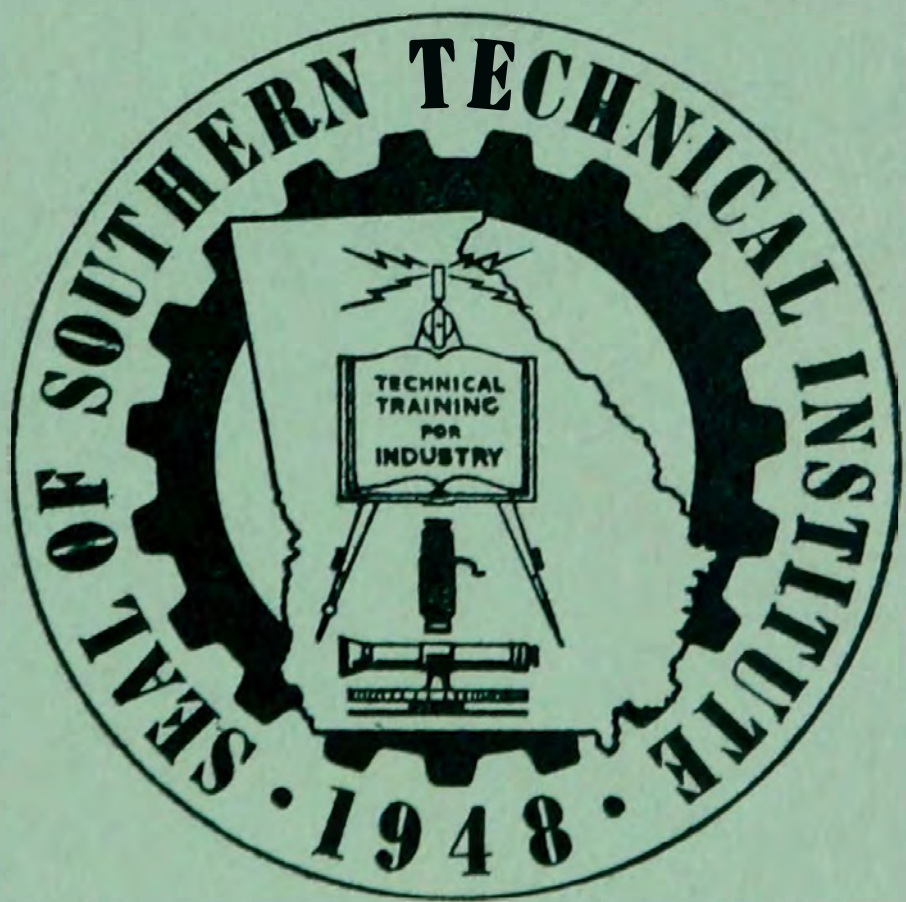


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# SOUTHERN TECHNICAL INSTITUTE



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A UNIT OF  
ENGINEERING EXTENSION DIVISION  
GEORGIA INSTITUTE OF TECHNOLOGY

## IN BRIEF

### **Where is the Southern Technical Institute?**

Only thirteen miles from the heart of Atlanta, on a portion of the Atlanta Naval Air Station, at Chamblee, Georgia. See Inside Back Cover.

### **What is the purpose of Southern Tech?**

To train technicians for industry. A technician is a supervising, operating, maintenance, or sales engineer in any number of industrial fields. He is not a designer; he is not a skilled mechanic. He is a technical specialist who translates designs into action by coordinating men, materials, and machines. See pp. 10-12.

### **What courses of study are offered?**

Eight two-year, technological courses—Building Construction, Civil, Electrical, Electronics and Communications, Gas Fuel, Heating and Air Conditioning, Industrial, and Mechanical. See pp. 35-51.

### **Is a degree conferred?**

Yes. You will be awarded the Associate in Science degree in the technological field of your specialty. See page 2.

### **What are the entrance requirements?**

You must be a high school graduate, or have equivalent training. When applying for admission, you must supply the STI Registrar with an Application for Admission, an affidavit concerning character and residence, and an official transcript of your high-school work, or its equivalent. See page 26.

### **How much does it cost to attend Southern Tech?**

Matriculation and other fees are \$90.00 per quarter. For a complete schedule of expenses, see page 18.

### **What boarding and living accommodations are provided?**

A modern, attractive dining hall, cafeteria plan. Comfortable, well-equipped dormitory rooms are available for 280 men. Married students may obtain inexpensive, furnished or unfurnished apartments in the nearby Tech-Lawson Apartments. See pages 17, 34.

### **What student activities are available at Southern Tech?**

Numerous student clubs, which sponsor dances, parties, and other social activities; a well-rounded sports program, including intercollegiate athletics and intramural sports; a monthly student newspaper and a yearbook; Student Government. See pp. 27-33.

### **Does Southern Tech help to place its graduates?**

Yes! An efficient, successful placement office will help you in every way to get a desirable position at a good starting salary. See page 24.

University System of Georgia

# SOUTHERN TECHNICAL INSTITUTE

CATALOGUE AND INFORMATION

1954-55

VOLUME VII

NUMBER I

A Unit of  
ENGINEERING EXTENSION DIVISION

## GEORGIA INSTITUTE OF TECHNOLOGY

Address

SOUTHERN TECHNICAL INSTITUTE  
CHAMBLEE, GEORGIA

Telephones

ATLANTA No.  
47-3164

CHAMBLEE No.  
7-3164

# Southern Technical Institute

Chamblee



Georgia

This Certifies That

**John Agar Wallankemp, Jr.**

having satisfactorily completed the engineering 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 awarded

