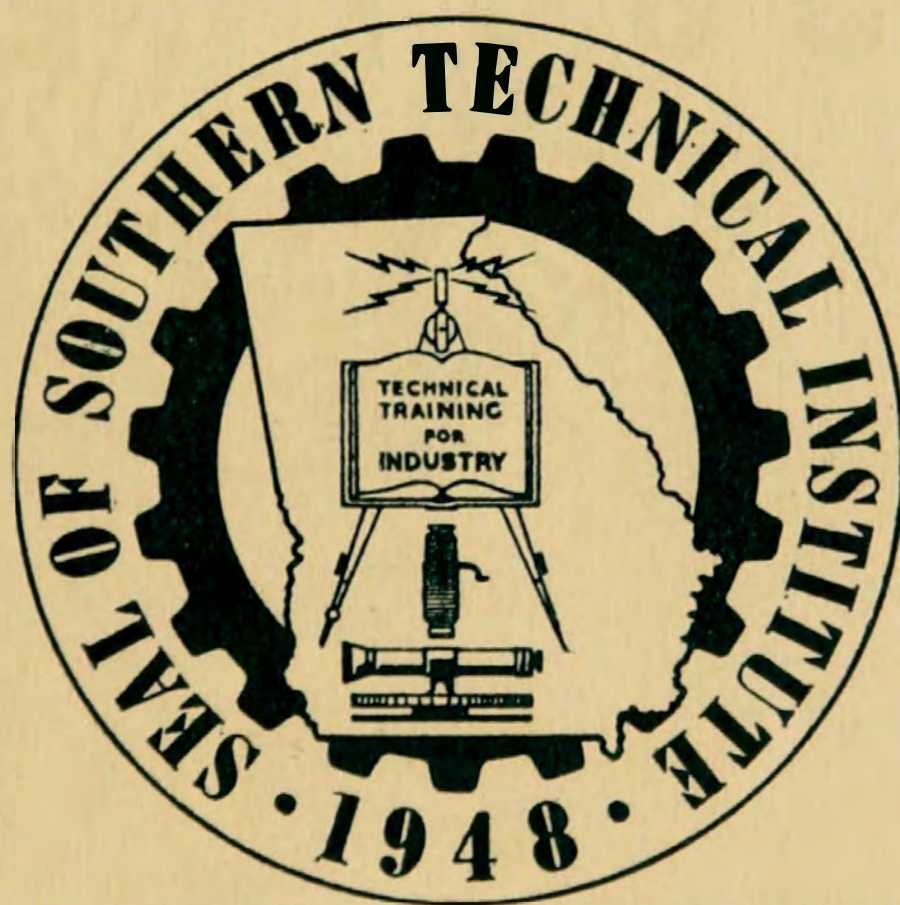


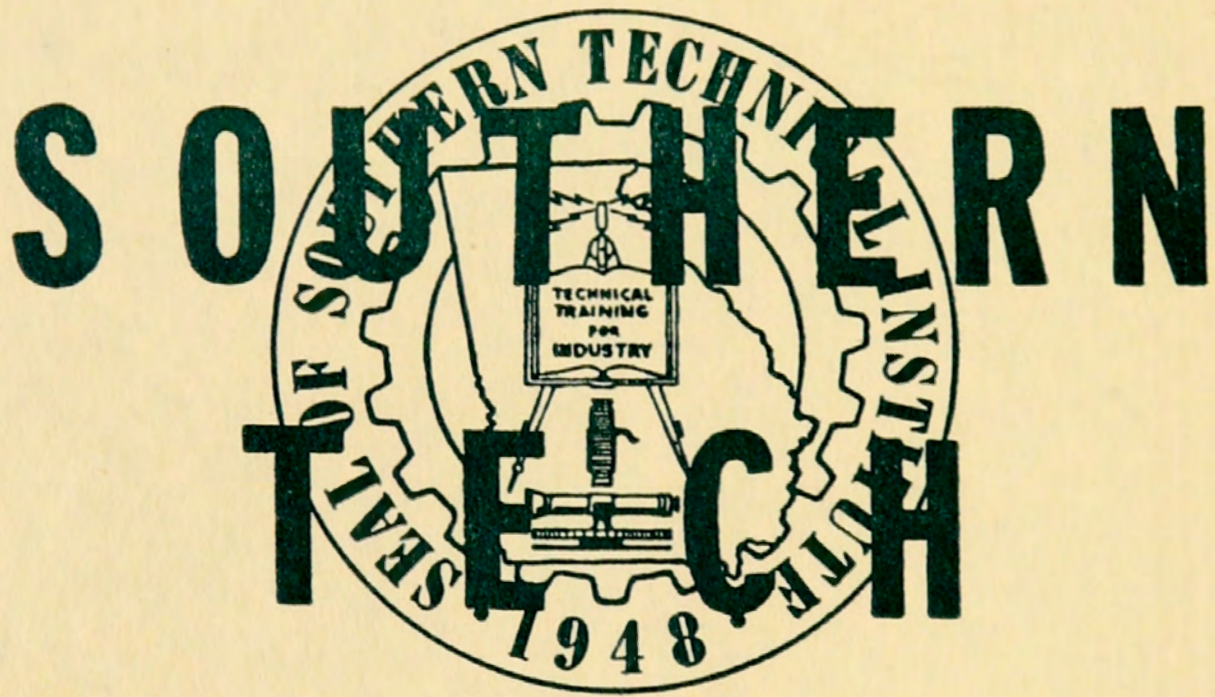
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SOUTHERN TECHNICAL INSTITUTE



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A UNIT OF
ENGINEERING EXTENSION DIVISION
GEORGIA INSTITUTE OF TECHNOLOGY



University System of Georgia

SOUTHERN TECHNICAL INSTITUTE

CATALOGUE AND INFORMATION

1951 - 52

VOLUME IV

NUMBER I

A Unit of
ENGINEERING EXTENSION DIVISION

GEORGIA INSTITUTE OF TECHNOLOGY

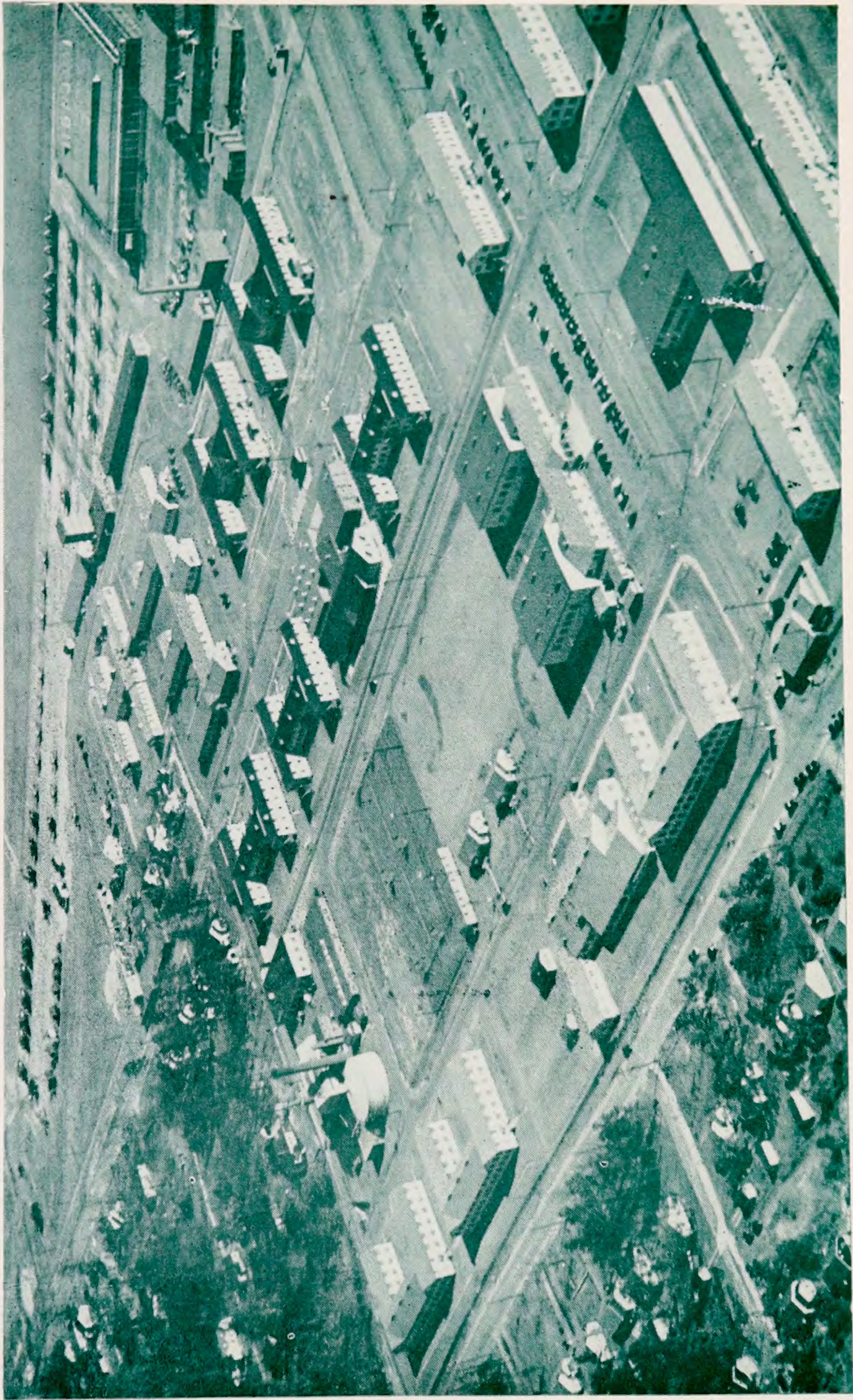
Address

SOUTHERN TECHNICAL INSTITUTE
CHAMBLEE, GEORGIA

Telephones

ATLANTA No.
21-3164

CHAMBLEE No.
3164



Southern Technical Institute, Chamblee, Georgia

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CALENDAR 1951-52

Fall Quarter, 1951

- September 24—Registration.
September 25—Classes begin.
September 26—Late registration fees apply.
September 29—Last day for registration. Last day for adding a subject to study list.
October 27—Last day for dropping a subject from study list without penalty.
November 3—End of deficiency report period.
November 22-25—Thanksgiving recess.
December 15—End of term.
December 16-January 1—Christmas recess.

Winter Quarter, 1952

- January 2—Registration.
January 3—Classes begin.
January 4—Late registration fees apply.
January 5—Last day for registration. Last day for adding a subject to study list.
February 6—Last day for dropping a subject from study list without penalty.
February 9—End of deficiency report period.
March 19—End of term.
March 20-25—Spring recess.

Spring Quarter, 1952

- March 26—Registration.
March 27—Classes begin.
March 28—Late registration fees apply.
March 29—Last day for registration. Last day for adding a subject to study list.
April 30—Last day for dropping a subject from study list without penalty.
May 3—End of deficiency report period.
June 7—End of term.

Summer Quarter, 1952

- July 7—Registration.
July 8—Classes begin.
July 9—Late registration fees apply.
July 12—Last day for registration. Last day for adding a subject to study list.
August 11—Last day for dropping a subject from study list without penalty.
August 16—End of deficiency report period.
September 20—End of term.

THE UNIVERSITY SYSTEM OF GEORGIA
BOARD OF REGENTS

DR. HARMON W. CALDWELL

• • *Chancellor*

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April 11, 1951 - January 1, 1956

MRS. WILLIAM HEALEY, Atlanta, Georgia, State-at-Large
January 18, 1950 - January 1, 1953

FRANK M. SPRATLIN, Atlanta, Georgia, State-at-Large
January 1, 1946 - January 1, 1953

CAREY WILLIAMS, Greensboro, Georgia, State-at-Large
January 10, 1949 - January 1, 1955

* * JOHN McDONOUGH, Rome, Georgia, State-at-Large
January 1, 1950 - January 1, 1957

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January 10, 1949 - January 1, 1955

H. L. WINGATE, Macon, Georgia, Second District
January 1, 1947 - January 1, 1954

CASON J. CALLAWAY, Hamilton, Georgia, Third District
January 1, 1951 - January 1, 1958

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January 10, 1949 - January 1, 1956

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January 1, 1947 - January 1, 1954

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January 7, 1950 - January 1, 1957

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January 1, 1945 - January 1, 1952

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January 1, 1945 - January 1, 1952

ROY V. HARRIS, Augusta, Georgia, Tenth District
January 1, 1951 - January 1, 1958

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* Chairman

* * Vice Chairman

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ROGER SHEPPARD HOWELL, B.S. in M.E., M.S. (Georgia Institute of Technology), *Director, Engineering Extension Division*

SOUTHERN TECHNICAL INSTITUTE
ADMINISTRATION AND FACULTY



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Director

LOY Y. BRYANT, A.B., M.A. Registrar

GEORGE L. CARROLL, A.B. Head of Humanities Division

GEORGE L. CRAWFORD, B.S., M.S. Head of Technical Division

CYRUS, V. MADDOX, A.B. . Head of Science Division, Dean of Students

CLARENCE A. ARNTSON, B.S. Mechanical

JACK CLARK, B.S., M.S. in A.E. Physics

JESSE J. DEFORE, A.B. Physics

FRANK L. BULLARD, B.S., M.S. Physics, Civil

CHARLES R. FREEMAN, B.S., M.S. Mechanical

| | |
|--|-------------------------------------|
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| CHARLES T. HOLLADAY, B.S.C.E. | <i>Civil</i> |
| LEONARD L. HORNER, B.S.E.E. | <i>Electrical</i> |
| PAUL R. LEWIS, A.B., M.A. | <i>Mathematics</i> |
| WILLIS F. LEWIS, M.E. | <i>Gas Fuel</i> |
| JOSEPH E. LOCKWOOD, B.S., M.A. | <i>Pattern Making</i> |
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| EDWARD J. MULLER, B.S. | <i>Drafting</i> |
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| LEONARD H. TAYLOR, B.S.M.E. | <i>Heating and Air Conditioning</i> |
| WILTON W. VAUGHN, B.S., B.Arch. | <i>Architecture, Construction</i> |
| RAY L. WILKINSON, A.B. | <i>Mathematics</i> |

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1951-1952

- LAWRENCE V. JOHNSON, *Director*
L. Y. BRYANT, *Registrar*
G. L. CARROLL, *Head of Humanities Division*
G. L. CRAWFORD, *Head of Technical Division*
C. V. MADDOX, *Head of Science Division*
P. R. Lewis, *Head of Mathematics Department*

ADMINISTRATIVE PERSONNEL

- Admissions and Attendance*—L. Y. BRYANT
Dean of Students—C. V. MADDOX
Student Placement—R. L. WILKINSON
Student Regulations—C. V. MADDOX
Administrative Assistant—MRS. M. N. MAVITY
Financial Secretary—MRS. J. S. ANDERSON
Secretary, Veterans Affairs—MISS DORIS WESTBROOK
Placement Secretary and Receptionist—MISS MARY PRICE
Steno-Typist—MRS. VERA L. BERES
Secretary to Superintendent of Buildings and Grounds—MRS. AILEEN
DEMPSEY

GENERAL INFORMATION

The Board of Regents of the University System of Georgia has established a new type of educational program designed to train technicians to supply the industrial needs of Georgia. Careful surveys and information received from the Associated Industries of Georgia reveal that this type of training is urgently needed to assist the industrial development of our state. This new type of program was begun at Chamblee, Georgia, on March 24, 1948. This school is a permanent, full-time, two-year college under the supervision and control of the Georgia Institute of Technology through its Engineering Extension Division.

THE NEED

In the past decade industry has moved South at a constantly increasing rate, changing this traditionally agricultural region into a modern industrial area. Industry itself has been changing—becoming more mechanized, demanding of its workers less physical labor and more skill and technical know-how.

This industrial South is daily demanding more and more skilled technicians who, educationally, stand midway between the high school graduate and the college-degree engineer. The technician will have a knowledge of mathematics, physics, English, mechanical drawing and electricity, and will understand the operation of machines and instruments required in modern industry.

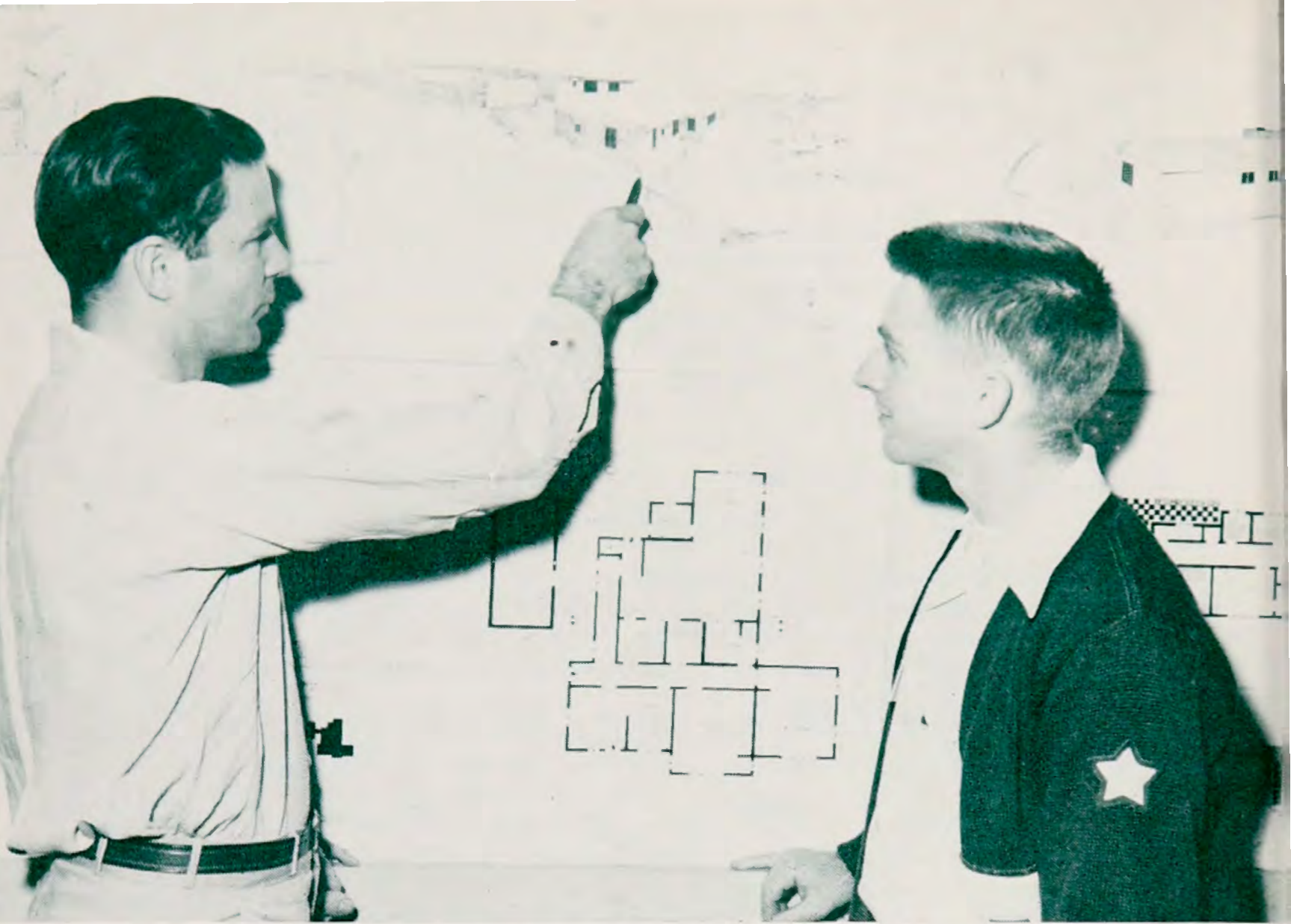
A large percentage of our high-school graduates desire to enter the industrial field but have been unable to find an educational program suitable to their needs, other than in professional engineering schools. Many are unable or unwilling to spend the time and money required for an engineering degree and go directly into industry ill-prepared to take advantage of its opportunities.

