fields as electronics, metallurgy, chemistry, drafting and design, aeronautics, etc. These workers may support and work under the supervision of a professional engineer. However, the program of training for a technician is much shorter and more specific than that for the engineer.

The need for technicians is increasing at a phenomenal rate and career opportunities in technical work exist in a wide range of occupational fields. This implies challenges and opportunities for those who have the necessary aptitudes, interests, and abilities.

The education required at this level is based upon the principles of science and include sufficient post-high school mathematics to enable the student to accomplish the technical objectives of the courses. Emphasis is placed on the use of rational processes in the fundamental portion of the curriculum.

The training needed for successful employment as a technician in industry is normally about two years of full-time instruction, although some technical jobs require perhaps one year or less. A few highly technical occupations require some additional training beyond the two years.

In addition to the preparatory programs, employed workers in specific technical fields may take extension or supplementary courses to better meet changing occupational demands and for job advancement opportunities.

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