the degree of

**Associate in Science**

in

**Electrical Technology**

Given under our hands, this fifteenth day of May, 1953

*Walter R. Van Leer*  
\_\_\_\_\_  
President, Georgia Institute of Technology

*R. S. Howell*  
\_\_\_\_\_  
Director, Engineering Extension Division

*L. V. Johnson*  
\_\_\_\_\_  
Director, Southern Technical Institute

*L. Y. Bryant*  
\_\_\_\_\_  
Registrar, Southern Technical Institute

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# THREE-YEAR CALENDAR

1954	1955	1956
<b>JULY</b>	<b>JANUARY</b>	<b>JANUARY</b>
S M T W T F S	S M T W T F S	S M T W T F S
1 2 3	1	1 2
4 5 6 7 8 9 10	2 3 4 5 6 7 8	3 4 5 6 7 8 9
11 12 13 14 15 16 17	9 10 11 12 13 14 15	10 11 12 13 14 15 16
18 19 20 21 22 23 24	16 17 18 19 20 21 22	17 18 19 20 21 22 23
25 26 27 28 29 30 31	23 24 25 26 27 28 29	24 25 26 27 28 29 30
	30 31	31
<b>AUGUST</b>	<b>FEBRUARY</b>	<b>AUGUST</b>
S M T W T F S	S M T W T F S	S M T W T F S
1 2 3 4 5 6 7	1 2 3 4 5	1 2 3 4 5 6
8 9 10 11 12 13 14	6 7 8 9 10 11 12	7 8 9 10 11 12 13
15 16 17 18 19 20 21	13 14 15 16 17 18 19	14 15 16 17 18 19 20
22 23 24 25 26 27 28	20 21 22 23 24 25 26	21 22 23 24 25 26 27
29 30 31	27 28	28 29 30 31
<b>SEPTEMBER</b>	<b>MARCH</b>	<b>SEPTEMBER</b>
S M T W T F S	S M T W T F S	S M T W T F S
1 2 3 4	1 2 3 4 5	1 2 3
5 6 7 8 9 10 11	6 7 8 9 10 11 12	4 5 6 7 8 9 10
12 13 14 15 16 17 18	13 14 15 16 17 18 19	11 12 13 14 15 16 17
19 20 21 22 23 24 25	20 21 22 23 24 25 26	18 19 20 21 22 23 24
26 27 28 29 30	27 28 29 30 31	25 26 27 28 29 30
<b>OCTOBER</b>	<b>APRIL</b>	<b>OCTOBER</b>
S M T W T F S	S M T W T F S	S M T W T F S
1 2	1 2	1
3 4 5 6 7 8 9	3 4 5 6 7 8 9	2 3 4 5 6 7 8
10 11 12 13 14 15 16	10 11 12 13 14 15 16	9 10 11 12 13 14 15
17 18 19 20 21 22 23	17 18 19 20 21 22 23	16 17 18 19 20 21 22
24 25 26 27 28 29 30	24 25 26 27 28 29 30	23 24 25 26 27 28 29
31		30 31
<b>NOVEMBER</b>	<b>MAY</b>	<b>NOVEMBER</b>
S M T W T F S	S M T W T F S	S M T W T F S
1 2 3 4 5 6	1 2 3 4 5 6 7	1 2 3 4 5
7 8 9 10 11 12 13	8 9 10 11 12 13 14	6 7 8 9 10 11 12
14 15 16 17 18 19 20	15 16 17 18 19 20 21	13 14 15 16 17 18 19
21 22 23 24 25 26 27	22 23 24 25 26 27 28	20 21 22 23 24 25 26
28 29 30	29 30 31	27 28 29 30
<b>DECEMBER</b>	<b>JUNE</b>	<b>DECEMBER</b>
S M T W T F S	S M T W T F S	S M T W T F S
1 2 3 4	1 2 3 4	1 2 3
5 6 7 8 9 10 11	5 6 7 8 9 10 11	4 5 6 7 8 9 10
12 13 14 15 16 17 18	12 13 14 15 16 17 18	11 12 13 14 15 16 17
19 20 21 22 23 24 25	19 20 21 22 23 24 25	18 19 20 21 22 23 24
26 27 28 29 30 31	26 27 28 29 30	25 26 27 28 29 30 31
<b>FEBRUARY</b>	<b>FEBRUARY</b>	<b>FEBRUARY</b>
S M T W T F S	S M T W T F S	S M T W T F S
1 2 3 4 5 6 7	1 2 3 4	1 2 3 4 5 6 7
8 9 10 11 12 13 14	5 6 7 8 9 10 11	8 9 10 11 12 13 14
15 16 17 18 19 20 21	12 13 14 15 16 17 18	15 16 17 18 19 20 21
22 23 24 25 26 27 28	19 20 21 22 23 24 25	22 23 24 25 26 27 28
29 30 31	26 27 28 29	29 30 31
<b>MARCH</b>	<b>MARCH</b>	<b>MARCH</b>
S M T W T F S	S M T W T F S	S M T W T F S
1 2 3	1 2 3	1 2 3
4 5 6 7 8 9 10	4 5 6 7 8 9 10	4 5 6 7 8 9 10
11 12 13 14 15 16 17	11 12 13 14 15 16 17	11 12 13 14 15 16 17
18 19 20 21 22 23 24	18 19 20 21 22 23 24	18 19 20 21 22 23 24
25 26 27 28 29 30	25 26 27 28 29 30 31	25 26 27 28 29 30 31
<b>APRIL</b>	<b>APRIL</b>	<b>APRIL</b>
S M T W T F S	S M T W T F S	S M T W T F S
1 2 3 4 5 6 7	1 2 3 4 5 6 7	1 2 3 4 5 6 7
8 9 10 11 12 13 14	8 9 10 11 12 13 14	8 9 10 11 12 13 14
15 16 17 18 19 20 21	15 16 17 18 19 20 21	15 16 17 18 19 20 21
22 23 24 25 26 27 28	22 23 24 25 26 27 28	22 23 24 25 26 27 28
29 30		29 30
<b>MAY</b>	<b>MAY</b>	<b>MAY</b>
S M T W T F S	S M T W T F S	S M T W T F S
1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
6 7 8 9 10 11 12	6 7 8 9 10 11 12	6 7 8 9 10 11 12
13 14 15 16 17 18 19	13 14 15 16 17 18 19	13 14 15 16 17 18 19
20 21 22 23 24 25 26	20 21 22 23 24 25 26	20 21 22 23 24 25 26
27 28 29 30 31	27 28 29 30 31	27 28 29 30 31
<b>JUNE</b>	<b>JUNE</b>	<b>JUNE</b>
S M T W T F S	S M T W T F S	S M T W T F S
1 2	1 2	1 2
3 4 5 6 7 8 9	3 4 5 6 7 8 9	3 4 5 6 7 8 9
10 11 12 13 14 15 16	10 11 12 13 14 15 16	10 11 12 13 14 15 16
17 18 19 20 21 22 23	17 18 19 20 21 22 23	17 18 19 20 21 22 23
24 25 26 27 28 29 30	24 25 26 27 28 29 30	24 25 26 27 28 29 30

## CALENDAR 1954-55

### Fall Quarter, 1954

- September 27—Registration.  
September 28—Classes begin.  
September 29—Late registration fees apply.  
October 2—Last day for registration. Last day for adding a subject to study list.  
October 30—Last day for dropping a subject from study list without penalty.  
November 6—End of deficiency report period  
\*November 25-28—Thanksgiving recess.  
December 18—End of term.  
\*December 19-January 3—Christmas recess.

### Winter Quarter, 1955

- January 3—Registration.  
January 4—Classes begin.  
January 5—Late registration fees apply.  
January 8—Last day for registration. Last day for adding a subject to study list.  
February 5—Last day for dropping a subject from study list without penalty.  
February 12—End of deficiency report period.  
March 19—End of term.  
\*March 20-27—Spring recess.

### Spring Quarter, 1955

- March 28—Registration.  
March 29—Classes begin.  
March 30—Late registration fees apply.  
April 2—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 7—End of deficiency report period.  
June 11—End of term.

### Summer Quarter, 1955

- July 5—Registration.  
July 6—Classes begin.  
July 7—Late registration fees apply.  
July 9—Last day for registration. Last day for adding a subject to study list.  
August 6—Last day for dropping a subject from study list without penalty.  
August 13—End of deficiency report period.  
September 17—End of term.

\* Official school holidays

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## FOREWORD

### OUR TECHNOLOGICAL AGE

The billions of dollars spent in research and development during the recent war years have made both our everyday life and industry increasingly technical and complex. The resulting enormous increase in our scientific learning and technical knowledge has not only created for us a way of life that was undreamed of 20 years ago, but has also produced a technical revolution in our industry and forced changes in our educational program—and this is only the beginning.

Today we have electric wrist watches, cinerama, miracle drugs, plastics and fibres, automatic automobiles, supersonic aircraft, and atomic energy. The advent of the transistor is making possible the mass production of electric brains, which can solve in a few hours complex problems that would require a team of engineers and scientists several years to solve. Wrist-watch radios are already in production, and moving pictures are now being recorded on magnetic tape.

Tomorrow—and many are already on the drafting board or in the laboratory—we will have automobiles and airplanes that drive or fly themselves to pre-determined destinations, rocket and jet aircraft traveling from 5,000 to 15,000 miles per hour, supersonic atomic airliners, TV telephones, electric readers for the blind, unlimited and cheap solar and atomic power, and world-wide color television, to mention only a few of these amazing developments.

Twenty years ago the processes and equipment of industry were relatively simple, and a high-school graduate with a willingness to work could build a successful career in almost any field. Today, that same man or woman would find his chances for success in the same industry very much less, or even negligible, unless he had a great deal more to offer. Today's industry requires brain-power, technical knowledge, and manual skill; the machine has taken over much of the work of the unskilled worker.

#### The Technical Team

Modern technical development today is the result of a team composed of (1) the professional engineer, (2) the engineering technician, and (3) the vocational specialist or craftsman. The education required and the work done by each are outlined as follows:

##### The Professional Engineer

The engineering student does not usually concern himself with the "know-how" of doing things; instead, he concentrates on the "know-why" of science. He, therefore, must have the concentrated training in the sciences, mathematics, physics, and chemistry, and



the application of these principles to research, design, and development. In order to qualify for creative work in the fields of modern chemistry, atomic energy, aeronautics, electronics, etc., a student must earn his Bachelor's degree, and preferably his Master's and Doctor's degree—and then gain his scientific skill by hard work in the field.