TECHNICAL OCCUPATION

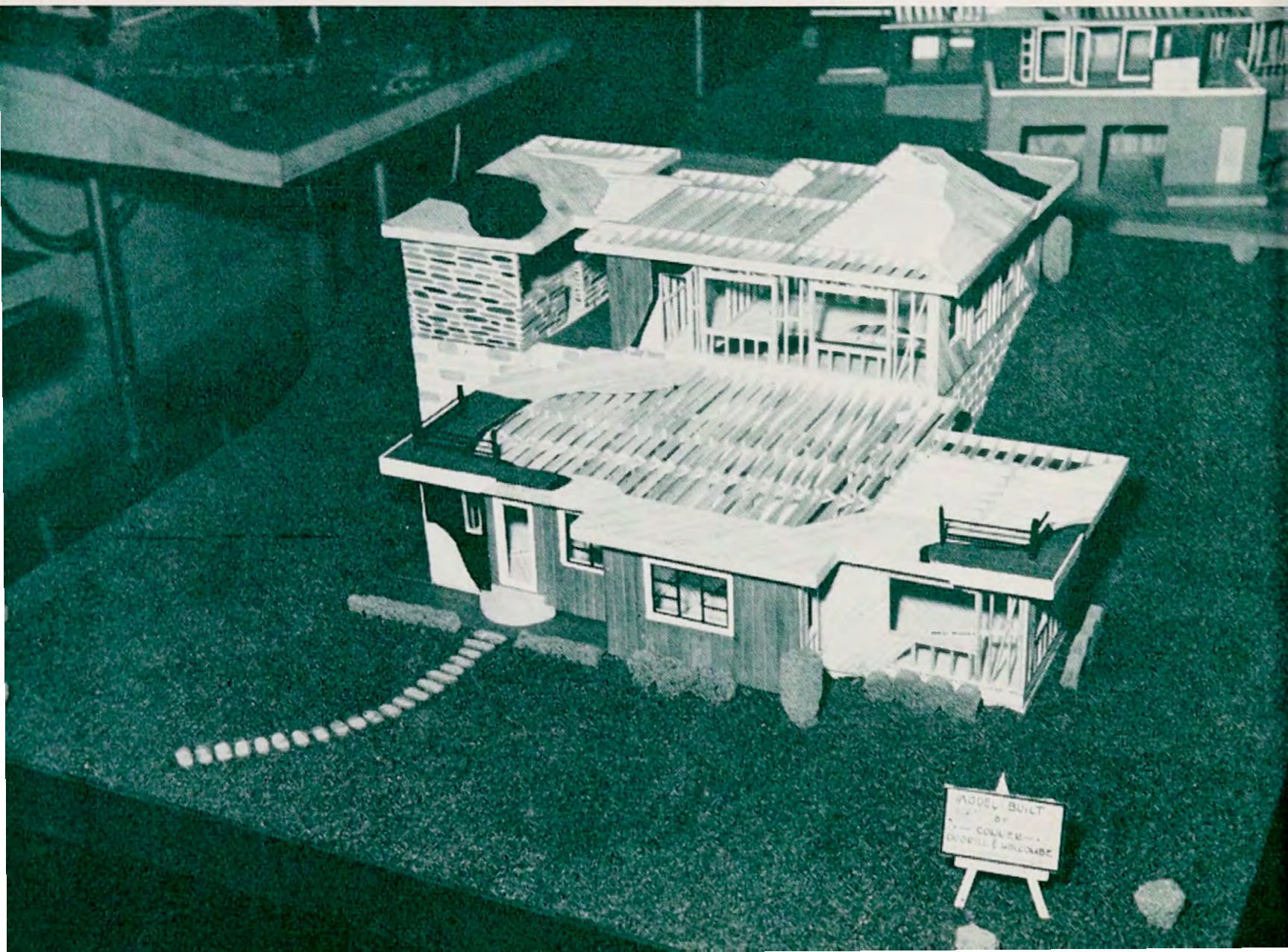
A technical occupation requires skillful application of a high degree of specialized knowledge together with a broad understanding of operational procedures; involves the frequent application of personal judgment; usually deals with a variety of situations; and often requires supervision of the work of others. It offers the opportunity for the worker to develop an ever-increasing personal control over the application of his knowledge to his work and usually requires fewer motor skills than a trade or skilled occupation and less generalized knowledge than a profession.

A technical institute offers an opportunity for those men who are not particularly interested in engineering research but who are interested in applied engineering. The technician serves on the job in building the factories, dams, and bridges, or in operating the factories and power plants, or in sales, services, and contracting of all kinds.

The technician is trained to take the plans of the engineer and by the coordination of men, materials, and machines produce the finished product. To accomplish this he will require a knowledge of basic engineering principles, specialized technical know-how in his field of work, industrial economics, and personnel management.



Southern Tech Offers Study of Design and Theory and Practical Application.



PLACE AND FUNCTION OF A TECHNICAL INSTITUTE

A technical institute operates in one of the most important areas of education. As defined by the Technical Institute Committee of Engineers' Council for Professional Development:

"Technical institute programs are intermediate between the high school and vocational school on one hand and the engineering college on the other . . . The purpose is to prepare individuals for positions auxiliary to but not in the field of professional engineering. Curricula are essentially technological in nature, based upon principles of science, require the use of mathematics beyond high school and emphasize rational processes rather than rules of practice. Curricula are briefer, more intensive, and more specific in purpose than collegiate engineering curricula, though they lie in the same general fields of industry and engineering. Their aim is to prepare individuals for specific technical positions or lines of activity rather than for broad sectors of engineering practice. Training for artisanship is not included within the scope of education of technical institute type."

In the April, 1944, report of the Subcommittee on Technical Institutes of Engineers' Council for Professional Development, it is stated:

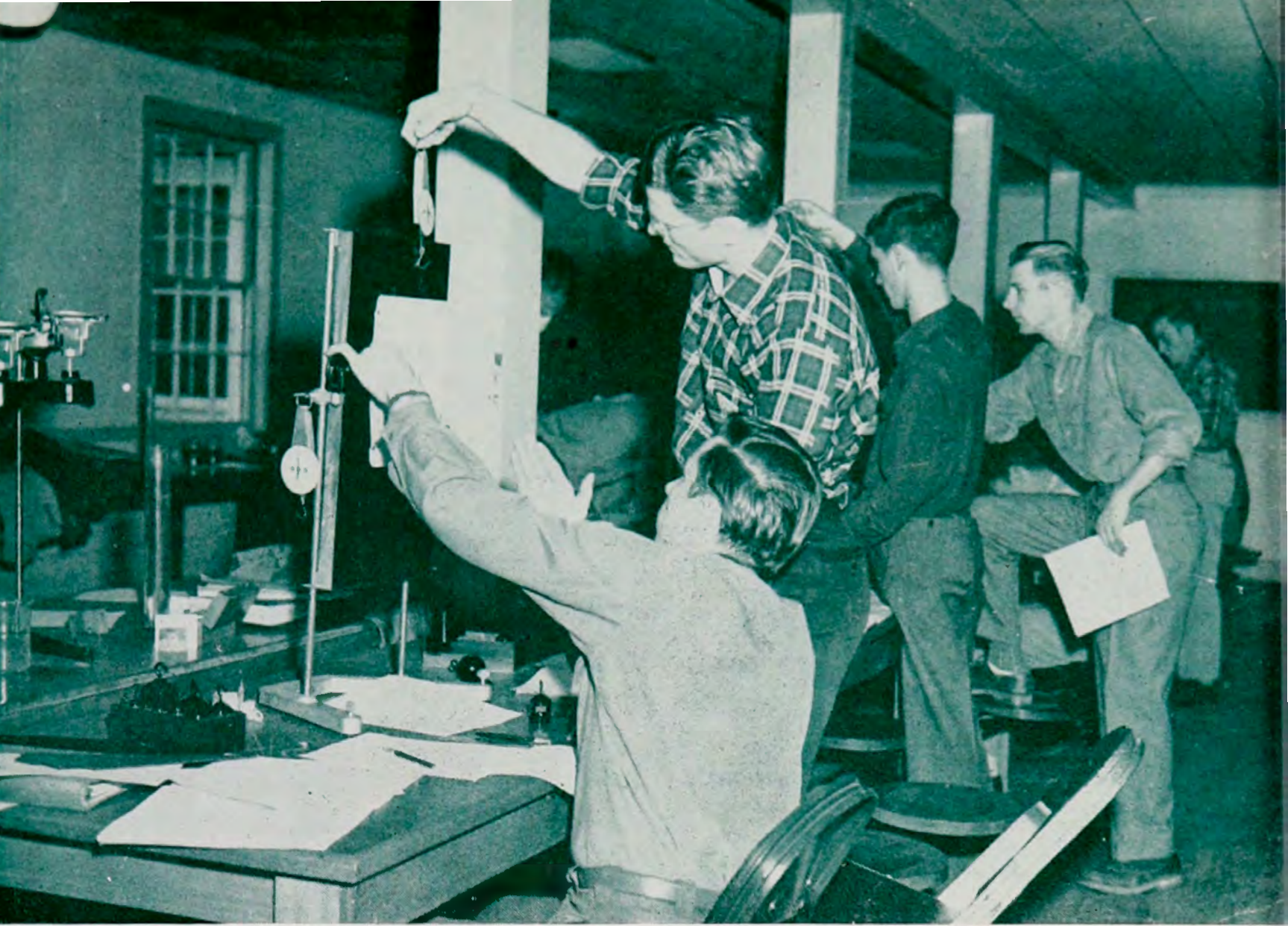
"A number of independent studies of technical institute education have disclosed that industry needs and can advantageously employ at least three times as many technical institute graduates as they can four-year engineering college graduates. Since the output of the technical institutes falls short of this number and the needs of industries must be served, many engineering graduates are employed for positions requiring less extensive and less fundamental training than that provided by the degree conferring college. This is a waste both of educational facilities and of young people."

Southern Technical Institute offers terminal courses of 18 months that prepare its graduates for immediate gainful employment in positions supplementary to those of professional engineering. Many of its graduates who enter industry as technicians or engineering aides reach full engineering positions after further part-time study and experience.

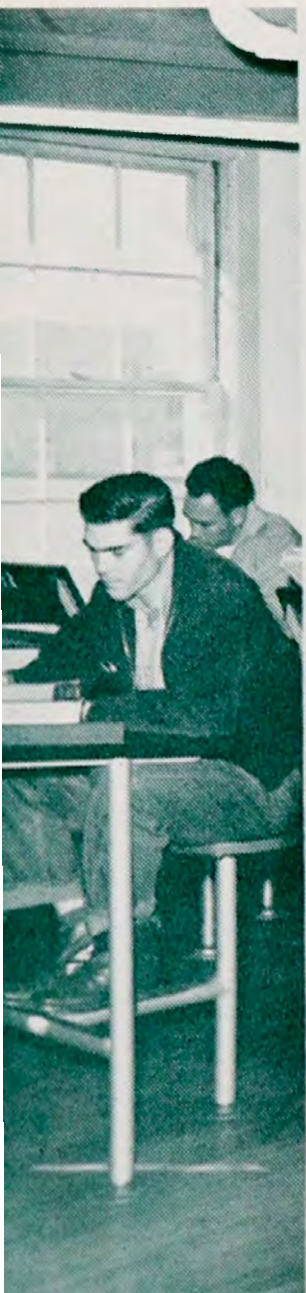
The courses are designed to train men for specific duties in specialized fields of engineering. Each course consists of a selection and arrangement of subjects to accomplish this purpose. Changes and substitutions, other than electives, cannot be permitted.

Because of this, the subjects may not fit into the study programs of other colleges or universities; and consequently no guarantee can be given that credits earned here may be accepted elsewhere. In fact, many institutions now grant advanced standing to a student only upon ability as shown by written examination.

It is not the desire of Southern Tech that a student repeat a subject with which he is already familiar, and proper credit will be given for work completed satisfactorily elsewhere. Each student's previous training and experience are considered in arranging his training program.



Drawing, English, Mathematics, and Physics Are Basic to All Curricula



VETERANS PROGRAM

Congress has passed two bills and amendments which specifically affect college training of the discharged service man. One of these bills (Public Law 16), as amended, provides for the rehabilitation and training of disabled veterans. The subsistence allowance under this bill is \$105 per month for a single man, \$115 for a man with a dependent, plus \$10 for the first child, \$7 for each additional child, and \$10 for a dependent parent. Veterans who seek the benefits of this bill must apply directly to the nearest Veterans Administration Office. The other bill (Public Law 346), as amended, is the so-called "G.I. Bill of Rights," which basically provides that any veteran who can meet certain requirements may receive a minimum of one year's training at government expense. In addition to paying the cost of tuition, books and supplies, the government will make a monthly allowance for subsistence of \$75; if the veteran is married the allowance is \$105 or \$120 if more than one dependent. For veterans who have been in the service for more than three months, the minimum training of one year may be extended by as many months as the veteran has served, up to a maximum of 48 months of training. Any veteran, regardless of age, who has served ninety days or more in any branch of the services exclusive of the Army and Navy College Training Programs and who has received an honorable discharge is automatically eligible for the school or college program.

VETERAN STUDENTS should have sufficient funds to sustain themselves for two months in order to provide for any delay which may be experienced in receiving their first subsistence checks from the Veterans Administration.

OUT-OF-STATE STUDENTS should write or wire to the VA Regional Office which has their files and request that their files be transferred immediately to the VA Regional Office in Atlanta, Georgia. Include your Georgia address in this letter or wire.

YOUR ATLANTA ADDRESS must be given to the Registrar upon registration. This will prevent an unnecessary delay in the receipt of your first subsistence check.

VETERANS desiring admission to the Southern Technical Institute may receive additional information by writing or calling the Southern Technical Institute (Atlanta No. 21-3164, Chamblee No. 3164), Chamblee, Georgia. There is always someone at Southern Tech to advise veterans.

THE VETERANS ADMINISTRATION is also represented on the campus at the Georgia Institute of Technology by training officers, contact officers, and a guidance center.

Veterans training under Public Law 346 will be assisted by the training officer in Room 204, Knowles Building. Veterans training under Public Law 16 will be assisted by the training officer in the VA Guidance Center. Veterans training under Public Law 16 are required to report to the training officer at the Guidance Center each quarter.

A contact officer at the Guidance Center will answer questions regarding pensions, National Service Life Insurance, and loans.

The Guidance Center at the Georgia Institute of Technology is located on Ponce de Leon near the corner of Ponce de Leon and Cherry Street.

TUITION AND FEES

| | Matriculation fee per quarter | Tuition fee per quarter | Medical fee per quarter | Student Activity fee per quarter | Total fees per quarter | Total fees per academic year |
|-----------------------------|-------------------------------------|-------------------------------|-------------------------------|---|------------------------------|---------------------------------------|
| Residents of Georgia | \$81.50 | ----- | \$3.50 | \$5.00 | \$ 90.00 | \$270.00 |
| Non-residents of Georgia | 81.50 | \$75.00 | 3.50 | 5.00 | 165.00 | 495.00 |

NOTE: (a) Matriculation, tuition, student activity, and medical fees of veterans enrolled under PL 16 and PL346 are paid by the Veterans Administration in accordance with the terms of those laws.

(b) An extra fee may be charged in special courses.

(c) A deposit of ten dollars (\$10) is required of each accepted applicant for admission as evidence of good faith within two weeks after the Certificate of Acceptance has been issued. After enrollment this deposit will be credited to the student's fee account. A veteran enrollee may submit his Certificate of Eligibility rather than make the ten dollars deposit. An accepted applicant who has deposited ten dollars and decides not to enter may receive a refund by application to the Assistant Director not later than the opening date of the term for which the applicant has been accepted.

SUMMARY OF EXPENSES

(Estimated for Academic Year)

Regular Students (3 quarters or 9 months)

| | Resident of Georgia | Non-Resident of Georgia |
|--|------------------------|----------------------------|
| Matriculation, tuition, and other fees | \$270.00 | \$ 495.00 |
| Board, room, and laundry | 550.00 | 550.00 |
| Books and equipment | 80.00 | 80.00 |

In order to provide boarding students of Southern Technical Institute with the best quality food at the lowest possible price, board and room are sold only as a unit. For the academic quarter the cost is \$150.00, which includes a dormitory room and three meals a day except Sundays. This cost may be paid in monthly installments and may vary slightly according to the cost of food.

The rates for fees, board, and room are subject to change at the end of any quarter.

OTHER FEES

Each member of the senior class must pay a diploma fee of \$5.00 before graduating.

Examinations at other than the regular examination times will be granted in exceptional cases only and by faculty action. A fee of \$2.00 will be charged in all such cases.

BOOKS AND SUPPLIES

The student should set aside \$20.00 to \$25.00 a quarter for books, notebooks, pencils, and other incidentals.

LATE REGISTRATION

A late registration fee of \$3.00 for the first day and \$1.00 for the second and third days, the total amount not to exceed \$5.00, will be charged. Exceptions to above will be made for proved emergencies or for sickness certified by doctor's statements.

REFUND OF FEES

Refunds of tuition and other educational fees may be made only upon written application for withdrawal. Student activity and medical fees are not refundable.

Students who formally withdraw within one week following the scheduled registration date are entitled to a refund of 80% of the fees paid for that quarter.

Students who formally withdraw during the period between one and two weeks after the scheduled registration date are entitled to a refund of 60% of the fees paid for that quarter.

Students who formally withdraw during the period between two and three weeks after the scheduled registration date are entitled to a refund of 40% of the fees paid for that quarter.

Students who formally withdraw during the period between three and four weeks after the scheduled registration date are entitled to a refund of 20% of the fees paid for that quarter.

Students who withdraw after a period of four weeks has elapsed from the scheduled registration date will be entitled to no refund of any part of fees paid for that quarter.

REFUND OF ROOM AND BOARD CHARGES

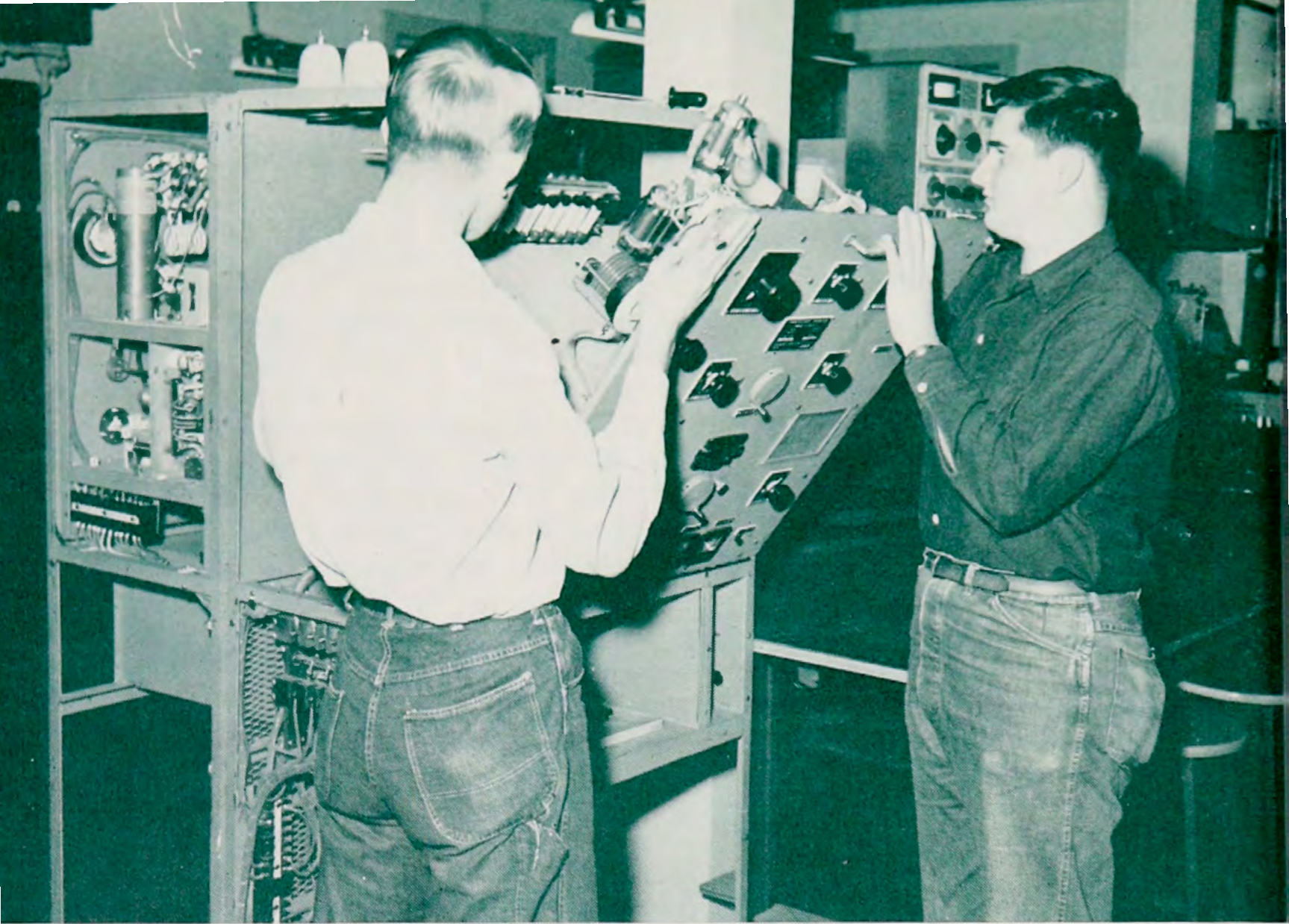
Refunds on room and board charges will be made only if the student formally withdraws from school and only in accordance with the above schedule for refund of fees.