America needs thousands of professional engineers and scientists, and for the student who is qualified for the work and who will spend the time and energy required, the opportunities to serve his fellow man and to gain fame and fortune are bright.



### The Engineering Technician

The engineering technician serves in the applied field of engineering and industry, and must possess much of the know-why of the engineer and the know-how of industry. He does not usually have the concentrated training in mathematics, physics, and other subjects needed to derive the mathematical equations,

chemical formulas, or the electronic circuits, etc.; but he must be well-grounded in the fundamentals of these subjects so that he will be able to take the plans of the engineer, scientist, or inventor, and by the co-ordination of men, materials, and machines produce the finished product.

The two-year technical institute curriculum for training engineering technicians must, therefore, provide a strong background in mathematics, physics, mechanics, electricity, English, human relations, and management, and emphasize the application of these principles to the processes, machines, instrumentation, management, and technical skills in his field of specialization. The graduate of the two-year Technical Institute College receives an Associate in Science degree in his field of specialized study.

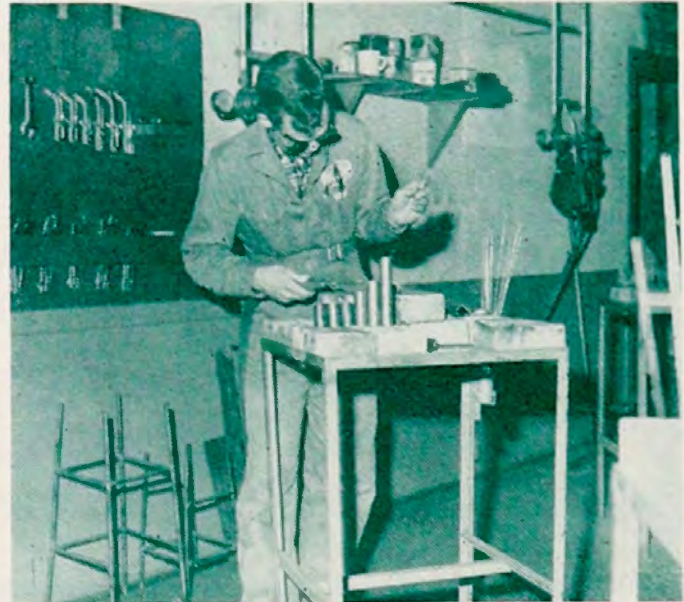
Because of this training, the engineering technician has a broad choice of technical positions at excellent beginning salaries and should qualify for rapid advancement. In the laboratory, the graduate serves as laboratory technician or engineering associate to carry out many of the tests, experiments, inspections, and calculations of modern research. In the factory, he serves as engineering aide, foreman, inspector, process specialist, technical salesman, estimator, specifications writer, production engineer, and department head. In the field, engineering technicians are needed for construction, installation, operation, and maintenance of thousands of installations whose specialized and complex nature require skills and a knowledge of basic science beyond that of the mechanic. Many become contractors or proprietors of their own business.

The engineering technician is usually more skilled in doing things than is the engineer. A radio and electronics technician, for example, is generally more interested in building, operating, and maintaining a television, radio, or radar station; whereas the electrical engineer is more interested in the design of new circuits and other improvements for the station. In brief, the engineer designs and projects; the technician builds and operates.

Studies made by the Engineers' Council for Professional Development show that eight technicians are needed for every engineer. Today 35,000 technicians are needed by Southern industry alone.

### **The Skilled Craftsman**

The vocational specialist or skilled craftsman is the person trained to do jobs that machines as yet cannot do. He is the electrician, plumber, cabinet maker, machinist, and repair man. He generally works with materials, tools, and machines rather than with calculating equipment, processes, and instruments, and is usually not concerned with supervision and management of people.



## **ADVANTAGES OF SOUTHERN TECHNICAL INSTITUTE TRAINING**

Complete Courses in Only 18 Months.

Economy—Maximum Training in Minimum Time at Minimum Cost.

Small Classes—Individual Attention.

Experienced, Skilled Instructors—Highly Specialized, Technical Training.

Theory Plus Practical Application.

Adequate, Up-to-Date Equipment.

Extracurricular Activities.

Draft Deferment for Qualified Students.

Effective Job-Placement Service.

Good Salaries for Graduates.

Associate in Science Degree.

## THE TECHNICIAN'S TRAINING

Each of the eight courses offered at Southern Tech is composed of a curriculum which consists of a closely unified body of subject matter drawn from four areas and designed to develop certain specialized, technical skills and abilities—

- I. Communication Skills—drawing, blueprint reading, spoken English, written English
- II. Basic Sciences—chemistry, mathematics, physics
- III. Supervisory Abilities—human relations, personnel management, labor relations, supervisory training
- IV. Technical Specialties—the technical subjects common to each of the eight technological courses, the study of which makes of the student a specialist in his chosen field.

### I. COMMUNICATION SKILLS



Spoken English



Written English

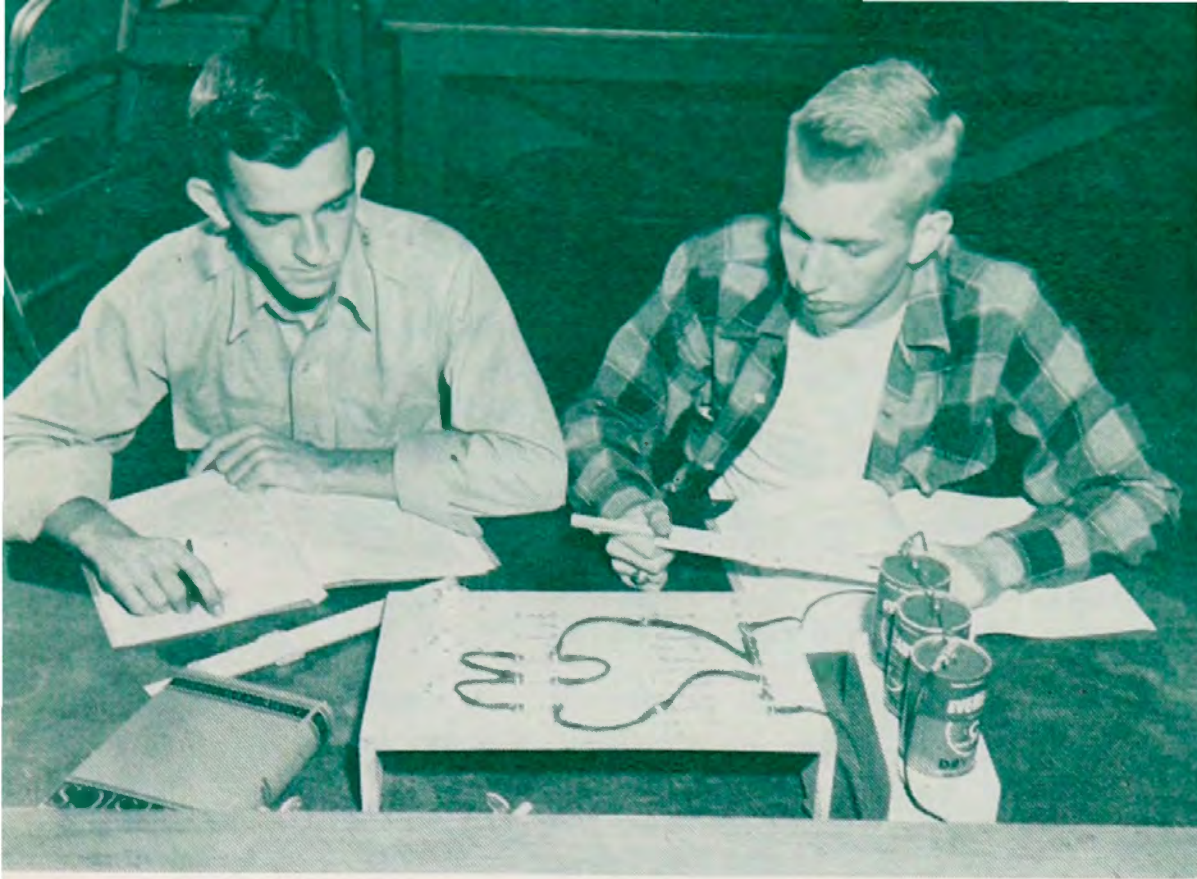
Drawing



## II. BASIC SCIENCES

### Physics

The basic scientific background acquired in the study of physics is so essential to full understanding of the later work in his specialized field that every student takes 16 credit hours of this subject.



### Mathematics

Mathematics is regarded as the technician's most important tool subject: it is to him what the wrench is to the mechanic. Depending on his technical specialty, the student studies from 11 to 16 credit hours of mathematics.

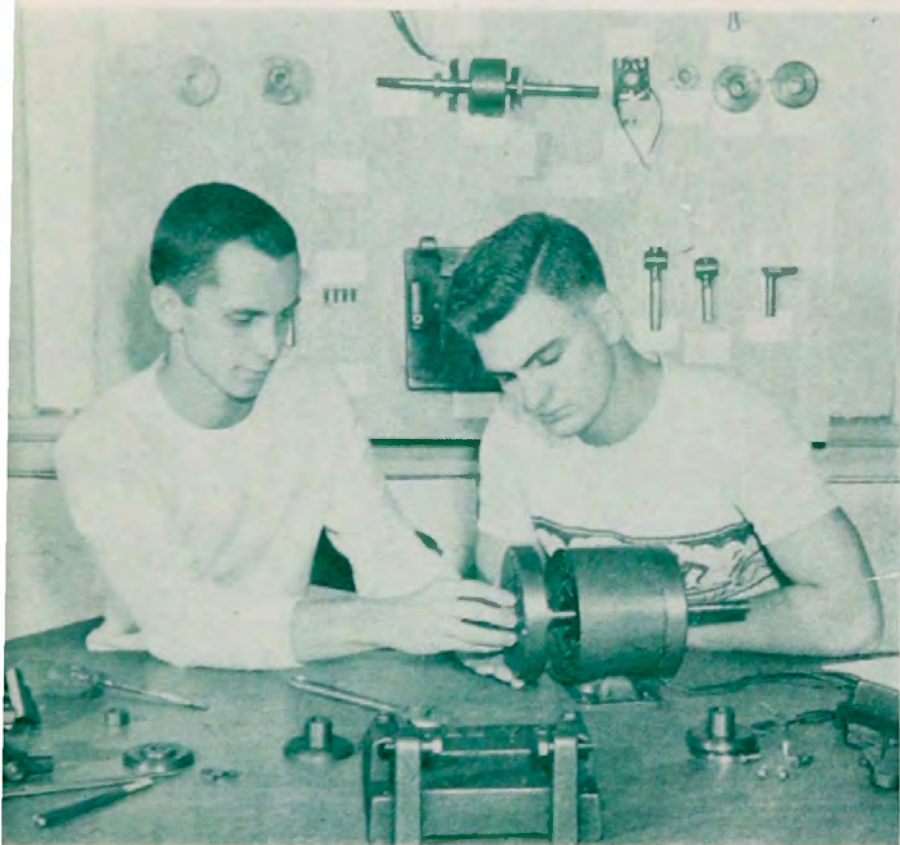


### Chemistry

Chemistry, another of the basic sciences, is included in four of the curricula at STI.



### III. SUPERVISORY TRAINING

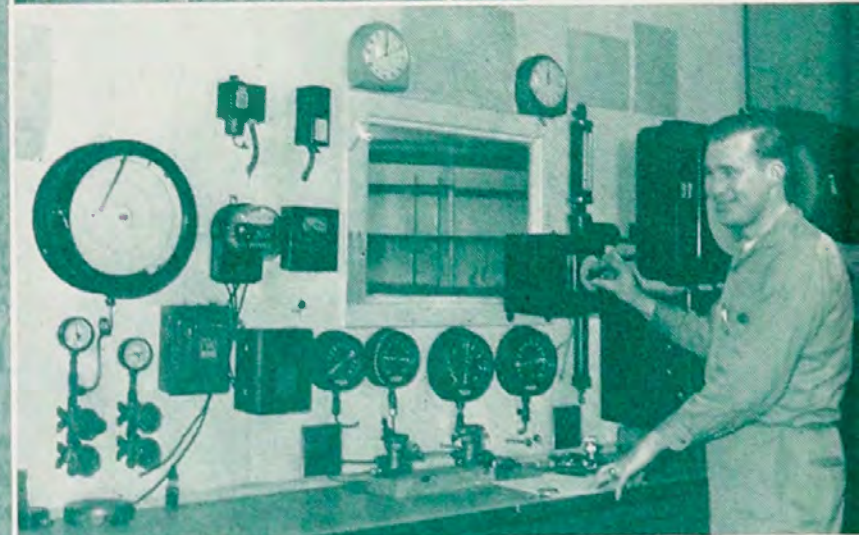
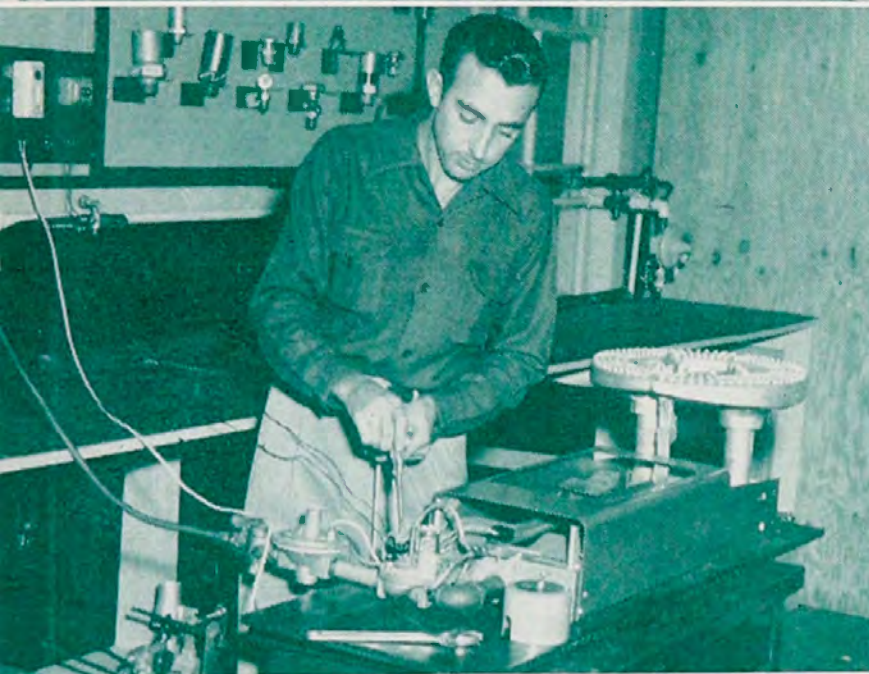
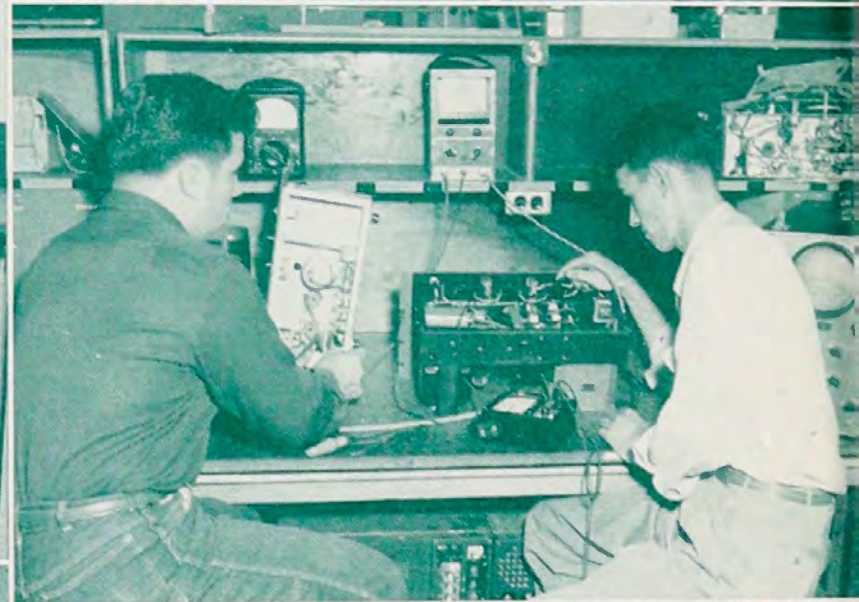
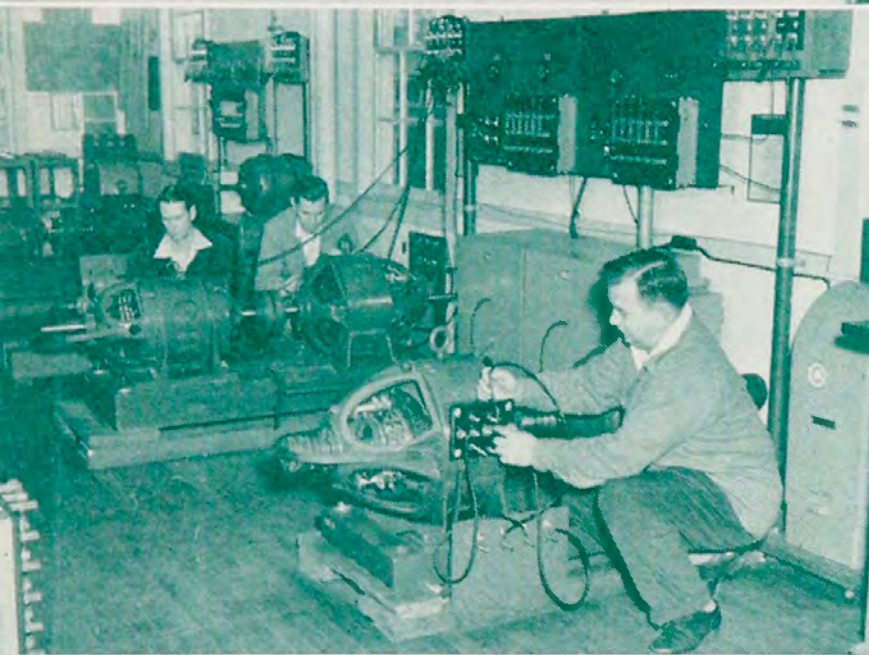