Students who are expelled from school will receive no refunds of their fees, or of room and board.

LEGAL RESIDENCE

"To qualify for Georgia tuition the student's parents must be legal and actual residents of Georgia." Legal residence is more fully defined by Section 32 of the Acts of the Georgia Legislature of 1912, which reads:

"BE IT ENACTED—That the non-resident students of the Georgia Institute of Technology who are required to pay tuition as non-residents, shall be those who reside without the limits of the State at the time when they matriculate in said institution. No student who matriculates as a non-resident shall afterwards be entitled to the benefit of resident tuition simply from the fact that he has elected to make Georgia his domicile. Any such non-resident shall be entitled to the benefits and privileges of the student as to tuition, only when the family, consisting of the parents or guardians of said non-resident student, shall remove to the State of Georgia with the intention of becoming domiciled therein." (Georgia Code of 1933, Section 32-103; note reference to the Act of 1912)



Demonstrations, Laboratory Experiments, and Shop Training Supplement
All Courses of Study



AVAILABLE SCHOLARSHIPS

Four annual William Pratt Heath—Coca-Cola Company scholarships of \$225.00 each were permanently established in the fall of 1950.

Southern Technical Institute has been selected by the gas fuel industry as the training headquarters for providing an adequate reservoir of trained gas fuel technicians. This is the only school in the nation to offer a two-year course in Gas Fuel Technology.

Twenty-nine Gas Fuel Scholarships paying all tuition and fees for eighteen months were made available in the fall of 1950. The industry hopes to provide additional scholarships for the 1951-52 school term.

The following firms contributed the twenty-nine scholarships for the 1950-51 term:

DONORS

Georgia Donors

Atlanta Gas Light Company
Automatic Gas Company of Columbus, Inc.
Charles S. Martin Distributing Company, Inc., Atlanta
Community Gas Company, Tucker
Economy Gas and Appliance Company, Montezuma
Gas Equipment Supply Company, Atlanta
Georgia Automatic Gas Company, Atlanta
Georgia Distributors, Inc., Atlanta
Georgia LP Gas Association, Griffin
Hopkins Equipment Company, Atlanta
Horne-Wilson, Inc., Atlanta
Noland Company, Atlanta
Rumbold and Company, Inc., Atlanta
Southern Gas Corporation, Atlanta

Out-of-State Donors

Carolina Butane Gas Company, Inc., Columbia, S. C.
Delta Tank Manufacturing Company, Inc., Baton Rouge, La.
The Weatherhead Company, Cleveland, Ohio
Butane Gas of Mississippi and Alabama, Tupelo, Miss.
The Bastian-Blessing Company, Chicago, Ill.
The Dri-Gas Corporation, Chicago, Ill.
The Parlett Gas Company, Waldorf, Maryland
Serval, Inc., Evansville, Indiana

Prospective students may secure further information about scholarships and scholarship applications by writing or calling the Registrar.

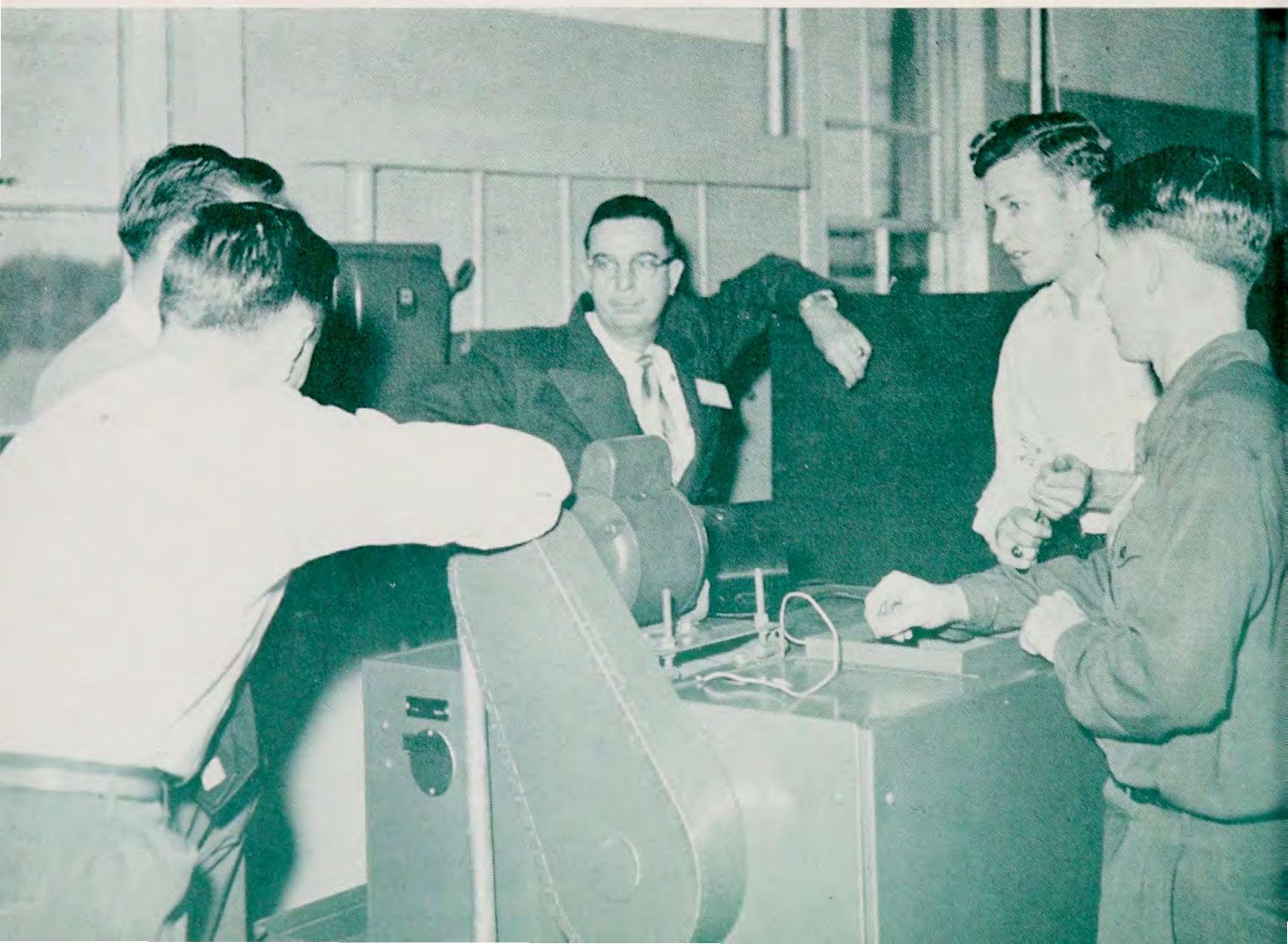
PART-TIME JOBS

There are fifteen to twenty campus jobs available to qualified students who need extra money to defray school expenses. Information about these jobs may be secured from the head of the department in which the student is enrolled.

Many students have been able to secure off-campus work in the afternoons and on week-ends. Scheduling work off the campus depends upon the student's class schedule, which will vary from quarter to quarter.



Southern Tech Students Have Many Opportunities to Meet and Talk Shop with Nation's Leading Industrialists



ENTRANCE REQUIREMENTS

Requirement for entrance: Graduation from an accredited high school, or the equivalent.

Students may be admitted with advanced standing

1. By transfer of credits from other technical institutes or colleges or universities.
2. By evaluation of previous work or vocational experience.

A transcript of credits must be submitted not later than the end of the first week.

GRADUATION

A student is eligible for graduation upon the satisfactory completion of the required number of hours specified by the curriculum of the course in which he is specializing.

Southern Tech awards a diploma for successful completion of a required course of study. A technician's diploma is awarded to each student who satisfactorily completes the program of study for his chosen field as outlined in this catalogue.

ELECTIVES

With special permission of his faculty advisor, a student may choose as electives subjects from any course of study taught at Southern Tech. However, his quarterly study load cannot exceed 21 hours. If, for example, the required work in the student's own field in any quarter totaled 18 hours, he could choose a three-hour elective to make his study load the maximum 21 hours.

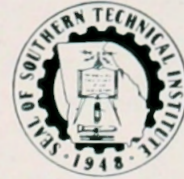
No classes will be scheduled in the first, second, or third quarters with an enrollment less than twelve. No classes will be scheduled in the fourth, fifth, or sixth quarters with an enrollment less than ten.

RULES AND REGULATIONS

Every student is obligated to become thoroughly acquainted with "Student Rules and Regulations," a pamphlet placed into his hands on Registration Day and covering attendance, grades, point averages, conduct, withdrawal from school, activities, etc.

Southern Technical Institute

Chamblee



Georgia

This Certifies That

Maris Clark McMullen, Jr.

having satisfactorily completed the technician's course of study authorized by the Board of Regents of the University System of Georgia and prescribed by the Georgia Institute of Technology for the Southern Technical Institute, is hereby granted this

Diploma

in

Electrical Technology

Given under our hands, this ninth day of September, 1950

Walter R. Taylor
President, Georgia Institute of Technology

L. V. Johnson
Director, Southern Technical Institute

R. S. Maxwell
Director, Engineering Extension Division

L. Y. Bryant
Registrar, Southern Technical Institute

SOUTHERN TECH FACILITIES

Buildings and Equipment

The Southern Technical Institute is located on a one million, five hundred thousand dollar campus at the Atlanta Naval Air Station. Two large buildings formerly used as officers' quarters are now used as student dormitories. Three large buildings house the shops and laboratories and another building serves as the main classroom building, although all buildings contain some classrooms. The Administration building houses all the administration offices, the book store, library, post office, and several classrooms. The Dining Hall and Snack Bar are completely equipped and adequately staffed. The entire area is served by a large, modern power plant.

Library

The library has a small but choice selection of fiction, biography, and other non-fiction, technical reference books, and general reference books. Newspapers, good popular magazines, and technical magazines are also provided.

On the Campus Facilities

The administration of Southern Technical Institute wishes to make available the best service possible in order that all students may have the advantage of a profitable course of instruction, and also enjoy the time spent in college. Campus facilities include a Post Office, Book Store, Library, a well-staffed-and-equipped Dining Hall and Snack Bar, and two fine Dormitories. Regular city transportation service joins our campus with any part of Atlanta. Other accommodations and conveniences are being provided to meet the needs of our constantly increasing student body.

Room Furnishings

Each dormitory is furnished with single Hollywood type beds with innerspring mattress, dresser, study table, chairs, locked closets and a small locker space for luggage. The student will have to provide bed linen, blankets, towels and any other personal items that he may desire. Dormitory lights are of the ceiling type.

PLACEMENT SERVICE

The Placement Service of Southern Technical Institute and of the Georgia Institute of Technology is available to all students graduating from Southern Technical Institute. The emphasis is directed toward placing students in their last quarter, but the service is available any time after graduation. This function of the placement service is to guide and direct the student in obtaining the job most suitable for his individual abilities, likes, and dislikes.

This service is in the form of maintaining active contact with approximately 4800 national concerns; keeping available for the students informative booklets, brochures, and industrial directories; arranging group and individual job interviews; and giving advice to the prospective graduate on any phase of job seeking.

The placement staff consists of a part-time secretary and two regular faculty members. Their services are available at regularly scheduled hours.

ADVISORY COUNSELOR

All students registered or enrolled at Southern Technical Institute will have the opportunity of consulting with a competent advisor about any problems which may arise. Specialists of Southern Technical Institute act as advisors in their particular fields.



Placement Director R. L. Wilkinson Confers with Senior Ready to Seek Employment.

Course Advisors Are Ready at All Times to Help Students with Their Problems.



EXTRACURRICULAR ACTIVITIES

The Technician

Technician's Log

Athletics

Honor Society

Student Council

Campus Clubs



Officials of the Southern Technical Institute believe so strongly in the benefits of extracurricular activities that they urge every student to participate in them. These student activities are most helpful in developing good health, the social graces, well-rounded personalities, and dependable leadership. They offer the student wholesome diversion from classroom, shop, and laboratory, and give him opportunities for creative self-expression. They build school spirit, keep it buoyant, and serve to unify administration, instructors, and students into one enthusiastic, loyal group. The Southern Technical Institute sponsors, therefore, an athletic program, a school paper, an annual, social events, and worthwhile student organizations.

PUBLICATIONS

Students who are interested in publications may become members of the staffs of the student newspaper and the yearbook. *The Technician*, a monthly newspaper, and the *Technician's Log*, a yearbook published each June, are sponsored and produced by students. These publications offer excellent opportunities for writers, cartoonists, and advertising salesmen to acquire valuable experience and to extend their interests into activities outside their courses of study.

Staff members who meet the requirements of publications work receive special recognition on Awards Day near the end of the spring quarter, when keys, trophies, letters, and other awards are presented to students who have been outstanding in extracurricular activities.

THE Technician



A Unit of Georgia Tech

Vol. III

Southern Technical Institute, Chamblee, Ga., January, 1951

No. 5

Hugh Edwards Is Nominated Editor Of School Paper

New Members Added to Fill Jobs of Valuable Writers Who Graduated

Hugh Edwards, Gas Fuel student with an enviable five-quarter point average of 3.40, was recently appointed the new editor-in-chief of *The Technician*, Southern Tech's school paper. He will find a big job ahead of him in filling the shoes of Tom Thrasher, recent editor lost through graduation.

Hugh is 27 years old and is from Louisville, Ga. Three and one half of those 27 were spent in the Naval Air Corps during the war. Although many do not know it, "Red" is the holder of the Distinguished Flying Cross.

Old members of *The Technician* staff welcomed Frank Allen, J. H. Smoak, W. D. McGee, and A. W. Edwards into their fold at the beginning of this quarter. Also a new member on the staff is Bill Dyer, replacing Edwards as sports editor. Tom Nichols, who has worked on the staff before but found it quit for a quarter, is



Husband-Wife Team in E & R
Eloise and Bill Spaeth

Bill Spaeth's Interest In Radio Lures Wife to STI

By JAY EATON

France had the Curies, Industrial Engineering had the Gilbreths, Hollywood has the Colemans, and now STI has the Spaeths. They are a husband-wife team who are enrolled

in the area of electronics. Bill's interest in radio led to his appointment as editor of the school paper. He was next to Eloise's, he was to see her because her

Southern Tech Opens Winter Quarter With 332 Enrolled

Building Construction Leads With 73; Non-Vets Outnumber Vets 172 to 160

Southern Technical Institute began the winter quarter of 1951 on January 2 with a total enrollment of 332 students, of whom 26 are attending STI for the first time. There was no change in the teaching staff from the fall quarter.

One important change in the calendar for the winter quarter was made. It concerns the rule on dropping a subject from one's schedule without penalty. The previous rule gave a student three weeks from the beginning of the quarter to drop a subject without penalty. The new ruling extends this period to five weeks.

Two Co-eds Present

For the second time since STI opened back in 1948 the non-veterans outnumbered the veterans, 172 to 160. Two of this total are co-eds. Miss Elizabeth Melton, who was en-

rolled in the Building Construction Department last quarter, has returned this quarter. The new co-ed is Mrs. Maggie Eloise Spaeth, member of the Electronics and Radio Department and wife of Bill Spaeth, also an E & R student. Mrs. Spaeth comes from Edison, Ga.

The Building Construction Department leads this quarter in the number of students in the department with a total of 73. Mechanical Technology, with 56, is second. The other departments follow in this order: Electronics and Radio, 44; Gas Fuel, 39; Electrical, 37; Industrial, 33; Heating and Air Conditioning, 26; and Civil, 24.

A decrease in the winter quarter's enrollment is attributed to several causes, the major one being the graduation of 36 students at the end of the fall quarter. Uncle Sam sent a few letters also, causing still others to enlist in the branch of service of their choice. Furthermore, the winter quarter's enrollment has never equaled that of the fall quarter because the fall quarter is the recognized beginning of the school year.

New Plan Assures Better Programs

Southern Tech inaugurated its new plan for student-faculty assemblies on Thursday, January 11, with the showing, in the Navy theater, of the color travel film "South America."

79 From Out of State

Winner of ACP All-American Award

The Technician's Log



Joseph W. Rettie, *Editor*
William B. Grant, *Associate Editor*

ATHLETICS

The athletic program has been developed in two separate phases, intramural and intercollegiate. Intramural competition is between departments and includes touch football, basketball, volleyball, tennis, golf, and softball. A trophy is presented to the winning department at the end of the year. An All-Campus team is selected in all the major sports, and each student so honored is awarded a gold medal.

Intercollegiate competition is conducted with schedules in varsity and freshman basketball, tennis, golf, cross-country, baseball, and track. An athlete who earns a letter in an intercollegiate sport is eligible for membership in the Monogram Club. This club has as its purpose the development of sportsmanship and athletics at Southern Technical Institute. One phase of this is in their sponsorship of the intramural program, where the varsity athletes act as department coaches and game officials for all intramural competitions. The club also presents a dance as a climax to the Awards Day program held the last week-end of every May. Graduating seniors and outstanding high school athletes are the guests of honor at this important event on the social calendar.

The physical plant includes a full-size college basketball court in a 1000-seat gymnasium, tennis courts, football field, baseball and softball diamonds, and an outdoor volleyball court. Future plans call for a quarter-mile cinder track around the football field.



Coaches Brief the Champions



Southern Tech
Fields Intercollegiate
Teams in—

Baseball



Basketball



Track

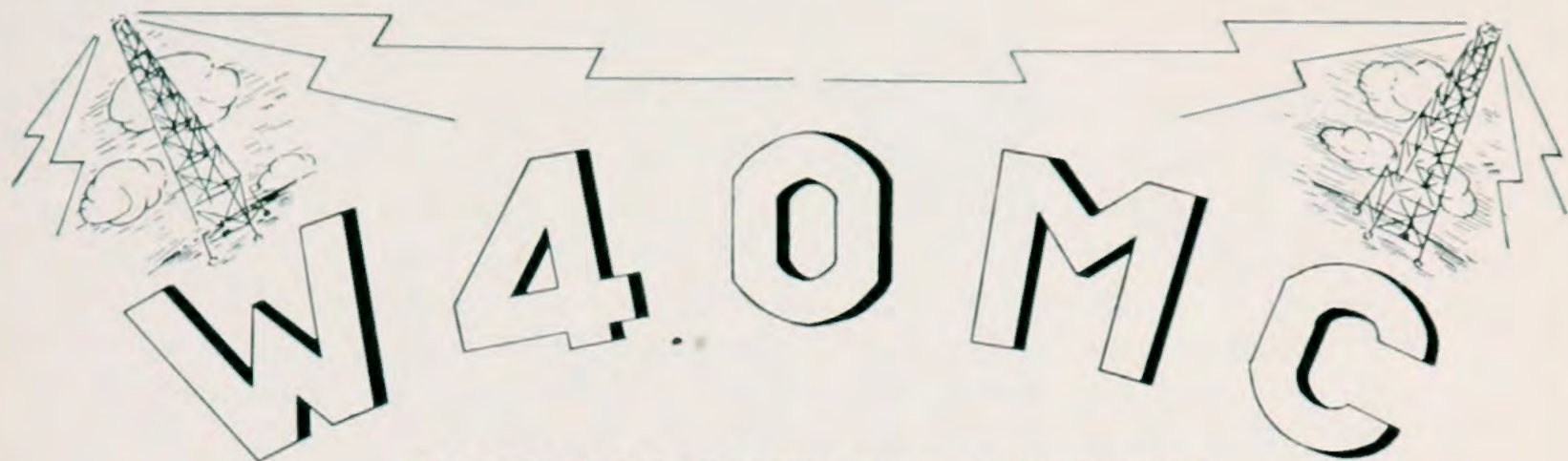
CAMPUS ORGANIZATIONS

Many campus organizations provide both stimulus and opportunity for personal development that is rich and varied. Each student has his departmental club: Industrial's "Iota Tau," Mechanical's "Mech," Heating and Air Conditioning's "Hot Air," Building Construction's "Alpha Beta," Radio and Electronic's "Electrons," the "Electrical," and "Civil." These clubs provide opportunities for participation in creative projects, intramural sports, and such social functions as fish fries, barbecues, picnics, and dances. Visiting speakers inform the club member along his line of interest. Each club has its lounge in which a student may relax between classes.