Every student who enrolls at Southern Tech is regarded as a potential supervisor — whatever the field of his specialty. All students, therefore, study, in addition to their specialized work, subjects which assist them to know people better; to guide, direct, and coordinate their efforts; to instruct them; and to get along with them successfully. These subjects include spoken and written English, Human Relations, Labor Relations, Supervisory Training, Safety, Industrial Sales and Purchasing, and Contracts and Specifications.

Among Many Techniques Learned Are Job Instruction (above) and Conducting Conferences (below)



# IV. TECHNICAL SPECIALTIES



## GENERAL INFORMATION

### HISTORY

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.

Southern Technical Institute, first known as The Technical Institute, began its unique program at Chamblee, Georgia, on March 24, 1948. Since that time it has been fully accredited by the Engineers' Council for Professional Development and is now listed in the Bulletin of the United States Office of Education as an accredited institution of higher learning. It is a permanent, full-time, two-year, co-educational, boarding college under the supervision of the Georgia Institute of Technology through the Engineering Extension Division.

In its six years of operation, the Southern Technical Institute has graduated and sent into industry 602 skilled technicians, who are now filling responsible positions and are being paid excellent salaries. Many of these graduates have been promoted to key positions of industrial leadership.

### BUILDINGS AND EQUIPMENT

The Southern Technical Institute is located on a campus which was once part of 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 Administrative 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.

### ROOM FURNISHINGS

Dormitory rooms are designed to accommodate two occupants comfortably. Each room is furnished with single Hollywood type beds with innerspring mattress, dresser, study table, chairs, closets, and a small space for luggage. Dormitory lights are of the ceiling type.

**The student must provide bed linen, blankets (2), a pillow, towels, a desk lamp, and any other personal items that he may desire.**

Married students may secure at reasonable rents one-bedroom or two-bedroom apartments, furnished or unfurnished, at Tech-Lawson Apartments, only a short distance from the campus.

## TUITION AND FEES

	Matricu- lation 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 PL 346 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.

## 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 and room	456.00	456.00
Books and supplies	80.00	80.00
Key and security deposit	10.00	10.00

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 \$152.00, which includes a dormitory room and three meals a day except Sunday and official school holidays, when the dining hall will be closed. This cost may vary slightly according to the cost of food, and may be paid in monthly installments in accordance with an official payment schedule established for each quarter.

*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 and only by faculty action. A fee of \$2.00 will be charged in all such cases.

## KEY AND SECURITY DEPOSIT

A \$10.00 key and security deposit must be made by students who live in the STI dormitories. This deposit will be refunded at the end

of the school year or at such time when a student may leave school, provided the key is turned in and there is no damage to dormitory facilities for which a student is responsible.

### 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

Refund of unused portion of board and room charges will be made only if student officially withdraws from school, vacates room, turns in key, and surrenders remainder of meal ticket.

### DEFINITION OF LEGAL RESIDENCE

To be considered a legal resident of Georgia for the purpose of registering at the Southern Technical Institute, a student must present evidence as follows:

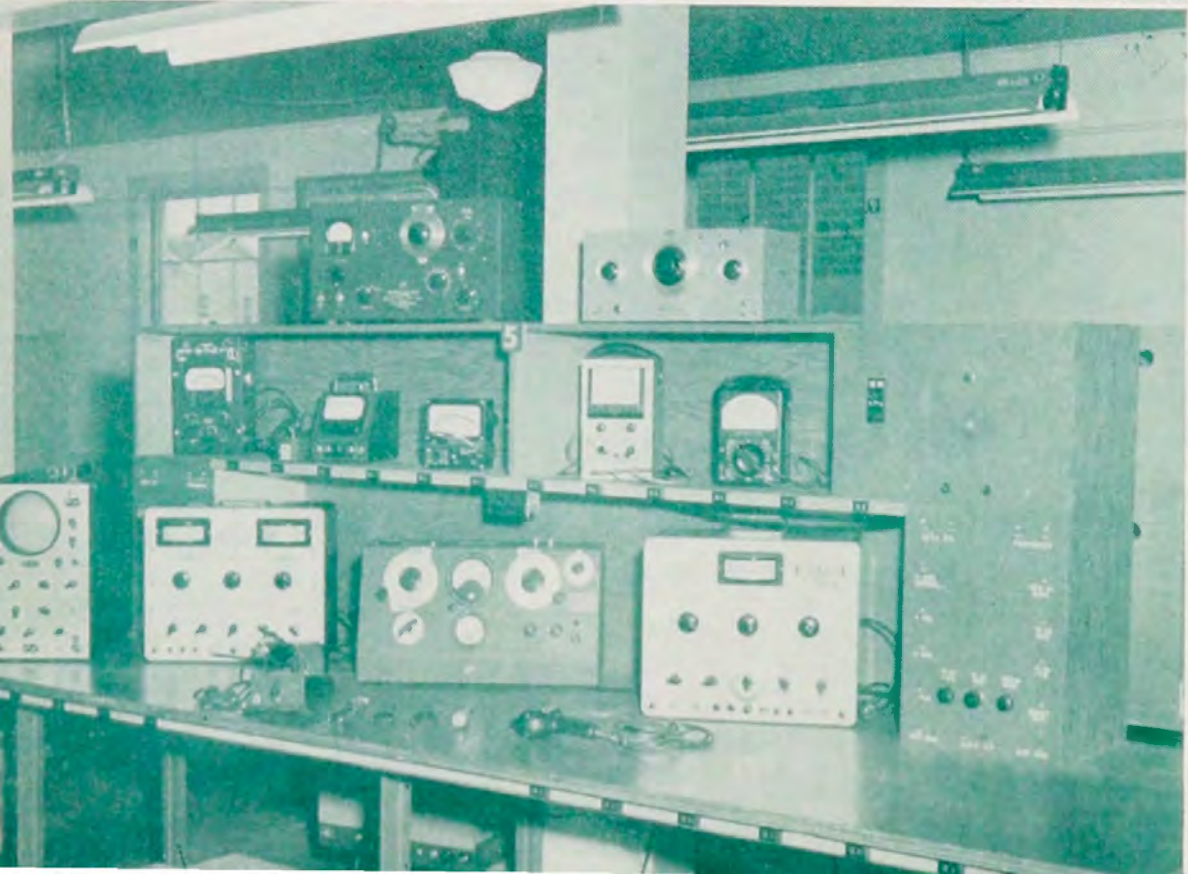
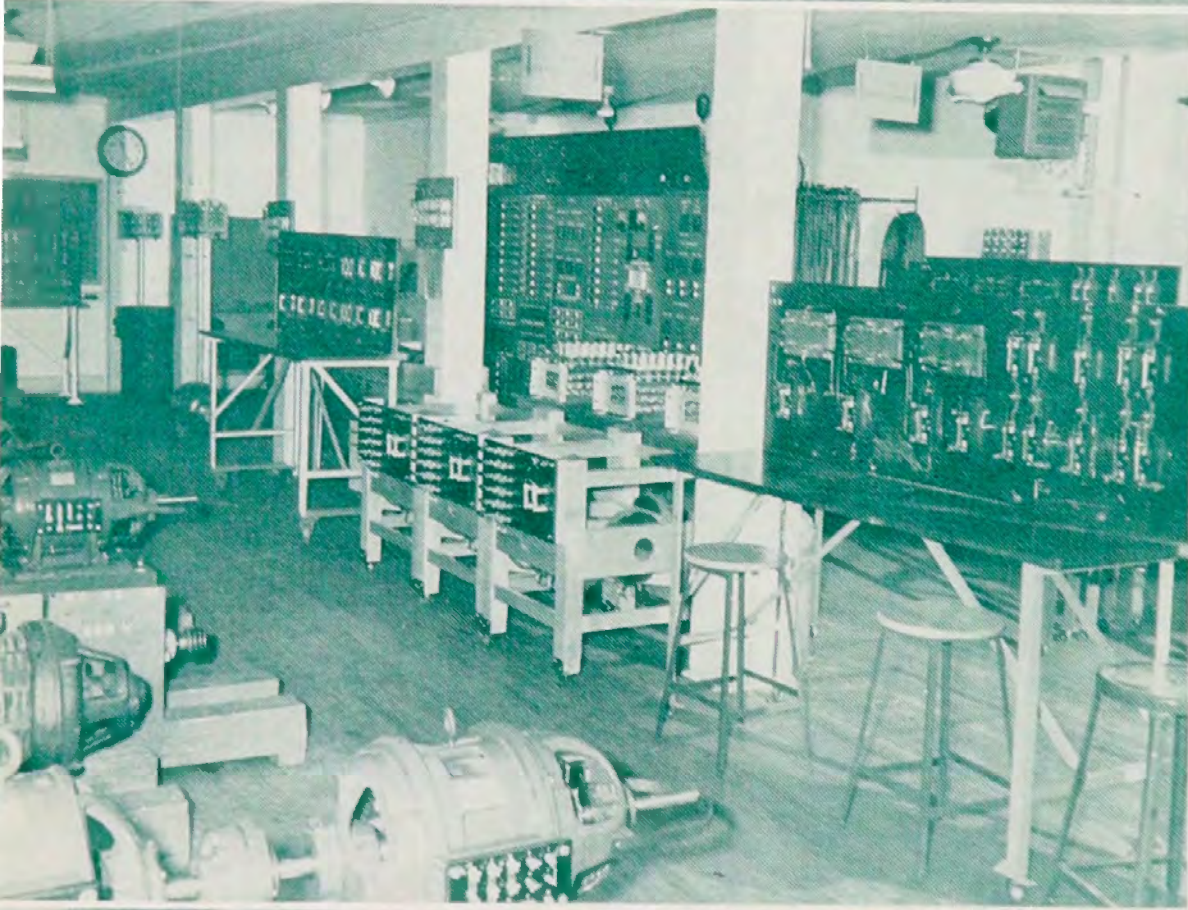
(a) If under 21 years of age, that the supporting parent (or guardian) has been a bona fide resident of the State of Georgia for at least one year next preceding the registration date.

In the event that a legal resident of Georgia is appointed as the guardian of a non-resident minor, such minor does not become a resident until the expiration of one year from the date of appointment, and then only upon proper showing that such appointment was not made to avoid the non-resident fee.

(b) If over 21 years of age, that bona fide residence in the State of Georgia has been established for at least one year next preceding