In addition, a student may join the Photo Club, which has a well-equipped darkroom; the Radio Club, which has its own amateur station; or the Glee Club, which makes much music and many interesting trips. Superior classroom achievement is recognized by membership in the Honor Society, and ability in leadership by membership in the Presidents' Club. A student may participate in joint Student-Faculty Rules and Regulations and Honor Committees, or, elected to represent his department on the Student Council, take part in controlling elections, supervising all student activities, chartering student organizations, and conducting mass meetings.

The Glee Club





SOUTHERN TECHNICAL INSTITUTE



RADIO



CLUB



CHAMBLEE, GEORGIA

QSL Card of W4OMC

W4OMC is the call of the 500-watt radio station operated by the Southern Technical Institute Radio Club. Membership in this club is open to all students of the Southern Technical Institute.

The STI Radio Club



Industrialists Want
Southern Tech
Graduates



waga·tv

CBS-TV Affiliate • Channel 5 • 1032 W. Peachtree St. N.W. Atlanta, Georgia
February 8, 1951

Mr. R. L. Wilkinson,
Placement Director,
Southern Technical Institute,
Chamblee, Ga.

Dear Mr. Wilkinson:

We appreciate your letter of February 2nd regarding graduation of technical students.

We have a few openings for exceptionally well qualified technicians. This does not necessarily mean technicians of long experience. We have found that aptitude is more important than length of experience. First class radio-telephone licenses, while not required for studio work, are desirable.

One of our very best technicians, James Elmo Lee, was a graduate of Southern Technical Institute. If you can send us some more men like this we will be indebted to you.

Sincerely,

Paul B. Cram
Paul B. Cram
Chief Engineer

FBC/I

Watch the World Go By



Commercial Refrigerators

THE WARREN COMPANY, INCORPORATED

Factory and General Offices - 805 MEMORIAL DRIVE, S.E.
DRAWER 1438
ATLANTA 1, GEORGIA

April 2, 1951

Mr. L. V. Johnson, Director
Southern Technical Institute
Chamblee, Georgia

Dear Mr. Johnson:

We have recently employed two of your graduates, one in industrial technology and another in electrical, and I am happy to advise you that both are doing a splendid job.

We, probably like other Atlanta industries, have difficulty in securing foremen, group leaders and men who can take a project and carry it through as it is almost impossible to promote these men from our ranks, because present day positions like foremen, inspectors, laboratory technicians, etc., require more academic and technical training than our plant employees have, even after ten or twelve years experience.

Southern Technical Institute is doing a splendid job and we plan to place at least six of your graduates in our plant every term, to improve the technical knowledge in our working force.

We wish you much continued success.

Yours very truly
Allen P. Livar
Allen P. Livar
Vice-President
In Charge of Manufacturing

"Our Sixty-Eighth Year"

Manufacturers of COMMERCIAL REFRIGERATORS FOR EVERY PURPOSE

GENERAL ELECTRIC
SUPPLY CORPORATION

Mr. Frank A. Stovall, Head,
Electronics & Radio Department,
Southern Technical Institute,
Chamblee, Georgia.

P.O. BOX 1710, 171 HAYNES STREET, S.W.
ATLANTA 1, GA.
October 13, 1950

Dear Mr. Stovall:

In answer to your inquiry it gives us much pleasure to be able to say that the graduates you have supplied us with for our Electronics Department have proven highly satisfactory.

In our opinion, the training they receive at Southern Technical Institute enables them to progress with the Corporation much more rapidly than those who do not have this background. It is our intention to consider your graduates whenever an opening comes and they are available. Each man we have taken comes to us well prepared and with a splendid attitude.

May we take this occasion to thank you for your cooperativeness on all requests we have made of you.

RA Clark-ms

Yours very truly,
Ralluk
DISTRICT MANAGER

Industrialists Want
Southern Tech
Graduates


THE MCPHERSON COMPANY
ENGINEERS - ARCHITECTS

GREENVILLE, SOUTH CAROLINA
November 9, 1950
NJ 50

Southern Technical Institute
Chamblee, Georgia

Attention: Mr. R. L. Wilkinson, Placement Director

Dear Mr. Wilkinson:

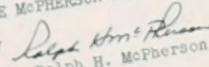
We note in your bulletin of November seventh that you will have two members of your graduating class of December fifteenth finishing in building construction. We assume that this terminology applies to the type of training that was given Tim Wells and Bob Goodman who are now working for us. If so we would greatly appreciate your having these men fill out the application forms two copies of which we are forwarding for this purpose.

We are entirely satisfied with the progress being made by Wells and Goodman and would like to take on other men with similar training.

Thanking you for your usual good cooperation, we are

Sincerely yours,

THE MCPHERSON COMPANY

By 
Ralph H. McPherson

REMcP/sh
Encl.

WRIGHT MACHINERY COMPANY

DURHAM, NORTH CAROLINA
SUBSIDIARY OF THE SPERRY CORPORATION

September 19, 1950

Mr. Frank A. Stovall, Head
Electronics & Radio Department
Southern Technical Institute
Chamblee, Georgia

Dear Mr. Stovall:

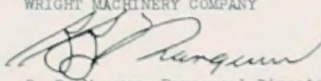
The writer has visited your campus on two occasions and has inspected your facilities for training technicians in the various courses offered. We are frank to say that you have definitely the best equipped shops that we have had the pleasure of seeing. The courses you offer are very thorough and your graduates should obtain all the knowledge necessary for them to carry on in their chosen field.

As you know we have employed four of your graduates in Electronics and these men have done an excellent job for us. They are well trained and have a superior knowledge in the technical field at which they are working. We have recently tried to hire other of your graduates but have been unable to secure them due to the fact that they had accepted jobs other places.

With kindest regards and best wishes for the continued success of your institution.

Yours very truly,

WRIGHT MACHINERY COMPANY



B. B. Mangum, Personnel Director

BEM:fw

PIONEERS SINCE 1925 IN AUTOMATIC PACKAGING MACHINERY

NATIONAL SURETY
Surety Bonds - Insurance



NATIONAL SURETY CORPORATION
NATIONAL SURETY MARINE INSURANCE CORPORATION
INCORPORATED IN GEORGIA
830 FIRST NATIONAL BANK BUILDING, ATLANTA 3, GA. 1 WALNUT ST. BARR

SPENCER B. BREWER, VICE PRESIDENT
April 10, 1951

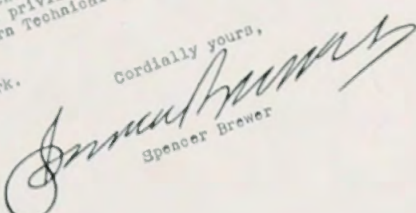
Mr. L. N. Johnson
Director
Southern Technical Institute
Chamblee, Georgia

My dear Mr. Johnson:

It is with pleasure that we tell you that the two young men coming to us as junior engineers in our safety division have proved highly satisfactory in every respect ... there being full indication that their basic training at your place was all that could be expected, and I trust that we shall have the privilege of considering more such young men from Southern Technical Institute in the coming years.

Keep up the good work.

Cordially yours,


Spencer Brewer

33B:fh

**SOUTHERN
TECHNICAL INSTITUTE
COURSES OF STUDY**

BUILDING CONSTRUCTION TECHNOLOGY

CIVIL TECHNOLOGY

ELECTRICAL TECHNOLOGY

ELECTRONIC AND RADIO TECHNOLOGY

GAS FUEL TECHNOLOGY

HEATING AND AIR CONDITIONING TECHNOLOGY

INDUSTRIAL TECHNOLOGY

MECHANICAL TECHNOLOGY

All of these courses are fully accredited by the Engineers' Council for Professional Development except Gas Fuel Technology, which was established so recently that the ECPD has not had an opportunity to evaluate and accredit it.

Curricula and Course Content

The curricula of the various courses are listed on the following pages. A description of each subject may be found following the Mechanical Technology course, listed in alphabetical order as to general subject and classified in numerical order under the general subject head.

The numbers following the subjects may be explained by the following example. T. Phys. 12 (Elec.) 5—3—6 indicates a first quarter subject in Technical Physics meeting five hours per week in class and three hours per week in the laboratory or problem section, making a total of six quarter hours per week scheduled for the subject.

BUILDING CONSTRUCTION

Building Construction Technology is concerned with the design, supervision, and construction of homes, factories, banks, schools, stores, hospitals, and municipal and government projects. The work is at once creative and practical; the student is taught to design, draw plans, and follow through with construction details and methods.

Emphasis is placed on Architectural Technology, which offers such subjects as building specifications and codes, blueprint reading, building design, and costs and estimates. Basic subjects such as physics, mathematics, English, human relations, small business management, general woodwork, technical writing, and public speaking are included.

Successful graduates in this course are presented with many varied job opportunities in architectural and engineering offices and with building contractors and manufacturers of building materials.

A more complete description of each subject is given in the back of this catalogue.

C L T: Class hours Laboratory hours Total quarter hours

| First Quarter | | | |
|-----------------------------|----|----|----|
| | C | L | T |
| Arch. T. 12 (Arch. Hist.) | 3 | 0 | 3 |
| T. Dr. 11 (Tech. Draw. I) | 0 | 6 | 2 |
| T. Eng. 11 (Comp. & Rhet.) | 5 | 0 | 3 |
| T. Math. 11 (Algebra) | 5 | 3 | 6 |
| Mech. T. 37 (Gen. Woodwork) | 0 | 6 | 2 |
| Total | 13 | 15 | 16 |

| Second Quarter | | | |
|-------------------------------|----|----|----|
| | C | L | T |
| Civil T. 21 (Graphic Statics) | 0 | 3 | 1 |
| Civil T. (Elem. Surv.) | 3 | 9 | 6 |
| T. Eng. 21 (Comp. & Rhet.) | 3 | 0 | 3 |
| T. Math. 21 (Trig., Analyt.) | 5 | 0 | 5 |
| T. Phys. 22 (Mechanics) | 5 | 3 | 6 |
| Total | 16 | 15 | 21 |

| Third Quarter | | | |
|---------------------------------|----|----|----|
| | C | L | T |
| Arch. T. 31 (Graphics) | 3 | 9 | 6 |
| Arch. T. 33 (Bldg. Mat.) | 3 | 0 | 3 |
| Ind. T. 12 (Human Relations) | 3 | 0 | 3 |
| Mech. T. 36 (Applied Mech.) | 3 | 0 | 3 |
| T. Phys. 32 (Ht., Sound, Light) | 3 | 3 | 4 |
| Total | 15 | 12 | 19 |

| Fourth Quarter | | | |
|--------------------------------|----|----|----|
| | C | L | T |
| Arch. T. 41 (Bldg. Design I) | 3 | 12 | 7 |
| Arch. T. 54 (Bldg. Equip.) | 3 | 0 | 3 |
| Mech. T. 51 (Strength of Mat.) | 3 | 3 | 4 |
| T. Phys. 12 (Electricity) | 5 | 3 | 6 |
| Total | 14 | 18 | 20 |

| Fifth Quarter | | | |
|--------------------------------|----|----|----|
| | C | L | T |
| Arch. T. 51 (Bldg. Design II) | 3 | 9 | 6 |
| Arch. T. 52 (Wd., Stl. Const.) | 3 | 6 | 5 |
| Arch. T. 55 (Costs, Estimates) | 3 | 3 | 4 |
| T. Eng. 52 (Public Speaking) | 2 | 0 | 2 |
| Ind. T. 51 (Contracts & Spec.) | 3 | 0 | 3 |
| Total | 14 | 18 | 20 |

| Sixth Quarter | | | |
|--------------------------------|----|----|----|
| | C | L | T |
| Arch. T. 61 (Bldg. Design III) | 3 | 9 | 6 |
| Arch. T. 62 (Concrete Const.) | 3 | 6 | 5 |
| T. Eng. 62 (Tech. Writing) | 2 | 0 | 2 |
| Ind. T. 67 (Seminar) | 1 | 0 | 1 |
| Ind. T. 68 (Small Bus. Mgt.) | 3 | 0 | 3 |
| Total | 12 | 15 | 17 |

**POSITIONS HELD BY STI GRADUATES
IN BUILDING CONSTRUCTION**

Junior Architectural Draftsman

Architectural Draftsman

Architectural Draftsman and Estimator

Building Superintendent

Estimator

Architectural Draftsman—Estimator—Job Supervisor

Contractor

Manager Building Supply and Lumber Company

Building Materials Salesman

Building Inspector

Appraiser and Inspector

Store Front Designer

Drawing Is One of the Bases of Building Construction



CIVIL TECHNOLOGY

The general field of Civil Technology is one of the broadest of the technological curricula. It includes many fields which, although not directly Civil Technology subjects, require a knowledge of Civil Technology and the principles of this subject. The civil technician is a versatile person. He is a surveyor and a construction man, not only on buildings but on hydroelectric projects, flood control work, highway and railroad construction, airports, sewerage and water supply systems, locks, dams, tunnels, aqueducts, and similar projects. It is the purpose of this course to qualify the student in any of these various fields so that he can handle the position with a minimum of supervision.

A more complete description of each subject is given in the back of this catalogue.

C L T: Class hours Laboratory hours Total quarter hours

| First Quarter | | | | Second Quarter | | | |
|---------------------------------|----------|---|---|---------------------------------|----------|---|---|
| | C | L | T | | C | L | T |
| T. Dr. 11 (Tech. Draw. I) | 0 | 6 | 2 | Civil T. 21 (Graphic Statics) | 0 | 3 | 1 |
| T. Eng. 11 (Comp. & Rhet.) | 5 | 0 | 3 | Civil T. 32 (Elem. Surv.) | 3 | 9 | 6 |
| Ind. T. 12 (Human Relations) | 3 | 0 | 3 | T. Eng. 21 (Comp. & Rhet.) | 3 | 0 | 3 |
| Ind. T. 51 (Contracts & Spec.) | 3 | 0 | 3 | T. Math. 21 (Trig., Analyt.) | 5 | 0 | 5 |
| T. Math. 11 (Algebra) | 5 | 3 | 6 | T. Phys. 22 (Mechanics) | 5 | 3 | 6 |
| Total | 16—9—17 | | | Total | 16—15—21 | | |
| Third Quarter | | | | Fourth Quarter | | | |
| | C | L | T | | C | L | T |
| Arch. T. 33 (Bldg. Materials) | 3 | 0 | 3 | Civil T. 41 (Route Surv.) | 3 | 6 | 5 |
| Civil T. 43 (Topo. Draw.) | 1 | 3 | 2 | Civil T. 45 (Hydraulics) | 5 | 0 | 5 |
| Civil T. 62 (Land Surv.) | 3 | 6 | 5 | Civil T. 63 (Struc. Draft.) | 0 | 6 | 2 |
| Mech. T. 36 (Applied Mech.) | 3 | 0 | 3 | Mech. T. 51 (Strength of Mat.) | 3 | 3 | 4 |
| T. Phys. 12 (Electricity) | 5 | 3 | 6 | T. Phys. 32 (Ht., Sound, Light) | 3 | 3 | 4 |
| Total | 15—12—19 | | | Total | 14—18—20 | | |
| Fifth Quarter | | | | Sixth Quarter | | | |
| | C | L | T | | C | L | T |
| Arch. T. 52 (Wd., Stl. Constr.) | 3 | 6 | 5 | Arch. T. 62 (Concrete Constr.) | 3 | 6 | 5 |
| Arch. T. 55 (Costs, Estimates) | 3 | 3 | 4 | Civil T. 42 (Highways) | 3 | 0 | 3 |
| Civil T. 64 (Constr. Methods) | 3 | 3 | 4 | Civil T. 44 (W.&S. Plt. Op.) | 3 | 0 | 3 |
| T. Eng. 52 (Public Speaking) | 2 | 0 | 2 | Civil T. 51 (Top. & Con. Sur.) | 2 | 6 | 4 |
| T. Eng. 62 (Tech. Writing) | 2 | 0 | 2 | Ind. T. 67 (Seminar) | 1 | 0 | 1 |
| Total | 13—12—17 | | | Total | 15—12—19 | | |

POSITIONS CIVIL TECHNOLOGY PREPARES FOR

Instrument Man, Recorder, or Party Chief on the following types of jobs: transmission line layout; highway layout; airport construction; canal construction; property surveys; traverse and level parties, with the U. S. Coast and Geodetic Surveys, Army Engineers, Tennessee Valley Authority, the various private construction companies and Consulting Engineering firms.

Assistant to the City Engineer

Assistant to Construction Superintendent on Heavy Construction Jobs, such as, roadway paving and grading; pipe line construction and layout; airport construction; dam and lock construction; canal and aqueduct construction.

Assistant to Professional Civil Engineer

Assistant to Hydraulic Engineer

Cartographer

Topographer

Topographic Draftsman

Structural Draftsman

Concrete Laboratory Technician

Inspector or Estimator on Heavy Construction Jobs

Subdivision Designer

Field Work Plays an Essential Role in the Civil Technician's Training



ELECTRICAL TECHNOLOGY

The course in Electrical Technology is planned to provide (1) general training in mathematics, technical drawing, the sciences on which electrical work is based, and in supervision and personnel relations; (2) specific training in electricity and the application of electrical energy to circuits, direct and alternating current machinery, industrial control equipment, and industrial electronic apparatus.

Graduates of the electrical course should be able to fill responsible positions as electrical draftsmen, production and maintenance technicians, laboratory and research technicians, project and control technicians, power-house operators, and electrical equipment sales and service technicians.

A more complete description of each subject is given in the back of this catalogue.

| C L T: Class hours | Laboratory hours | Total quarter hours |
|--|------------------|---------------------|
| First Quarter | | |
| | C L T | |
| T. Dr. 11 (Tech. Draw. I) _____ | 0—6—2 | |
| T. Eng. 11 (Comp. & Rhet.) _____ | 5—0—3 | |
| T. Math. 11 (Algebra) _____ | 5—3—6 | |
| T. Phys. 12 (Electricity) _____ | 5—3—6 | |
| Total _____ | 15—12—17 | |
| Second Quarter | | |
| | C L T | |
| Elec. T. 22 (D.C. Machines) _____ | 5—3—6 | |
| T. Eng. 21 (Comp. & Rhet.) _____ | 3—0—3 | |
| T. Math. 21 (Trig., Analyt.) _____ | 5—0—5 | |
| T. Phys. 22 (Mechanics) _____ | 5—3—6 | |
| Total _____ | 18—6—20 | |
| Third Quarter | | |
| | C L T | |
| Elec. T. 31 (A.C. Circuits) _____ | 5—3—6 | |
| Elec. T. 33 (Vacuum Tubes) _____ | 5—3—6 | |
| T. Math. 31 (Applied Math.) _____ | 5—0—5 | |
| T. Phys. 32 (Ht., Sound, Light) _____ | 3—3—4 | |
| Total _____ | 18—9—21 | |
| Fourth Quarter | | |
| | C L T | |
| Elec. T. 42 (A.C. Machines I) _____ | 5—3—6 | |
| Elec. T. 43 (Illumination) _____ | 2—3—3 | |
| Elec. T. 47 (Telephony) _____ | 3—3—4 | |
| Elec. T. 53 (El. Eq. for Bldg.) _____ | 5—0—5 | |
| Total _____ | 15—9—18 | |
| Fifth Quarter | | |
| | C L T | |
| Elec. T. 51 (Ind. Electronics) _____ | 5—3—6 | |
| Elec. T. 52 (A.C. Machines II) _____ | 5—3—6 | |
| T. Eng. 62 (Tech. Writing) _____ | 2—0—2 | |
| Ind. T. 12 (Human Relations) _____ | 3—0—3 | |
| Ind. T. 51 (Contracts & Spec.) _____ | 3—0—3 | |
| Total _____ | 18—6—20 | |
| Sixth Quarter | | |
| | C L T | |
| Elec. T. 61 (Elec. Power Distr.) _____ | 4—0—4 | |
| Elec. T. 62 (A.C. Machines III) _____ | 5—3—6 | |
| Elec. T. 64 (Seminar) _____ | 1—0—1 | |
| T. Dr. 62 (Elec. Drawing) _____ | 0—6—2 | |
| T. Eng. 52 (Public Speaking) _____ | 2—0—2 | |
| Ind. T. 67 (Seminar) _____ | 1—0—1 | |
| Total _____ | 13—9—16 | |

POSITIONS THAT ELECTRICAL TECHNOLOGY PREPARES FOR

Graduates in Electrical Technology are basically trained for employment in many phases of power and communication work, the following being a partial listing of work offered to Electrical Technicians:

POWER AND LIGHT: electrician, electrician foreman, meter tester, relay tester, testing foreman, substation operator, mainstation operator, draftsman, estimator, inspector.

MANUFACTURING: inspector, tester, testing foreman, inspection foreman, salesman, electrician, electrician foreman, meter testing and calibration.

SALES-SERVICE: counter salesman, outside salesman, price clerk, customer serviceman, electrician, estimator, service manager, manufacturer's agent.

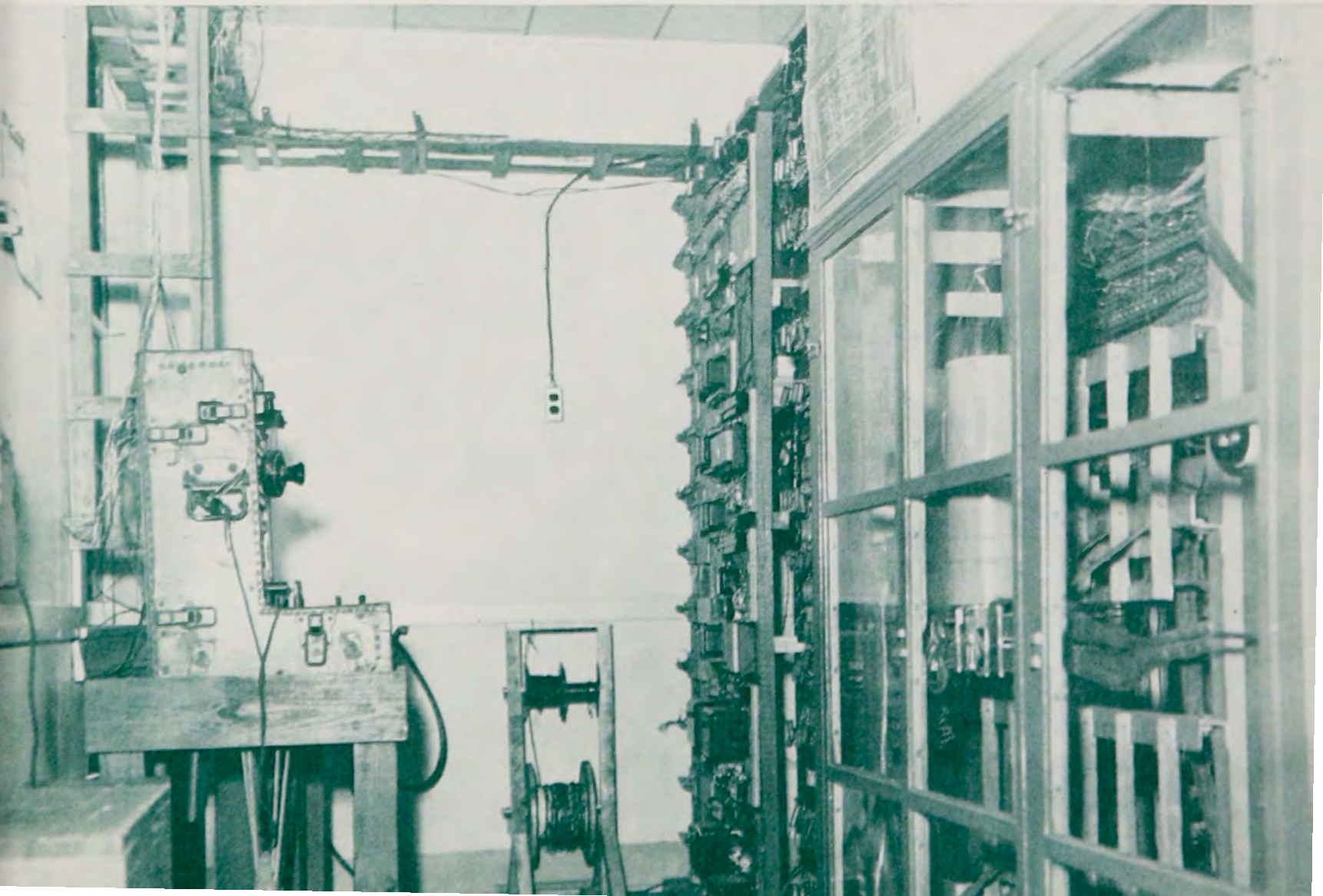
GOVERNMENT: engineering aide, electrician, building superintendent, power plant operator, inspector, draftsman, tester.

CONSTRUCTION: electrician, job foreman, draftsman, estimator.

TELEPHONY: distributing frame man, toll testboard man, wire chief, equipment man, repeater attendant, transmission man, installer, repairman, power plant attendant, cable tester, draftsman, service inspector.

MISCELLANEOUS: electrician, maintenance man, draftsman, railway signal inspector and maintenance man, engineering aide, assistant engineer, power house technicians.

Students Solve Many Electrical Problems in This Telephony Lab



ELECTRONIC AND RADIO TECHNOLOGY

The course in Electronic and Radio Technology is planned to provide (1) general training in mathematics, technical drawing, the sciences on which electronic work is based, and in supervision and personnel relations; (2) specific training in radio, radar, television, industrial electronics, telephony, wave filters, transmission lines, antennas, and radiation.

Graduates of the electronics course should be able to fill responsible positions as electronic equipment sales and service technicians, broadcast and radio technicians, and radar, X-ray, and electronics research technicians.

A more complete description of each subject is given in the back of this catalogue.

C L T: Class hours Laboratory hours Total quarter hours

| First Quarter | | | |
|----------------------------------|----|----|----|
| | C | L | T |
| T. Dr. 11 (Tech. Draw. I) _____ | 0 | 6 | 2 |
| T. Eng. 11 (Comp. & Rhet.) _____ | 5 | 0 | 3 |
| T. Math. 11 (Algebra) _____ | 5 | 3 | 6 |
| T. Phys. 12 (Electricity) _____ | 5 | 3 | 6 |
| Total _____ | 15 | 12 | 17 |

| Second Quarter | | | |
|-------------------------------------|----|---|----|
| | C | L | T |
| Elec. T. 24 (Intro. to Elec.) _____ | 3 | 3 | 4 |
| T. Eng. 21 (Comp. & Rhet.) _____ | 3 | 0 | 3 |
| Ind. T. 12 (Human Relations) _____ | 3 | 0 | 3 |
| T. Math. 21 (Trig., Analyt.) _____ | 5 | 0 | 5 |
| T. Phys. 22 (Mechanics) _____ | 5 | 3 | 6 |
| Total _____ | 19 | 6 | 21 |

| Third Quarter | | | |
|---------------------------------------|----|---|----|
| | C | L | T |
| Elec. T. 31 (A.C. Circuits) _____ | 5 | 3 | 6 |
| Elec. T. 33 (Vacuum Tubes) _____ | 5 | 3 | 6 |
| T. Math. 31 (Applied Math.) _____ | 5 | 0 | 5 |
| T. Phys. 32 (Ht., Sound, Light) _____ | 3 | 3 | 4 |
| Total _____ | 18 | 9 | 21 |

| Fourth Quarter | | | |
|------------------------------------|----|----|----|
| | C | L | T |
| Elec. T. 46 (Radio I) _____ | 5 | 6 | 7 |
| Elec. T. 47 (Telephony) _____ | 3 | 3 | 4 |
| Elec. T. 58 (T. Lines) _____ | 5 | 3 | 6 |
| T. Eng. 52 (Public Speaking) _____ | 2 | 0 | 2 |
| Total _____ | 15 | 12 | 19 |

| Fifth Quarter | | | |
|--------------------------------------|----|----|----|
| | C | L | T |
| Elec. T. 51 (Ind. Electronics) _____ | 5 | 3 | 6 |
| Elec. T. 56 (Radio II) _____ | 5 | 3 | 6 |
| Elec. T. 59 (Spec. Problems) _____ | 2 | 6 | 4 |
| Elec. T. 66 (Antennas) _____ | 3 | 3 | 4 |
| Total _____ | 15 | 15 | 20 |

| Sixth Quarter | | | |
|--------------------------------------|----|----|----|
| | C | L | T |
| Elec. T. 67 (FM & Television) _____ | 5 | 3 | 6 |
| Elec. T. 68 (Microwaves) _____ | 3 | 3 | 4 |
| Elec. T. 69 (Radio Sr. Repair) _____ | 2 | 6 | 4 |
| T. Eng. 62 (Tech. Writing) _____ | 2 | 0 | 2 |
| Ind. T. 67 (Seminar) _____ | 1 | 0 | 1 |
| Total _____ | 13 | 12 | 17 |

PLACEMENT POSSIBILITIES IN ELECTRONICS AND RADIO

Sales-Service Representatives for manufacturers of and dealers in radio, television, radar, X-ray, and all other types of equipment using electronic controls and devices.

Servicemen for all the types of equipment mentioned above.

Radio Distributor Representative

Radio Control Room Operator

Television Field Crewman

Electronics Advertising

Telephone Carrier and Repeater Installation and Repair

F.C.C. Examiner-Plant Inspector

Production Testing of Electronic and Non-Electronic Manufacturing

Patent Office Technician (Electronic)

Civil Service Electronics Inspector

Civil Service Radio Maintenance, Construction

Warehouse (Electronic Equipment) Supervisor

Industrial Insurance Adjuster

**Radar Is Only One of the Many Absorbing Phases of Electronic and Radio
Technology**



GAS FUEL TECHNOLOGY

The course in Gas Fuel Technology is planned to provide an adequate reservoir of trained personnel for the great and fast growing gas industry. STI, with advisory assistance from industry, has worked out a curriculum to prepare a student to go into the gas industry at a technician's level, which is so sorely needed by the industry at this time. That part of the curriculum devoted solely to gas (LP-Gas, natural gas and manufactured gas) is backed up by specialized training in mathematics, English, and physics. In addition, specialized training in supervision and personnel problems is included.

Specific work is presented on the many uses of gas as a fuel, and the required utilization equipment. The shop work has been selected to develop the student's knowledge of all types of problems encountered in the manufacturing of equipment, installation of such equipment and the servicing of it.

Successful graduates of this course are presented with many and varied job opportunities in engineering offices, producers and distributors of gas, manufacturers and distributors of appliances and equipment and in the operations of retail marketers.

A more complete description of each subject is given in the back of this catalogue.

| C | L | T: | Class hours | Laboratory hours | Total quarter hours |
|-----------------------------------|----------|----|-------------|------------------|---------------------|
| <hr/> First Quarter <hr/> | | | | | |
| | C | L | T | | |
| T. Chem. 31 (Gen. Chemistry) | 5 | 0 | 5 | | |
| T. Dr. 11 (Tech. Draw. I) | 0 | 6 | 2 | | |
| Ind. T. 12 (Human Relations) | 3 | 0 | 3 | | |
| T. Math. 11 (Algebra) | 5 | 3 | 6 | | |
| Mech. T. 13 (Gas Survey) | 1 | 0 | 1 | | |
| Total | 14—9—17 | | | | |
| <hr/> Second Quarter <hr/> | | | | | |
| | C | L | T | | |
| Arch. T. 24 (Blueprint Read.) | 3 | 0 | 3 | | |
| T. Dr. 21 (Tech. Draw. II) | 0 | 6 | 2 | | |
| T. Eng. 11 (Comp. & Rhet.) | 5 | 0 | 3 | | |
| T. Math. 21 (Trig., Analyt.) | 5 | 0 | 5 | | |
| T. Phys. 22 (Mechanics) | 5 | 3 | 6 | | |
| Total | 18—9—19 | | | | |
| <hr/> Third Quarter <hr/> | | | | | |
| | C | L | T | | |
| T. Dr. 41 (Machine Sketching) | 0 | 6 | 2 | | |
| T. Eng. 21 (Comp. & Rhet.) | 3 | 0 | 3 | | |
| Ind. T. 32 (Ind. Sales & Pur.) | 3 | 0 | 3 | | |
| Mech. T. 24 (Gen. Metal Shop) | 0 | 6 | 2 | | |
| Mech. T. 38 (Fuels & Burners) | 3 | 0 | 3 | | |
| T. Phys. 32 (Ht., Sound, Light) | 3 | 3 | 4 | | |
| Total | 12—15—17 | | | | |
| <hr/> Fourth Quarter <hr/> | | | | | |
| | C | L | T | | |
| T. Eng. 62 (Tech. Writing) | 2 | 0 | 2 | | |
| Mech. T. 41 (Air Condition. I) | 5 | 3 | 6 | | |
| Mech. T. 48 (Gas Fuels, Burn.) | 3 | 6 | 5 | | |
| T. Phys. 12 (Electricity) | 5 | 3 | 6 | | |
| Total | 15—12—19 | | | | |
| <hr/> Fifth Quarter <hr/> | | | | | |
| | C | L | T | | |
| Elec. T. 32 (Ind. Electricity) | 5 | 3 | 6 | | |
| Ind. T. 67 (Seminar) | 1 | 0 | 1 | | |
| Ind. T. 68 (Small Bus. Mgt.) | 3 | 0 | 3 | | |
| Mech. T. 31 (Gas Safety Stds.) | 3 | 0 | 3 | | |
| Mech. T. 53 (Refrigeration I) | 3 | 3 | 4 | | |
| Mech. T. 57 (Welding) | 0 | 6 | 2 | | |
| Total | 15—12—19 | | | | |
| <hr/> Sixth Quarter <hr/> | | | | | |
| | C | L | T | | |
| T. Eng. 52 (Public Speaking) | 2 | 0 | 2 | | |
| Ind. T. 61 (Ind. Economics) | 5 | 0 | 5 | | |
| Ind. T. 62 (Supv. Training) | 3 | 0 | 3 | | |
| Mech. T. 60 (Gas Fuel Eqpt.) | 5 | 3 | 6 | | |
| Mech. T. 68 (Gen. Sheet Met.) | 0 | 6 | 2 | | |
| Total | 15—9—18 | | | | |

PLACEMENT POSSIBILITIES FOR GAS FUEL TECHNOLOGY GRADUATES

1. Servicing & Installation
 - a. Domestic gas systems & appliances
 - b. Commercial equipment
 - c. Industrial equipment
 - d. Job estimating
2. Sales
 - a. All types of gas equipment
3. Distribution
 - a. Bulk plant construction, operation and maintenance.
 - b. Operation of distributing equipment.
4. Supervision and Management
 - a. Plant foreman
 - b. Service manager
 - c. Training service personnel
 - d. Office manager
 - e. Sales manager
 - f. Purchasing agent
 - g. Technical advisor to dealers

Gas Fuel Students Assemble for a Demonstrated Lecture



HEATING AND AIR CONDITIONING TECHNOLOGY

In the past few years the heating and air conditioning industry has become one of the largest in the country. Already air conditioning is a "must" for homes, offices, hotels, and theaters. New applications of air conditioning and refrigeration theory are announced daily.

The heating and air conditioning course is designed to train technicians to plan, install, operate, and maintain all types of heating, air conditioning and refrigerating equipment. Basic courses in physics, mathematics, mechanical drawing, shop, human relations, technical writing, public speaking, and supervisory training are included.

Successful graduates of the course will have excellent job opportunities leading to responsible positions in the rapidly expanding industry.

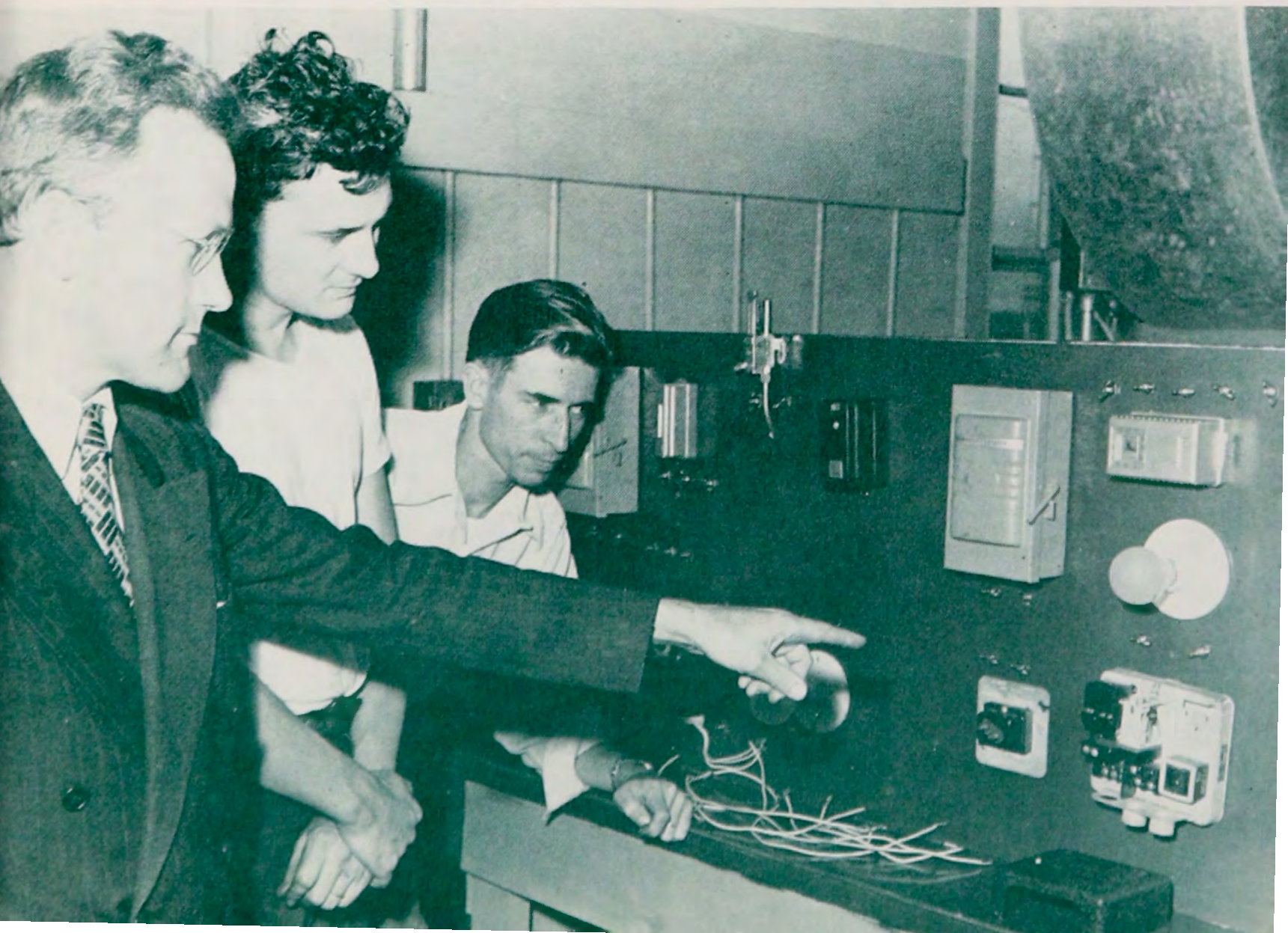
A more complete description of each subject is given in the back of this catalogue.