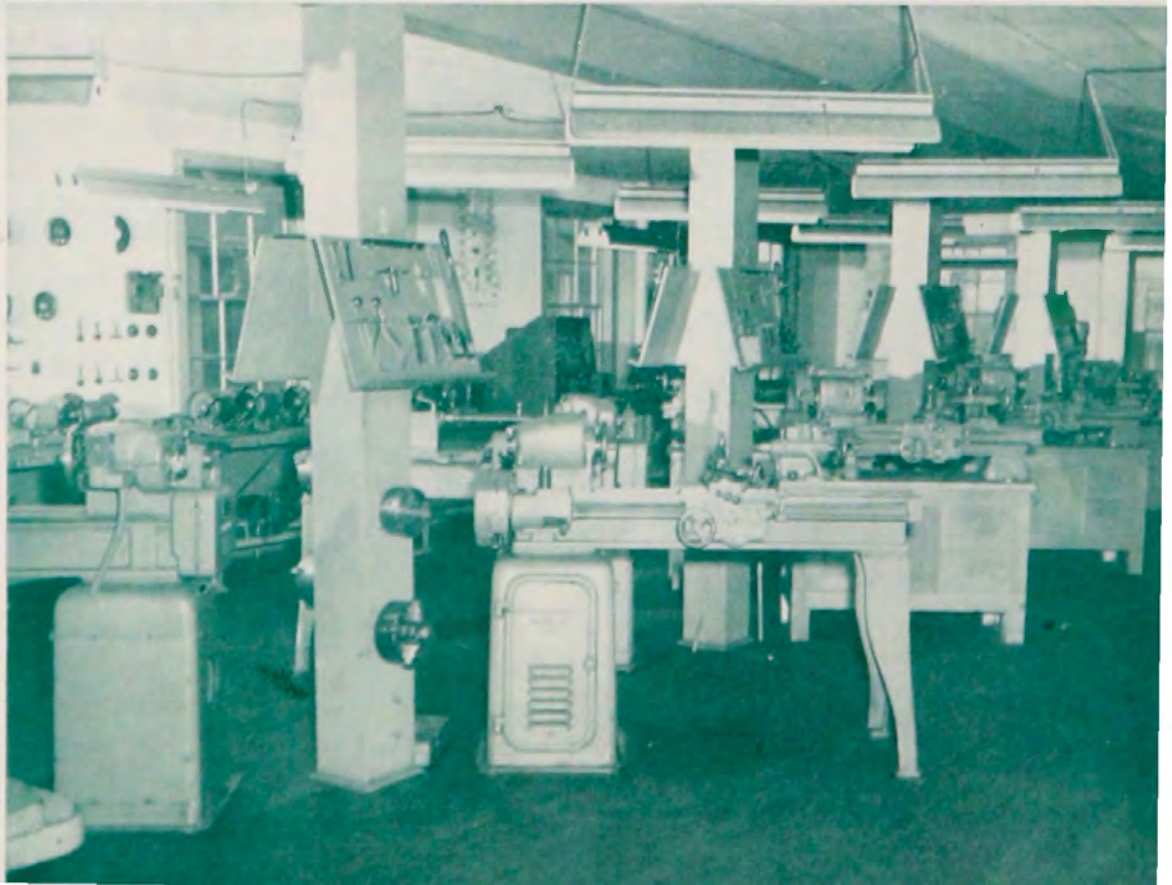
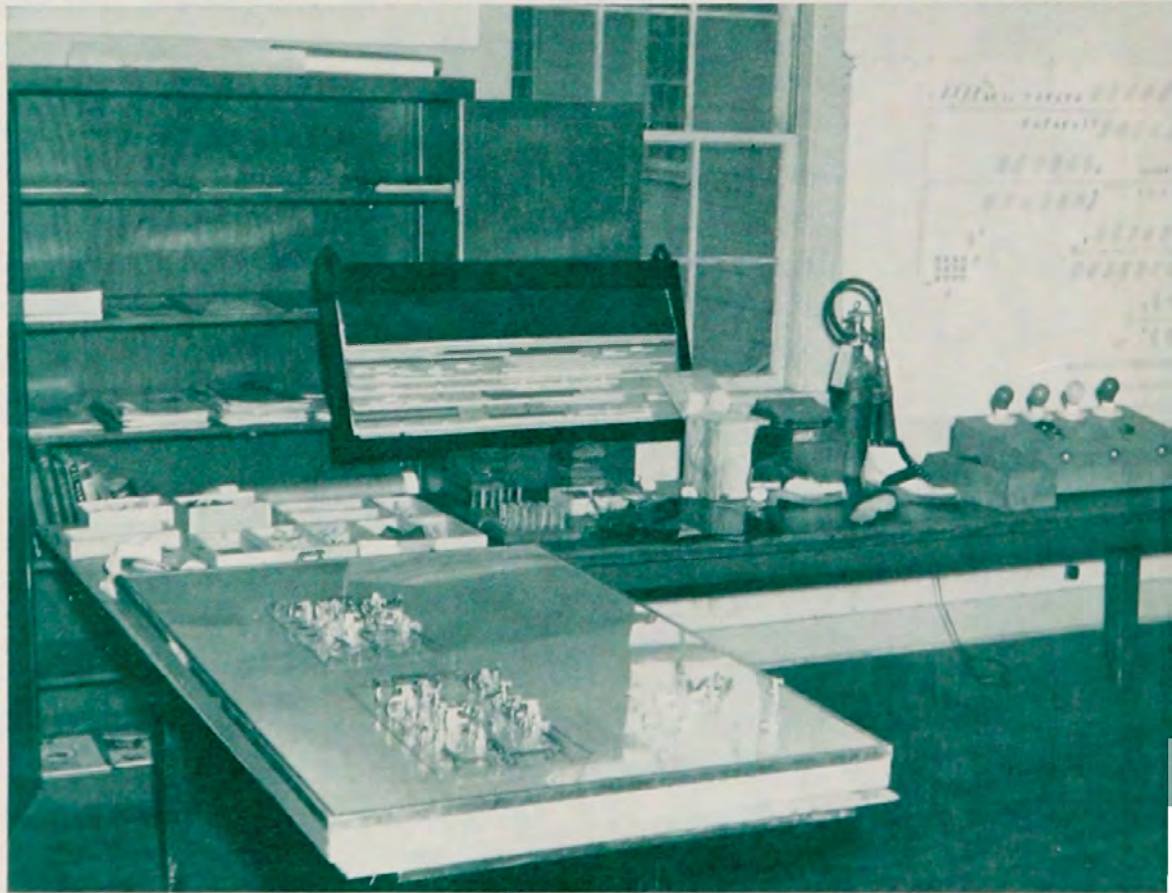
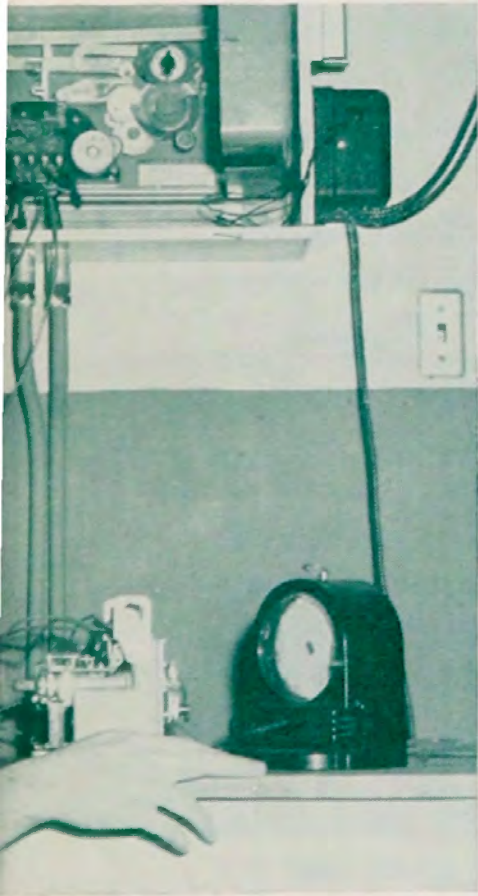
## STI EQUIPMENT

Each of Southern Tech's eight curricula is based upon an excellent, effective study-combination of 60 per cent theoretical material and 40 per cent practical work. In the Institute's 22 shops and laboratories is found a wide



## IS SUPERIOR

variety of the most modern equipment available. All departments possess everything necessary to build, work out, test, inspect, demonstrate, or prove the projects, problems, or principles encountered by the student in his two years of training.



registration and that he is eligible to become a registered voter. No person shall be deemed to have gained or lost residence while a student at the Southern Technical Institute.

### VETERANS PROGRAM

The school is approved for the training of veterans under Public Law 346 ("G. I. Bill of Rights"), Public Law 16 (Disability), Public Law 550 (Korean), and Public Law 894 (Korean Disability). Veterans eligible for training under either bill may apply directly to the nearest Veterans Administration office or may receive necessary information by writing or calling Southern Technical Institute (Atlanta No. 47-3164, Chamblee No. 7-3164).

### HEALTH CARE

The medical fee paid by the student entitles him to clinical services for minor illnesses by doctors at the Chamblee Hospital. The facilities of the hospital on the main campus of the Georgia Institute of Technology are available for the use of Southern Tech students who require temporary hospitalization.

Free service does not apply to the following: major surgery, elective surgery, specialist's care, orthopedic appliances, special laboratory examinations, special nurses, medications, hospitalization in cases of the more serious contagious diseases, or students who are ill electing to remain outside the infirmary. In these instances the student, parent or guardian is responsible for such added expense.

### AVAILABLE SCHOLARSHIPS

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.

The following firms have contributed scholarships totaling \$28,990.00.

### DONORS OF OUT-OF-STATE SCHOLARSHIPS

The Bastian-Blessing Company.  
Butane Gas of Mississippi and Alabama.  
The Dri-Gas Corporation.  
Fisher Governor Company (Fisher Foundation).  
Green's Fuel.  
The Parlett Gas Company.  
Skelly Oil Company.  
Serval, Inc.  
The Weatherhead Company.  
The Seley Foundation, Inc.