| C L T: Class hours | Laboratory hours | Total quarter hours |
|---------------------------------|------------------|---------------------|
| First Quarter | | |
| | C L T | |
| T. Chem. 31 (Gen. Chemistry) | 5—0—5 | |
| T. Dr. 11 (Tech. Drawing I) | 0—6—2 | |
| Ind. T. 12 (Human Relations) | 3—0—3 | |
| T. Math. 11 (Algebra) | 5—3—6 | |
| Total | 13—9—16 | |
| Second Quarter | | |
| | C L T | |
| Arch. T. 24 (Blueprint Read.) | 3—0—3 | |
| T. Dr. 21 (Tech. Drawing II) | 0—6—2 | |
| T. Eng. 11 (Comp. & Rhet.) | 5—0—3 | |
| T. Math. 21 (Trig., Analyt.) | 5—0—5 | |
| T. Phys. 22 (Mechanics) | 5—3—6 | |
| Total | 18—9—19 | |
| Third Quarter | | |
| | C L T | |
| T. Dr. 41 (Mach. Sketching) | 0—6—2 | |
| T. Eng. 21 (Comp. & Rhet.) | 3—0—3 | |
| Ind. T. 22 (El. of Ind. Safety) | 3—0—3 | |
| Ind. T. 32 (Ind. Sales & Pur.) | 3—0—3 | |
| Mech. T. 24 (Gen. Metal Shop) | 0—6—2 | |
| Mech. T. 38 (Fuels & Burners) | 3—0—3 | |
| T. Phys. 32 (Ht., Sound, Light) | 3—3—4 | |
| Total | 15—15—20 | |
| Fourth Quarter | | |
| | C L T | |
| T. Eng. 62 (Tech. Writing) | 2—0—2 | |
| Mech. T. 41 (Air Condition. I) | 5—3—6 | |
| Mech. T. 45 Thermodynamics | 3—0—3 | |
| Mech. T. 68 (Gen. Sheet Metal) | 3—0—3 | |
| T. Phys. 12 (Electricity) | 5—3—6 | |
| Total | 18—6—20 | |
| Fifth Quarter | | |
| | C L T | |
| Elec. T. 32 (Ind. Electricity) | 5—3—6 | |
| Mech. T. 52 (Air Condition. II) | 5—6—7 | |
| Mech. T. 53 (Refrigeration I) | 3—3—4 | |
| Mech. T. 69 (Sht. Mtl. Layout) | 0—6—2 | |
| Total | 13—18—19 | |
| Sixth Quarter | | |
| | C L T | |
| T. Eng. 52 (Public Speaking) | 2—0—2 | |
| Ind. T. 51 (Contracts & Specs.) | 3—0—3 | |
| Ind. T. 67 (Seminar) | 1—0—1 | |
| Mech. T. 62 (Air Cond. III) | 5—6—7 | |
| Mech. T. 63 (Refrigeration II) | 3—3—4 | |
| Total | 14—9—17 | |

JOB POSSIBILITIES IN THE HEATING AND AIR CONDITIONING FIELD

Technical Sales Representative (Sales Engineer)
Heating System Designer
Assistant to Consulting Engineer
Heating Contractor
Manager of Service Department Training
Air Conditioning Maintenance and Operations Engineer
Heating Engineer
Ventilating and Air Conditioning Draftsman
Refrigeration Mechanic
Service Engineer
Refrigeration Instructor

**Head of Heating and Air Conditioning Department Explains Functions of
Various Types of Controls**



INDUSTRIAL TECHNOLOGY

The student in Industrial Technology is being trained primarily for supervisory and management positions in the manufacturing industries. However, he is equally well qualified to enter the field of distribution as an industrial salesman. His specialized training in safety technology qualifies him for positions with casualty and fire insurance companies, and the transportation industry. With his training in materials handling, wage incentives, job evaluation, time and motion study, and labor relations, he can find his place with large department stores or distributing companies as a technician in these particular fields. In fact, his training in control of cost, quality, production, and personnel will qualify him for positions in any type of industry.

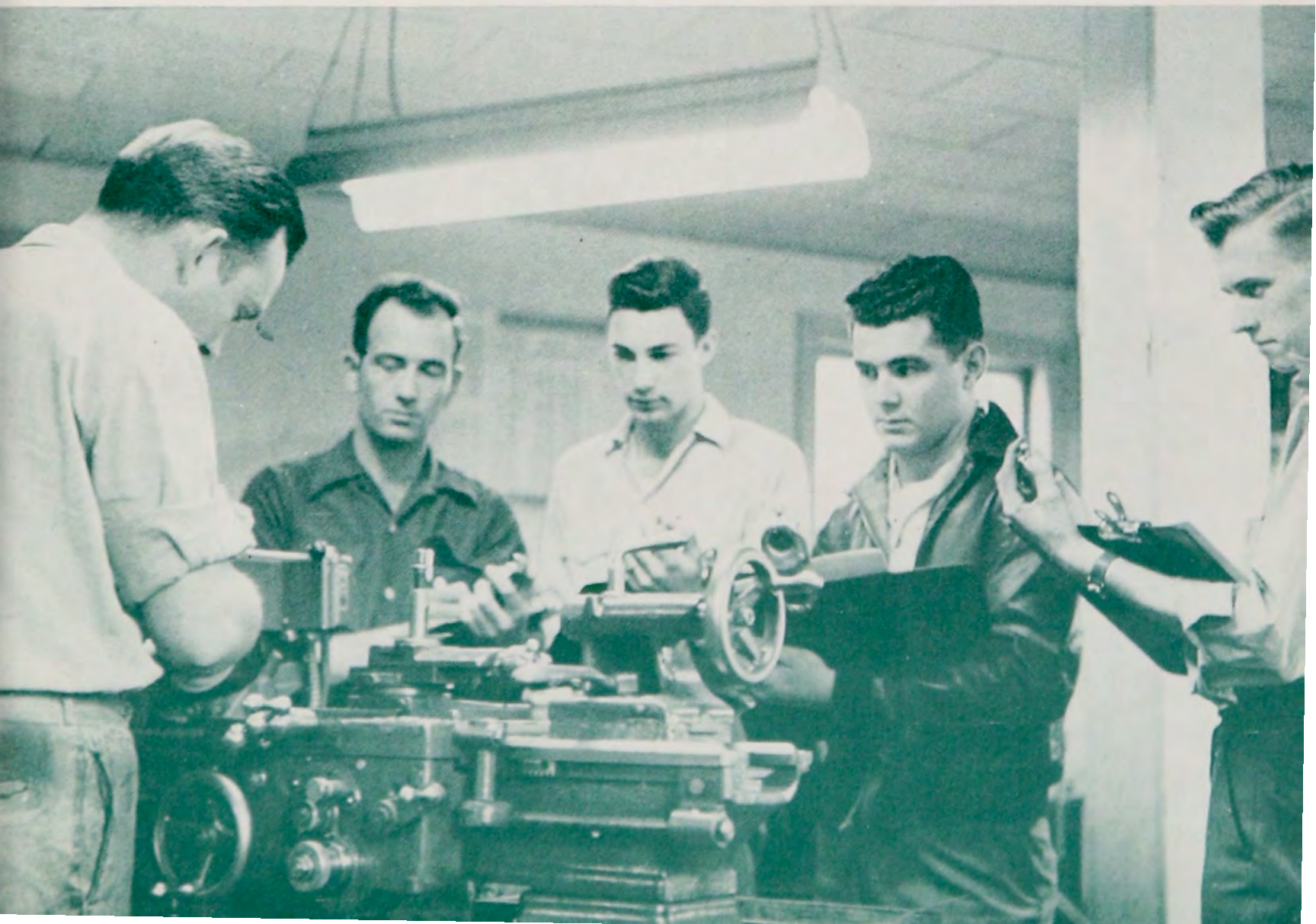
A more complete description of each subject is given in the back of this catalogue.

| C L T: Class hours | Laboratory hours | Total quarter hours |
|---------------------------------|------------------|---------------------|
| First Quarter | | |
| | C L T | |
| T. Chem. 31 (Gen. Chemistry) | 5—0—5 | |
| T. Dr. 11 (Tech. Draw. I) | 0—6—2 | |
| Ind. T. 12 (Human Relations) | 3—0—3 | |
| T. Math. 11 (Algebra) | 5—3—6 | |
| Total | 13—9—16 | |
| Second Quarter | | |
| | C L T | |
| T. Dr. 21 (Tech. Draw. II) | 0—6—2 | |
| T. Eng. 11 (Comp. & Rhet.) | 5—0—3 | |
| T. Math. 21 (Trig., Analyt.) | 5—0—5 | |
| Mech. T. 11 (Tools & Methods) | 3—0—3 | |
| T. Phys. 22 (Mechanics) | 5—3—6 | |
| Total | 18—9—19 | |
| Third Quarter | | |
| | C L T | |
| T. Eng. 21 (Comp. & Rhet.) | 3—0—3 | |
| Ind. T. 22 (El. Ind. Safety) | 3—0—3 | |
| Ind. T. 23 (Job Evaluation) | 2—0—2 | |
| Ind. T. 42 (Labor Relations) | 3—0—3 | |
| Mech. T. 24 (Gen. Metal Shop) | 0—6—2 | |
| T. Phys. 12 (Electricity) | 5—3—6 | |
| Total | 16—9—19 | |
| Fourth Quarter | | |
| | C L T | |
| Ind. T. 41 (Plant Layout) | 2—3—3 | |
| Ind. T. 43 (Time, Mot'n Stdy) | 2—3—3 | |
| Ind. T. 45 (Matls. Handling) | 2—0—2 | |
| Ind. T. 47 (Wage Incentives) | 2—0—2 | |
| Ind. T. 63 (Quality Control) | 2—0—2 | |
| Mech. T. 34 (Machine Shop I) | 0—6—2 | |
| T. Phys. 32 (Ht., Sound, Light) | 3—3—4 | |
| Total | 13—15—18 | |
| Fifth Quarter | | |
| | C L T | |
| T. Eng. 62 (Tech. Writing) | 2—0—2 | |
| Ind. T. 32 (Ind. Sales & Pur.) | 3—0—3 | |
| Ind. T. 51 (Contracts & Spec.) | 3—0—3 | |
| Ind. T. 52 (Prod. Control) | 3—0—3 | |
| Ind. T. 58 (Methods Imprvmt.) | 3—0—3 | |
| Ind. T. 66 (Industry Analysis) | 0—6—2 | |
| Mech. T. 54 (Jigs & Fixtures) | 2—3—3 | |
| Total | 16—9—19 | |
| Sixth Quarter | | |
| | C L T | |
| T. Eng. 52 (Public Speaking) | 2—0—2 | |
| T. Dr. 41 (Mach. Sketching) | 0—6—2 | |
| Ind. T. 61 (Ind. Economics) | 5—0—5 | |
| Ind. T. 62 (Supv. Training) | 3—0—3 | |
| Ind. T. 67 (Seminar) | 1—0—1 | |
| Ind. T. 68 (Small Bus. Mgt.) | 3—0—3 | |
| Ind. T. 69 (Cost Control) | 2—0—2 | |
| Total | 16—6—18 | |

TYPES OF JOBS FOR WHICH THE INDUSTRIAL TECHNICIAN IS TRAINED

1. PERSONNEL function:
 - Personnel Director
 - Employment Manager
 - Recreation Directors
 - Union Negotiator
 - Safety Director
 - Public Relations Director
 - Training Director
 - Editor—Plant Publications
 - Personnel Counselors and Interviewers
2. QUALITY function:
 - Chief Inspector
 - Product and Process Development Technicians
 - Raw Material Sampler
 - Process Inspector
 - Laboratory Technician
 - Product Designers
3. METHODS and COST function:
 - Time Study Men
 - Motion Study Men
 - Methods Technicians
4. EQUIPMENT function:
 - Cost Control Technicians
 - Estimators (Cost of manufacturing new products.)
 - Industrial Engineer's Assistants
5. PLANNING function:
 - Works or Plant Engineer
 - Master Mechanic
 - Engineering Draftsman
6. PRODUCTION function — Start at the supervisory level and rise to:
 - Schedulers
 - Dispatchers
 - Planning Superintendents
 - Production Control Technicians
 - Assistant Foreman
 - Foreman
 - General Foreman
 - Superintendents
 - Plant Managers
 - General Managers

Industrial Students Run a Time and Motion Study



MECHANICAL TECHNOLOGY

The Mechanical Technology curriculum offers training in basic courses such as mathematics, English, physics, supervisory training, and shop laboratory training. Classroom theory is correlated with laboratory work in which the student becomes familiar with basic tools and machines used in the mechanical field.

This field embraces the manufacture and production of mechanical products and the tools, machines, and processes by which they are made. In a broad sense mechanical technology is the creation and utilization of mechanical power, and as such enters into every business, industrial, and community activity. Men with technical institute type of training possess a knowledge that is basic to, and in demand by, companies in nearly every line of business throughout the world.

A more complete description of each subject is given in the back of this catalogue.

C L T: Class hours Laboratory hours Total quarter hours

| First Quarter | | | |
|-------------------------------------|----|----|----|
| | C | L | T |
| T. Dr. 11 (Tech. Draw. I) _____ | 0 | 6 | 2 |
| Ind. T. 12 (Human Relations) _____ | 3 | 0 | 3 |
| T. Math. 11 (Algebra) _____ | 5 | 3 | 6 |
| Mech. T. 11 (Tools & Methods) _____ | 3 | 0 | 3 |
| Mech. T. 24 (Gen. Metal Shop) _____ | 0 | 6 | 2 |
| Total _____ | 11 | 15 | 16 |

| Second Quarter | | | |
|---------------------------------------|----|----|----|
| | C | L | T |
| T. Dr. 21 (Tech. Draw. II) _____ | 0 | 6 | 2 |
| T. Eng. 11 (Comp. & Rhet.) _____ | 5 | 0 | 3 |
| Ind. T. 22 (El. of Ind. Safety) _____ | 3 | 0 | 3 |
| T. Math. 21 (Trig., Analyt.) _____ | 5 | 0 | 5 |
| Mech. T. 34 (Machine Shop I) _____ | 0 | 6 | 2 |
| T. Phys. 22 (Mechanics) _____ | 5 | 3 | 6 |
| Total _____ | 18 | 15 | 21 |

| Third Quarter | | | |
|-------------------------------------|----|----|----|
| | C | L | T |
| T. Eng. 21 (Comp. & Rhet.) _____ | 3 | 0 | 3 |
| Ind. T. 58 (Methods Imprvmt.) _____ | 3 | 0 | 3 |
| Mech. T. 36 (Applied Mech.) _____ | 3 | 0 | 3 |
| Mech. T. 37 (Gen. Woodwork) _____ | 0 | 6 | 2 |
| Mech. T. 44 (Machine Shop II) _____ | 0 | 6 | 2 |
| T. Phys. 12 (Electricity) _____ | 5 | 3 | 6 |
| Total _____ | 14 | 15 | 19 |

| Fourth Quarter | | | |
|---------------------------------------|----|----|----|
| | C | L | T |
| Elec. T. 32 (Ind. Electricity) _____ | 5 | 3 | 6 |
| Ind. T. 43 (Time, Mot'n Stdy) _____ | 2 | 3 | 3 |
| Mech. T. 42 (Met., Heat Tr.) _____ | 3 | 0 | 3 |
| Mech. T. 47 (Pattern Making) _____ | 0 | 6 | 2 |
| T. Phys. 32 (Ht., Sound, Light) _____ | 3 | 3 | 4 |
| Total _____ | 13 | 15 | 18 |

| Fifth Quarter | | | |
|--------------------------------------|----|----|----|
| | C | L | T |
| T. Dr. 41 (Mach. Sketching) _____ | 0 | 6 | 2 |
| T. Eng. 62 (Tech. Writing) _____ | 2 | 0 | 2 |
| Ind. T. 67 (Seminar) _____ | 1 | 0 | 1 |
| Mech. T. 45 (Thermodynamics) _____ | 3 | 0 | 3 |
| Mech. T. 51 (Strength of Mat.) _____ | 3 | 3 | 4 |
| Mech. T. 57 (Welding) _____ | 0 | 6 | 2 |
| Mech. T. 65 (Inspec. Methods) _____ | 3 | 3 | 4 |
| Total _____ | 12 | 18 | 18 |

| Sixth Quarter | | | |
|--------------------------------------|----|----|----|
| | C | L | T |
| T. Dr. 61 (Machine Draw.) _____ | 0 | 6 | 2 |
| T. Eng. 52 (Public Speaking) _____ | 2 | 0 | 2 |
| Ind. T. 41 (Plant Layout) _____ | 2 | 3 | 3 |
| Ind. T. 62 (Supv. Training) _____ | 3 | 0 | 3 |
| Mech. T. 54 (Jigs & Fixtures) _____ | 2 | 3 | 3 |
| Mech. T. 55 (Tool Engr. Prob.) _____ | 3 | 0 | 3 |
| Mech. T. 68 (Gen. Sheet Metal) _____ | 0 | 6 | 2 |
| Total _____ | 12 | 18 | 18 |

JOB OPPORTUNITIES FOR MECHANICAL TECHNICIANS

Ordnance Inspector

Automotive Inspector

Draftsman

Maintenance Men

Assistant Service Superintendent

Engineer's Assistant

Junior Engineer

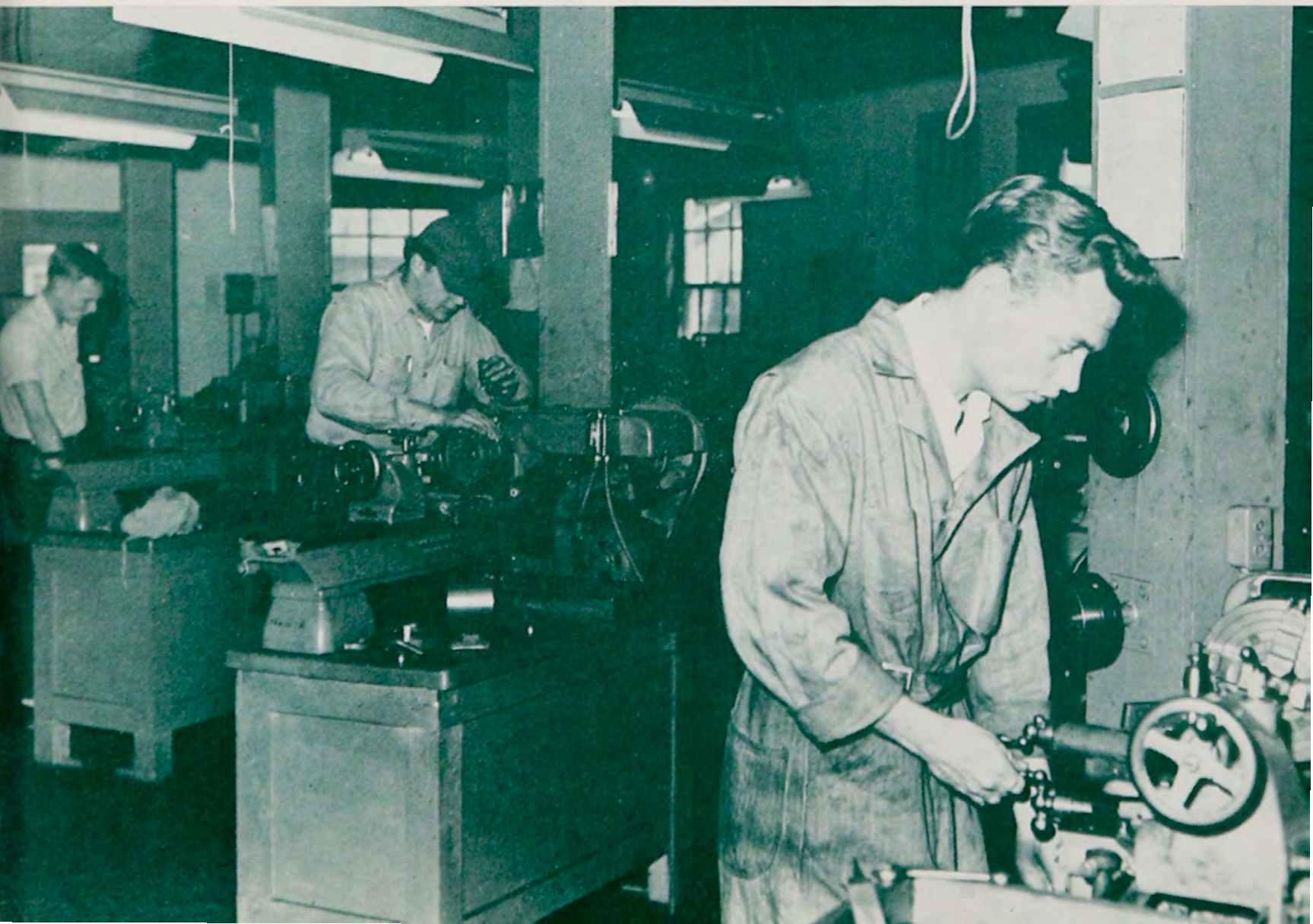
Sales Engineer

Foreman and Assistant Foreman in various fields

Warehouse Manager

Service Engineer

Students of Mechanical Technology Prove Classroom Theories Through
Hours Spent in Machine Shops



SUBJECT DESCRIPTIONS

BUILDING CONSTRUCTION TECHNOLOGY

- Arch. T. 12—ARCHITECTURAL HISTORY** 3—0—3
Prerequisite—None
A study of the progress of architecture. The material covered by this subject includes a review of architectural forms from early Egyptian to Modern Engineered Architecture.
- Arch. T. 24—BLUEPRINT READING** 3—0—3
Prerequisite—None
A study of architectural blueprints for all students who must translate drawings into actual existing structures. This course is also useful for students who must use them for general layout of electrical, plumbing, and air conditioning systems.
- Arch. T. 31—GRAPHICS** 3—9—6
Prerequisite—T. Draw. 11
An introductory study in architectural drawing and in the principles of visual design. This subject equips the student with a basic knowledge of descriptive geometry, shades and shadows, and perspective.
- Arch. T. 33—BUILDING MATERIALS** 3—0—3
Prerequisite—None
A subject designed to familiarize the student with the physical properties of the materials generally used in the erection of structures, with brief descriptions of their manufacture.
- Arch. T. 41—BUILDING DESIGN I** 2—12—7
Prerequisite—Arch. T. 31
Residential design. This subject includes working drawings and details with the actual construction of a model of a small house.
- Arch. T. 51—BUILDING DESIGN II** 3—9—6
Prerequisites—Arch. T. 41, Arch. T. 52 or concurrently
Architectural design, working and structural drawings of more complex structures than those studied in Arch. T. 41. Structural computations are required.
- Arch. T. 52—WOOD AND STEEL CONSTRUCTION**
Prerequisites—Mech. T. 51 and Civil T. 21 3—6—5
A study of the design of beams, girders, and columns in both steel and wood. Included is a study of the various timber fasteners, steel and timber trusses, and steel frameworks.
- Arch. T. 54—BUILDING EQUIPMENT** 3—0—3
Prerequisite—T. Phys. 32
A brief survey of the principles of heating, ventilating, plumbing, air conditioning, lighting and electrical wiring of buildings from the construction viewpoint.
- Arch. T. 55—COSTS AND ESTIMATES** 3—3—4
Prerequisite—Arch. T. 33
Preparation of material and labor quantity surveys from actual working drawings and specifications.

Arch. T. 61—BUILDING DESIGN III 3—9—6

Prerequisite—Arch. T. 51

A continuation of Arch. T. 51 with the necessary working and structural drawings. More complex structures than those in Arch. T. 51 are studied and a small scale model is required.

Arch. T. 62—CONCRETE CONSTRUCTION 3—6—5

Prerequisites—Mech. T. 36 and Mech. T. 51

A study of the properties of reinforced concrete with the determination of direct stresses and bending stresses in beams, slabs, girders, and columns. Laboratory work consists of problems and the actual testing of various concrete members.

CHEMISTRY, TECHNICAL

T. Chemistry 31—GENERAL CHEMISTRY 5—0—5

A survey of general chemistry with the emphasis on inorganic. Numerous classroom demonstrations are used to illustrate principles studied.

CIVIL TECHNOLOGY

Civil T. 21—GRAPHIC STATICS 0—3—1

Prerequisite—To be taken concurrently with T. Phy. 22

Graphical methods of calculating reactions, stresses, shears, moments and their application in various structural problems.

Civil T. 32—ELEMENTARY SURVEYING 3—9—6

Prerequisite—To be taken concurrently with T. Math. 21

Construction, care, and use of surveying instruments; theory and practice of chaining; differential and profile leveling; traversing; computation of areas and earthwork; theory and practice of stadia and its application to topographic surveying; U. S. Government System of public land surveys; lines and grades; city surveys; reduction and plotting of field notes.

Civil T. 41—ROUTE SURVEYING 3—6—5

Prerequisite—Civil T. 32

Reconnaissance, preliminary location, and construction surveys for routes of all kinds, including simple, compound, and reverse curves, spiral and easement curves used on highways and railroads; superelevation of curves; computation of earthwork; construction of quantity, haul and mass diagrams. For a final project each student must lay out a complete highway location and submit the plans and profiles for this location.

Civil T. 42—HIGHWAYS 3—0—3

Prerequisite—Civil T. 41

The historic, economic, and structural phases of highway construction; study of traffic census; traffic classification as related to the type of highway; methods of construction and design of highway and road types, including grades, curves, sight distance and other safety features.

Civil T. 43—TOPOGRAPHICAL DRAWING 1—3—2

Prerequisite—Civil T. 32

The interpretation and plotting of field notes of topographic surveys; the drafting of a number of topographic maps, including the contours as well as the planimetric details.

Civil T. 44—WATER AND SEWAGE PLANT OPERATION

Prerequisite—Civil T. 45 or concurrently 3—0—3

Basic principles of water supply and sewerage, with special reference to operating techniques involved. This course acquaints the student with the ordinary operating practices of water supply and sewage treatment plants.

Civil T. 45—HYDRAULICS 5—0—5

Prerequisites—T. Phy. 22 and Mech. T. 36

Elementary principles of fluid mechanics with special emphasis on flow through pipes, channels and over weirs; a study of the various types of pumps to cause flow through pipes.

Civil T. 51—TOPOGRAPHIC AND CONTOUR SURVEYING

Prerequisite—Civil T. 32 2—6—4

Theory, description and use of advanced surveying instruments and methods; practice of state and local coordinate systems for cadastral surveys and construction work; field work for the design and construction of engineering projects; use of the Plane Table on topographic surveys; description of aerial surveying and mapping; theory, description and purposes of the many types of maps, plans and profiles used by engineers.

Civil T. 62—LAND SURVEYS 3—6—5

Prerequisite—Civil T. 32

Theory and practice of land surveying; subdivision; filing and recording deeds; U. S. system of land subdivision; U. S. Coast and Geodetic plane coordinate systems; county and state laws; city surveying procedures; use of instruments and computations on astronomical observations for geographic coordinates; Georgia Land Lot System of land subdivision.

Civil T. 63—STRUCTURAL DRAFTING 0—6—2

Prerequisite—T. Draw. 11

Detailing steel, timber, and concrete drawings.

Civil T. 64—CONSTRUCTION METHODS 3—3—4

Prerequisite—Arch. T. 33

Heavy construction practices. This subject acquaints the student with the many common pieces of heavy construction equipment and apparatus; operation, use, limitations, and maintenance of this equipment are covered, along with the methods, organization, and management for both large and small jobs. Field trips are made to construction projects to illustrate the usage of the various pieces of equipment.

DRAWING, TECHNICAL

T. Dr.11—TECHNICAL DRAWING I 0—6—2

Introduction to drawing, use of instruments, lettering, geometric construction, orthographic projection, auxiliary views, dimensioning, and drawing conventions.

T. Dr. 21—TECHNICAL DRAWING II 0—6—2

Prerequisite—T. Dr. 11

Continuation of topics introduced in Technical Drawing 11, plus threads and fasteners, sectioning, conventional representation, working drawings, and ink tracings.

T. Dr. 41—MACHINE SKETCHING 0—6—2

Prerequisite—T. Dr. 21

A step by step procedure in freehand sketching of machine parts with pencil. Sketches are made in orthographic, isometric, and oblique projection, as well as in true perspective. Dimensioning and shading of sketches are included.

T. Dr. 61—MACHINE DRAWING 0—6—2

Prerequisite—T. Dr. 21

Study of gears, cams, and complete assembly drawings of a small machine, together with manufacturing specifications.

T. Dr. 62—ELECTRICAL DRAWING 0—6—2

Prerequisite—T. Dr. 11

A study of A.S.A. and A.I.E.E. standard electrical drawing symbols and preparation of electrical drawings including schematics, single-line diagrams, wiring diagrams, layouts, and others.

ELECTRICAL TECHNOLOGY ELECTRONIC AND RADIO TECHNOLOGY

Elec. T. 22—D.C. MACHINES 5—3—6

Prerequisite—T. Phys. 12, T. Math 21 concurrently

Construction, characteristics, control, and industrial applications of direct-current motors and generators. Laboratory work, laboratory reports, and problem solving ability are particularly stressed in this subject.

Elec. T. 24—INTRODUCTION TO ELECTRONICS 3—3—4

Study of basic components, electronics nomenclature, care and use of test equipment, and a broad survey of radio and television transmission and reception.

Elec. T. 31—A.C. CIRCUITS 5—3—6

Prerequisite—T. Math 21, T. Phys. 12

Study and practice in the fundamentals of circuit calculations. The subject material includes the following: A.C. power measurements and calculations, complex notation, properties of resistance, inductance and capacitance, series and parallel A.C. circuits, the admittance methods of calculations, and polyphase circuits. To facilitate the calculations necessary for this subject the student will find a sliderule, upon which are the A,B,C,D,CI,L,S,T, and ST scales, most useful.

Elec. T. 32—INDUSTRIAL ELECTRICITY 5—3—6

Prerequisite—T. Physics 12 and T. Math. 21

Electrical fundamentals, electrical machinery, electrical controls, and the industrial applications of electrical equipment. This is a survey subject for non-electrical students.

Elec. T. 33—VACUUM TUBES 5—3—6

Prerequisite—T. Phys. 12, T. Math. 21, Elec. T. 24, Elec. T. 31 concurrently

Basic study of the control of free electrons, electron emission, triode, tetrode, pentode, beam power vacuum tubes, load lines, rectifier circuits, basic amplifier circuits, gas filled tubes, and thyatron control.

- Elec. T. 42—A.C. MACHINES I** 5—3—6
 Prerequisite—Elec. T. 22, Elec. T. 31, T. Physics 22, T. Math. 31
 Construction, characteristics, control and operation, and industrial applications of alternators and transformers. Problems and laboratory work which approximate the situations found in industry are an integral part of this subject.
- Elec. T. 43—ILLUMINATION** 2—3—3
 Illumination principles and practices. A survey of modern illumination principles, calculations, and equipment occupies most of the time available for this course. The laboratory work for this subject consists of several design problems in which the student is expected to design complete fluorescent and incandescent lighting installations. The economics of illumination receive particular attention throughout the entire subject.
- Elec. T. 46—RADIO I** 5—6—7
 Prerequisite—Elec. T. 31, Elec. T. 33, T. Math. 31
 Study of resonant systems, resistance-coupled amplifiers, tube input capacitance, impedance-coupled amplifiers, feedback amplifiers, RC and RL time constants and transient analysis, simple receiving circuits, tuning circuits, and detector circuits. In the laboratory emphasis is placed on circuit tracing of power supplies, receivers, transmitters, and industrial equipment.
- Elec. T. 47—TELEPHONY** 3—3—4
 Prerequisite—Elec. T. 31, Elec. T. 33
 Study of the operating principles of telephone equipment and circuits, basic local battery and common battery manual exchanges, and automatic exchanges.
- Elec. T. 51—INDUSTRIAL ELECTRONICS** 5—3—6
 Prerequisite—Elec. T. 33
 A study of basic industrial electronic circuits and of the applications of these circuits to such devices as motor-control systems, electronic timers, voltage regulators, electro-static air cleaners, and induction and dielectric heating equipment.
- Elec. T. 52—A.C. MACHINES II** 5—3—6
 Prerequisite—Elec. T. 42
 Construction, characteristics, operation and control and industrial applications of induction and synchronous motors. This subject is a continuation of Elec. T. 42.
- Elec. T. 53—ELECTRIC EQUIPMENT FOR BUILDINGS AND NATIONAL ELECTRICAL CODE** 5—0—5
 Prerequisite—Elec. T. 31
 Study of types of wiring used in buildings, and building wiring methods. The subject material includes a study of each type of authorized material, electrical fittings, service entrances, distribution centers, fuses, circuit breakers, switching arrangements, motor control circuits, and other equipment and circuits which are in general use throughout the electrical industry. The National Electrical Code is given a thorough examination with illustrative applications to all wiring procedures.

- Elec. T. 56—RADIO II** 5—3—6
 Prerequisite—Elec. T. 46
 Study of radio-frequency and power amplifiers, basic filters and their applications in circuits work, modulation, amplitude-modulation transmitters, and superhetrodyne receivers. Each student builds a superhetrodyne receiver.
- Elec. T. 57—FCC RULES AND REGULATIONS** 3—0—3
 Prerequisite—Elec. T. 46
 Study of the rules and regulations of the Federal Communications Commission. The examination elements for radio telephone and radiotelegraph licenses are covered in detail.
- Elec. T. 58—TRANSMISSION LINES** 5—3—6
 Prerequisite—Elec. T. 46 concurrently
 Study of high-frequency transmission-line concepts and their practical applications, with a smooth transition from the student's previous knowledge of low-frequency lines and circuit phenomena. Emphasis is placed on impedance-matching concepts and methods and on the use of the transmission-line circle diagram for the solution of practical problems. Laboratory practice demonstrates and supplements classroom theory and provides experience in the use of standard radio-frequency measuring equipment.
- Elec. T. 59—SPECIAL PROBLEMS IN ELECTRONICS** 2—6—4
 Prerequisite—Elec. T. 46
 Special projects dealing with study, modification, and improvement of existing equipment. Each student gives two oral progress reports and a written final project report.
- Elec. T. 60—SPECIAL PROBLEMS IN ELECTRONICS II** 0—3—1
 Prerequisite—Completion of three quarters of work.
 Either basic or advanced projects, dependent upon the capabilities and needs of the student. Project may deal with study of equipment beyond the scope of the regular class and laboratory assignments.
- Elec. T. 61—ELECTRIC POWER DISTRIBUTION** 4—0—4
 Prerequisite—Elec. T. 42
 Study of the principles of construction, operation, and maintenance of distribution lines, substations, electric utility organization, and the types of customer loads supplied by electric utilities.
- Elec. T. 62—A.C. MACHINES III** 5—3—6
 Prerequisite—Elec. T. 52
 Construction, characteristics, operation and control, and industrial applications of synchronous converters, single-phase motors, and mechanical and electronic rectifiers. This subject is a continuation of Elec. T. 42 and 52.
- Elec. T. 64—SEMINAR** 1—0—1
 Prerequisite—Completion of four quarters' work
 Scheduled meetings at which individual students present oral and written reports on important electrical developments. Each report is followed by group discussion and criticism.

Elec. T. 65—SPECIAL PROJECTS FOR ELECTRICAL TECHNOLOGY 0—3—1

Prerequisite—Completion of 4 quarters of work and approval by Department staff

Special projects dealing with study, testing, modification, construction, and/or design of laboratory equipment beyond the scope of the regular laboratory assignments. The student will be assigned a project which he will develop during the quarter under the guidance of a faculty member specializing in the field of the specific project. A complete report will be rendered at the end of the quarter to include all observed data, calculated data, applicable curves and results of the project. Only those students who are approved by the Course Advisor as being qualified, both scholastically and practically, to pursue this type of training will be permitted to schedule this course.

Elec. T. 66—ANTENNAS 3—3—4

Prerequisite—Elec. T. 58

Study of propagation, transmission lines, basic antenna theory, antennas for low-frequency and high-frequency work, and measuring techniques.

Elec. T. 67—FM AND TELEVISION 5—3—6

Prerequisite—Elec. T. 56

Study of the basic principles of FM and television, followed by a study of standard FM and television transmitting and receiving systems.

Elec. T. 68—MICROWAVES 3—3—4

Prerequisite—Elec. T. 46, Elec. T. 58

Study of multivibrators, wave guides, cavity resonators, and radar. Laboratory work includes the study, operation, and trouble-shooting of the ASC and APS radars.

Elec. T. 69—RADIO SERVICE AND REPAIR 2—6—4

Prerequisite—Elec. T. 56

Study and application of servicing to both receivers and transmitters.

ENGLISH, TECHNICAL

T. Eng. 11—COMPOSITION AND RHETORIC 5—0—3

Grammar study and drill, punctuation, correct usage, sentence structure, elimination of errors in sentence structure, and writing for comprehension. All students attend classes five days a week for the first two weeks. Students who make satisfactory grades on a proficiency test at the end of two weeks and who maintain "C" averages are required to attend only three classes a week. Students who fail to make the necessary grades on the proficiency test or who fail to maintain a "C" average are required to attend classes five days a week.

T. Eng. 21—COMPOSITION AND RHETORIC 3—0—3

Prerequisite—T. Eng. 11

Vocabulary building, dictionary study, practice in developing sentence style, precise writing, paragraph technique, and business correspondence.

T. Eng. 31—SURVEY OF HUMANITIES 2—0—2

Prerequisite—T. Eng. 21

An elective subject designed to provide for those students who are

interested a brief survey of our literary heritage, to encourage them to read thoughtfully, to help them increase their ability to think and learn.

T. Eng. 52—PUBLIC SPEAKING 2—0—2

Prerequisite—T. Eng. 21

Study and practice in the fundamentals of public speaking. The subject includes training in selecting a subject, obtaining and organizing material, and presenting speeches effectively. Each student makes several speeches before an audience.

T. Eng. 62—TECHNICAL WRITING 2—0—2

Prerequisite—T. Eng. 21

Study of the fundamentals of technical writing style and mechanics with practice in preparing reports of the various types most likely to be used on the job by technicians.

INDUSTRIAL TECHNOLOGY

Ind. T. 12—HUMAN RELATIONS 3—0—3

Training in development of personality, ability to analyze problems involving human relations, and the development of good foundations for personnel relations. Actual cases of human relations problems in industry are studied with a view toward developing the technique of working with superiors, associates, and subordinates.

Ind. T. 22—ELEMENTS OF INDUSTRIAL SAFETY 3—0—3

A basic study of industrial accident prevention considering the nature and extent of the accident problem. A practical study is given the technique for control of industrial hazards together with the fundamentals of good organization.

Ind. T. 23—JOB EVALUATION 2—0—2

A study of the techniques and principles of job analysis and evaluation as a means for developing sound wage and salary administration.

Ind. T. 31—SAFETY STANDARDS 3—0—3

A survey of recognized safety standards and codes to permit their ready, intelligent use in the industrial plant; use of machine safeguards in minimizing accident possibilities in connection with the use of industrial machinery; principles of fire prevention and control, including the use of first-aid fire equipment.

Ind. T. 32—INDUSTRIAL SALES AND PURCHASING 3—0—3

Methods and principles of Industrial sales and service engineering as encountered in the basic industries; the nature of the purchasing function, including the art of the interview and conference, sources of purchasing information, forecasting ultimate values, and reciprocity purchasing.

Ind. T. 41—PLANT LAYOUT 2—3—3

Principles of plant layout, process and flow charts, tools and aids for effective plant layouts, case studies; the supervisor's responsibility for building and equipment maintenance.

Ind. T. 42—LABOR RELATIONS 3—0—3

Personnel policies, selection and employment, interviewing and test-

ing, employee records, training, employee benefits, collective bargaining and employer-employee relations, grievance procedure, wage and salary standards, and use of practical industrial psychology.

Ind. T. 43—TIME & MOTION STUDY 2—3—3

Principles of motion economy, tools for motion study, time study methods and practice; standard data and formula construction; use of methods-time measurement as a substitute for time studies.

Ind. T. 45—MATERIALS HANDLING 2—0—2

Selection and use of modern equipment and methods for handling material in the industrial processes.

Ind. T. 47—WAGE INCENTIVES 2—0—2

Basic requirements of a sound wage incentive plan, control of quality in incentive installations, union participation. Subject matter includes a study of five types of wage incentive plans.

Ind. T. 51—CONTRACTS AND SPECIFICATIONS 3—0—3

The general laws of contracts, agency, sales agreements, and engineering specifications as incorporated into contracts; the business, legal, and ethical phases of engineering.

Ind. T. 52—PRODUCTION CONTROL 3—0—3

The preparation for production, planning based on sales forecasts, operation sheets, routing, scheduling, dispatching, follow-up, inventory control, receiving, stores and shipping, control forms and reports.

Ind. T. 53—SAFETY SUPERVISION 3—0—3

Methods for the training of the various persons within the industrial organization in their respective safety duties, the recognition and evaluation of industrial health hazards, and techniques for their control.

Ind. T. 58—METHODS IMPROVEMENT 3—0—3

Study of the various production methods, batch and mass production techniques; practice in writing standard procedures, raw material specifications, and manufacturing instructions. The application of the "questioning attitude" in the search for better manufacturing methods and job procedures and the 4-step method of job improvement are also studied.

Ind. T. 61—INDUSTRIAL ECONOMICS 5—0—5

Output and life of equipment, operation costs, depreciation rates, economic selection of equipment, determination of economic lot sizes, and cost studies on representative problems.

Ind. T. 62—SUPERVISORY TRAINING 3—0—3

Line of responsibility and authority, technique of job instruction, personal leadership, technique of conducting a conference, how to produce for a profit. The subject treats problems of the supervisor as cost man, as safety man, as production man, as quality man, as personnel man, as the manager of his department.

Ind. T. 63—QUALITY CONTROL 2—0—2

Principles of inspection and quality control, specifications and limits, equipment, methods, records and control charts.

Ind. T. 66—INDUSTRY ANALYSIS 0—6—2

A survey and study of the various fields of industrial activity such

as textile, steel, chemical, wood products, food processing, and mechanical assembly. Field trips and detailed reports will be included in order to enable the student to make a better choice of the particular type of industry he desires to enter.

Ind. T. 67—SEMINAR 1—0—1

A study of the techniques for obtaining employment, improving one's position after he gets the job, and a general discussion of professional ethics.

Ind. T. 68—SMALL BUSINESS MANAGEMENT 3—0—3

Training in the operation of a small business concern including a practical knowledge of accepted accounting procedures, order billing, credits and collections, costs, payroll procedures, taxes, and information about standard business and office machines.

Ind. T. 69—COST CONTROL 2—0—2

Control of material and labor costs, determination of labor requirements, cost studies for use in estimating product prices.

MATHEMATICS, TECHNICAL

T. Math. 11—TECHNICAL ALGEBRA 5—3—6

Fundamental operations in algebra, factoring, fractions, exponents, radicals, complex numbers, equations, formulas, primes and subscripts, simultaneous equations, Kirchoff's laws, determinants, quadratic equations, ratio and proportion, variation, graphical solution of simultaneous equations, logarithms, and computations on the slide rule. Remedial practice work in each topic stressed. The laboratory period is devoted largely to slide rule computations and logarithms.

T. Math. 21—APPLIED TRIGONOMETRY AND ANALYTIC GEOMETRY 5—0—5

Prerequisite—T. Math. 11

Trigonometric functions, plane right triangles, reduction formulas, fundamental relations, addition formulas, double angles, half angles, inverse functions, and solution of oblique triangles. Approximately two-thirds of the quarter is devoted to topics in trigonometry. During the remainder of the quarter topics in analytics are considered. Rectangular coordinate systems, locus and equations, the straight line, the circle, the parabola, and the hyperbola are the topics covered.

T. Math. 31—APPLIED MATHEMATICS 5—0—5

Prerequisite—T. Math. 21

An application of mathematics to problems ordinarily not solvable by algebra or trigonometry. The subject, therefore, consists mainly of an introduction to the more elementary principles and concepts of calculus. The application of the calculus is directed toward problems pertinent to the student's major field of study.

T. Math. 32—BUSINESS MATHEMATICS 3—0—3

Short methods of computation, interest and discount, annuities, amortization, depreciation, valuation and yield of bonds.

MECHANICAL TECHNOLOGY

Mech. T. 11—TOOLS AND METHODS 3—0—3

An introduction to the field of metal work and industrial manufac-

turing for mechanical students. Possibilities and limitations of various machine tools are developed so that the student will have a basic perspective of modern efficient industrial procedure. The characteristics of different materials are covered as well as their adaptability to the various processes. Each process is covered from a technical viewpoint. Correct terms are introduced so that the student will be able to use the language of the technician or the engineer.

Mech. T. 13—GAS SURVEY 1—0—1

A course designed to introduce the student to the Gas Industry and the facilities available in the Gas Fuel Technology Course.

Mech. T. 24—GENERAL METAL SHOP 0—6—2

An introduction to metal work, giving the students both actual practice and related information in lathe work, shaper work, bench metal, acetylene welding and cutting, and forging. The proper use and care of hand tools are stressed along with maintenance of shop equipment. Lectures are given on the most frequently used hand tools, measuring devices, and specifications of ordering materials and supplies.

Mech. T. 31—GAS SAFETY STANDARDS 3—0—3

This subject is concerned with the study of codes and regulations as applied to the Gas Industry. Accident reports are analyzed with respect to code violations. Experts of the Gas Industry as well as those interested in formulating and enforcing codes and regulations will present lectures.

Mech. T. 34—MACHINE SHOP I 0—6—2

Prerequisite—T. Dr. 11

Fundamental machine operations of drilling, reaming, turning between centers, chuck work, thread cutting, shaper work, layout, and finishing. Special attention will be given to cutting speeds, tool and drill grinding, and machine upkeep.

Mech. T. 36—APPLIED MECHANICS 3—0—3

Prerequisites—T. Phys. 22 and T. Math. 21

Statics and dynamics, including equilibrium of forces, center of gravity, couples, friction, rectilinear and curvilinear motion, rotation, Newton's Laws of Motion, moment of inertia, work, power, and energy.

Mech. T. 37—GENERAL WOODWORK 0—6—2

Prerequisite—T. Dr. 11

An introduction to woodwork designed to give students a background of basic woodworking processes. Topics include use of hand tools, sharpening and the upkeep of tools, basic woodworking principles of design and construction.

Mech. T. 38—FUELS AND BURNERS 3—0—3

Study of the fuels used in domestic and commercial heating, the types of equipment used to burn these fuels, and automatic controls as applied to heating.

Mech. T. 41—AIR CONDITIONING I 5—3—6

Prerequisite—T. Phys. 32 or concurrently

A study of the basic principles of heating and air conditioning. The subject matter includes calculation of heating and cooling loads, properties of air and vapor mixtures, heating and humidification, cooling and dehumidification, fans and ducts, heating and cooling systems, and automatic controls. Laboratory work is carried out on controls and heating equipment.

Mech. T. 42—METALLURGY AND HEAT TREATING

Prerequisite—Mech. T. 11 and Mech. T. 24 3—0—3

Fundamentals of metallurgy, grain size, effect of carbon content, and hardness testing devices. Different alloys will be tested to determine the effect of heat treating.

Mech. T. 43—HEAT POWER 3—0—3

Prerequisite—T. Physics 32

This course is intended to give the student a broad conception of applied energy. It includes a study of fuels, combustion, heat transfer, vapors, steam and internal combustion engines, boilers, fans, compressors, heating, power plants and efficiencies.

Mech. T. 44—MACHINE SHOP II 0—6—2

Prerequisite—Mech. T. 34

A continuation of Machine Shop I with the following additions: Use of gages, taper turning, gear cutting, square thread cutting, and types of fits. The topics studied are applied practically in the shop as the required projects are made.

Mech. T. 45—THERMODYNAMICS 3—0—3

Prerequisites—T. Phys. 32 and T. Math. 21

A subject intended to acquaint the students with some of the basic concepts in the field of thermodynamics. It includes a study of the First Law of Thermodynamics, non-flow energy relations, steady-flow processes, solids, liquids and gases, gas laws, specific heat of gases, steam tables, frictionless non-flow ideal gas and vapor changes, air compressors, and refrigeration cycles.

Mech. T. 47—PATTERN MAKING 0—6—2

Prerequisite—Mech. T. 37

A basic study of pattern making. Different type patterns are made and the various allowances, finish, and color code are coordinated and presented in both lecture form and on the projects.

Mech. T. 48—GAS FUELS AND BURNERS 3—6—5

This gas course deals exclusively with the handling of gas from a storage tank or pipe line until it is finally used by a domestic consumer. A detailed study of containers, piping, regulators, accessory equipment, meters, controls, appliances, and heating equipment is made in the classroom and in the laboratory. Considerable time is devoted to the construction requirements, installation, adjustments, servicing, and operation of domestic appliances and heating equipment.

Mech. T. 51—STRENGTH OF MATERIALS 3—3—4

Prerequisite—Mech. 36

A study of the effects of externally applied forces. Topics include

properties of materials, stresses and strains in axially loaded members, riveted and welded joints, thin-walled cylinders, torsion of circular shafts, bending and shear stresses and deflection in statically determinate beams, column theory, and combined stresses.

Mech. T. 52—AIR CONDITIONING II 5—6—7

Prerequisite—Mech. T. 41

A continuation of the work given in Mech. T. 41 with laboratory work in design of domestic or commercial heating systems. This subject includes selection of equipment and its placement on blueprints.

Mech. T. 53—REFRIGERATION I 3—3—4

Prerequisite—T. Phys. 32 or concurrently

The fundamentals and application of refrigeration. This subject is a study of the refrigeration cycle, refrigerants, compressors, evaporators, condensers, control equipment, and domestic and commercial systems. Laboratory work parallels the class theory.

Mech. T. 54—JIGS AND FIXTURES 2—3—3

Prerequisites—Mech. T. 24 and 34

Factors involved in large quantity production by machine processes. Types of jigs and fixtures, different methods of gaging work, ease of operation, and methods of assembly are studied. Machine parts are selected and preliminary methods of production together with cost estimates and production costs are calculated for each part chosen.

Mech. T. 55—TOOL ENGINEERING PROBLEMS 3—0—3

Prerequisites—Mech. T. 51

A study of the applications of principles of strength and rigidity that are necessary in machine tool elements. The theory of strength that are necessary in machine tool elements. The theory of strength of materials is put into practice in designing the assigned problems.

Mech. T. 57—WELDING 0—6—2

Prerequisite—Mech. T. 24

Fundamentals of both arc and acetylene welding. A study is made of the most economical methods in regard to welding time, machinability, and ductility. Methods of manufacturing rods, types of rods, color code of rods, safe practices in welding, and welding symbols are covered in lectures.

Mech. T. 60—GAS FUEL EQUIPMENT 5—3—6

Prerequisite—Mech. T. 48

This course deals with the production and transportation of gas, industrial applications, commercial applications, carburetion, bulk plant operations, standby and peak shaving operations, pipe lines and codes pertaining to this phase of the Gas Industry. This work is supplemented by outstanding lecturers from the Gas Industry and also field trips to the many gas installations in this area.

Mech. T. 62—AIR CONDITIONING III 5—6—7

Prerequisite—Mech. T. 52

A continuation of Mech. T. 52. The laboratory work covers the calculation of cooling loads, selection and arrangement of equipment, and drawings of the system.

Mech. T. 63—REFRIGERATION II 3—3—4

Prerequisite—Mech. T. 53

A continuation of Mech. T. 53 with emphasis placed on commercial and industrial systems. In addition there is a study of load calculations, the thermodynamic analysis of the refrigeration cycle, and auxiliary equipment.

Mech. T. 65—INSPECTION METHODS 3—3—4

Prerequisites—Mech. T. 24 and 34

A study of the use and care of precision instruments, and methods of inspection. Types and methods of inspection are compared and discussed from samples chosen from industry as a comparison. Field trips will be taken to observe different methods used in industry.

Mech. T. 68—GENERAL SHEET METAL 0—6—2

Prerequisite—T. Dr. 11

Shop problems including layouts and methods of fabrication of sheet metal.

Mech. T. 69—SHEET METAL LAYOUT 0—6—2

Prerequisite—Mech. T. 68

A continuation of Mech. T. 68 for the Heating and Ventilating students, dealing with layout and fabrication of the different heating and ventilating problems such as parallel line development, radical line development, and triangulation.

PHYSICS, TECHNICAL

T. Physics 12—ELECTRICITY 5—3—6

An introduction to electricity and a study of its simpler applications. The subject matter includes magnetism, electrostatics, potential differences, work and power in electrical circuits, Joule's Law, resistances in series and parallel, Ohm's Law, electro-chemical effects, motors, generators, induced electromotive forces, Lenz's Law, electromagnetic effects, electrical measuring, high frequency oscillations. The laboratory work parallels the work in the classroom.

T. Physics 22—MECHANICS 5—3—6

Prerequisite—T. Math. 21 or concurrently

An introduction to Newtonian mechanics. Subject matter includes measurement, coplanar concurrent forces, coplanar parallel forces, forces in space, work and energy, simple machines, accelerated motion, friction, vibratory motion, rotary motion, gravitation, fluids in motion, elasticity and strength of materials. Laboratory exercises parallel the work in the classroom.

T. Physics 32—HEAT, SOUND, LIGHT 3—3—4

Prerequisite—T. Physics 22

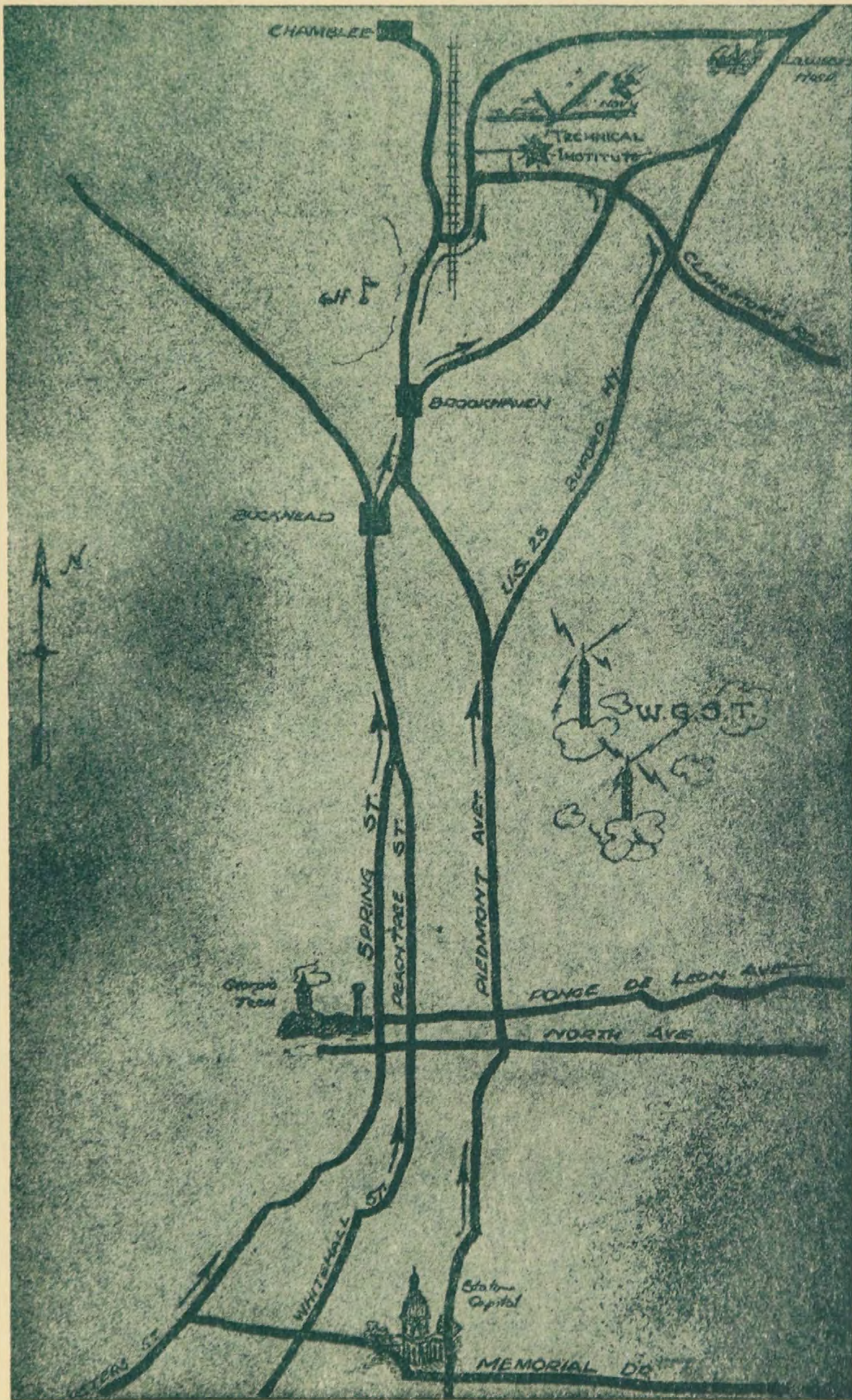
The elementary principles of heat, sound, and light and their technical applications. Class work includes discussions of temperature and its measurement, thermal expansion, heat units, work and heat, transfer of heat, change of state, meteorology, heat engines, wave motion, sound, propagation of light, photometry, reflection, refraction, spectra, color, and optical instruments. Laboratory exercises parallel the work in the classroom.



The Tau Alpha Pi Is Typical of STI's Departmental Clubs



Graduate Technicians Ready for Industry



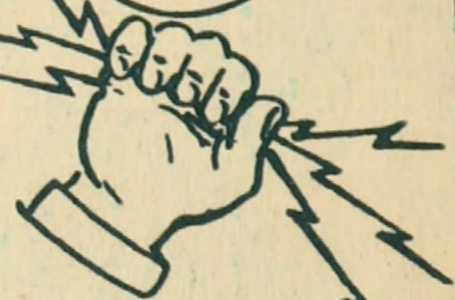
MECHANICAL

BUILDING
CONSTRUCTION

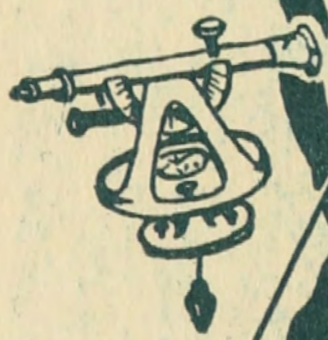


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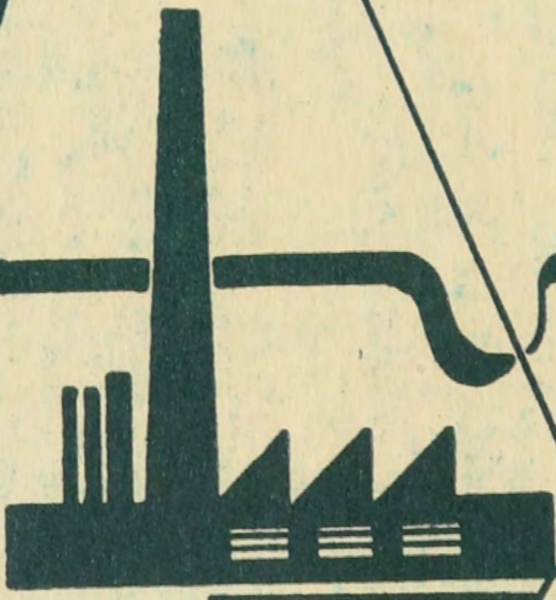


ELECTRONIC
& RADIO



CIVIL

HEATING &
VENTILATING



INDUSTRIAL