## DONORS OF IN-STATE SCHOLARSHIPS

Atlanta Gas Light Company.  
Automatic Gas Company of Columbus, Inc.  
Carolina Butane Gas Company, Inc.  
Charles S. Martin Distributing Company, Inc.  
Community Gas Company.  
Delta Tank Manufacturing Company, Inc.  
Economy Gas & Appliance Company.  
Gas Equipment & Supply Company.  
Georgia Automatic Gas Company.  
Georgia Distributors, Inc.  
Georgia L-P-Gas Association.  
Hopkins Equipment Company.  
Horne-Wilson, Inc.  
Noland Company, Inc.  
Rumbold & Company, Inc.  
Southern Gas Corporation.

## GAS FUEL TECHNOLOGY FOUNDATION

The Liquefied Petroleum Gas Association, at its Board of Directors Meeting on September 14, 1951, established "The Gas Fuel Technology Foundation," which will distribute scholarships to applicants from every state in the Union. Information about scholarships may be obtained from the Scholarship Committee, Southern Technical Institute, Chamblee, Georgia.

## 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.

## 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.

First-quarter students are given aptitude and interest tests during their first week at the school. Advisory counselors use the test scores as guides in advising the students in their departments.

## 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.



### Placement Service

When job-seeking time comes, Placement Director Wilkinson acts as liaison between graduate and prospective employer.

### Counseling Service

Student and Counselor meet in conference to work out school problems. Course advisers are always available to assist the students in their departments with personal, academic, or other difficulties.



## ACADEMIC REQUIREMENTS

To be accepted for admission, the applicant must be a graduate of an accredited high school, or possess the equivalent study or training. Furthermore, if he is a non-veteran, he must supply the school with three completed admission papers; if a veteran, with four:

1. An Application for Admission
2. A Certificate of Resident (or Non-Resident, if an out-of-state student). See page 26.
3. A high-school transcript or an official copy of satisfactory scores on the General Educational Development (GED) Tests
4. A VA Certificate of Eligibility, if a veteran

Students may be admitted for advanced standing

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

An official transcript of transfer credits must be submitted before the end of the first week the student enrolls.

## 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.

## GRADUATION REQUIREMENTS

A student is eligible for graduation when he (1) has satisfactorily completed the required number of hours specified by the curriculum of the course in which he is specializing, (2) has achieved the necessary scholastic point average (1.70), and (3) has paid all required fees.

Southern Tech awards an Associate in Science Degree to each student who satisfactorily completes the required program of study for his chosen field as outlined in this catalogue.

Beginning with the 1952-53 academic year only one graduation exercise a year will be held—that in June, at the end of the spring quarter.

## 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.

## AMENDMENT TO ADMISSION REQUIREMENTS

On April 8, 1953, the Board of Regents of the University System of Georgia adopted the following amendment to admission requirements and made it applicable to all institutions in the University System.

1. Any resident of Georgia applying for admission to an institution of the University System of Georgia shall be required to submit certificates from two citizens of Georgia, alumni of the institution that he desires to attend on prescribed forms, which shall certify that each of such alumni is personally acquainted with the applicant, that he is of good moral character, bears a good reputation in the community in which he resides, and, in the opinion of such alumnus, is a fit and suitable person for admission to the institution and able to pursue successfully the courses of study offered by the institution he desires to attend.

Provided, however, that any applicant who seeks admission to an institution with an enrollment of less than 1000 students and who lives in a county in which no alumnus of the institution he wishes to attend resides, may furnish a certificate from the Judge of the Superior Court of his circuit in lieu of the certificate from alumni. In such a case the certificate of the Judge of the Superior Court shall set forth the same facts that the alumni certificate must contain in other cases.

Each such applicant shall also submit a certificate from the Ordinary or Clerk of the Superior Court of the county in which the applicant resides that such applicant is a bona fide resident of such county, is of good moral character and bears a good reputation in the community in which he resides.

2. Any non-resident of the State applying for admission to an institution of the University System of Georgia shall submit a similar certificate from two alumni of the institution that he desires to attend, or from two reputable citizens of the community in which the applicant resides.

Every such applicant shall also submit a certificate from a judge or a court of record of the county, parish or other political sub-division of the State in which he resides that he is a bona fide resident of such county, parish or other political subdivision and a person of good moral character and bears a good reputation in the community in which he resides.

3. There is reserved to every institution of the University System of Georgia the right to require any applicant for admission to take appropriate intelligence and aptitude tests in order that the institution may have information bearing on the applicant's ability to pursue successfully courses of study for which the applicant wishes to enroll and the right to reject any applicant who fails to satisfactorily meet such tests.

4. The foregoing requirements shall apply to all applicants who have applied for admission to any institution of the University System of Georgia, but have not been actually enrolled and admitted, and to all applicants who hereafter make application for admission to any such institution.

## EXTRACURRICULAR ACTIVITIES

*The Technician*

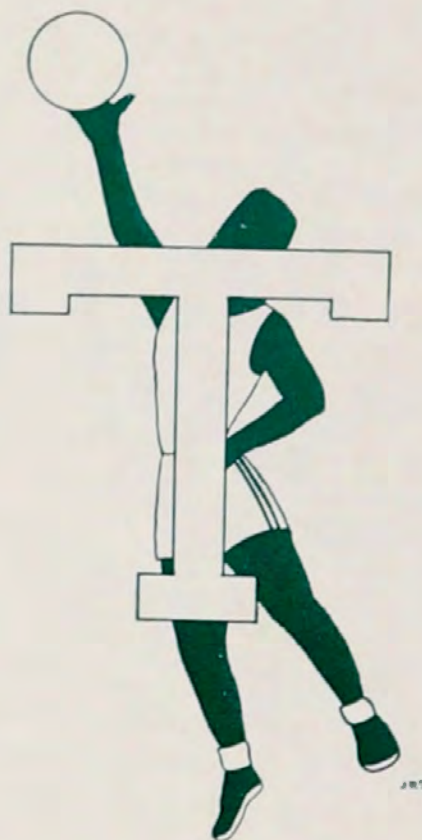
*Technician's Log*

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.

# Technician



A Unit of Georgia Tech

Vol. V

Southern Technical Institute, Chamblee, Ga., November, 1952

No. 3

## Club, Choir To Present Concert on December 9

Group of 35 to Appear in Four-Part, Varied Program of World's Loved Music

Southern Tech Glee Club and the STI Choir, under the direction of Jack Elkins, will appear in a joint Christmas concert in the school gym on Tuesday evening, December 9, at 8 o'clock. No charges are made for this performance, and the public is cordially invited.

The evening's program will be presented in four parts: (1) Songs by the Glee Club; (2) "Four by Four" by a group of four songs by the most talented of the

Club's singers; (3) Songs by the Choir; and (4) Caroling by the Audience, in which all present will join in singing carols in keeping with the Christmas season.

In general, the selections by the Glee Club will be semi-classical and popular, while that of the Choir will be music in the spirit of the season. Some of the numbers will be "Only Make Believe," "Ol' Man River," "The Emperor Waltz," "Ave Maria," and "Let Every Tongue Adore Thee." A program lasting approximately two hours will be offered.

### 35 To Appear

Presenting solo numbers will be Jack Elkins, Ken Malone, Raymond Eckman, Max Johnston, and Norman Talley. About 35 students will participate in the evening's performance, which will be staged in the school gym with special effects.

Accompanyist for the concert is Robert F. Peck.

## Students, Staff Give Thanks for Holidays From November 26-30

Joyous Thanksgiving approaches again!

And according to the Southern Technical Institute calendar, staff and students will be allowed November 27, 28, 29, and 30 off to enjoy the many activities and pleasures appropriate to the season and occasion—fishing, hunting, eating, reading, sleeping, visiting with friends, just plain loafin', or whatever other activity or lack of it one desires.

School will close after the last scheduled class on Wednesday, November 26, and fire up again Monday morning, December 1, at 8.

The Technician staff wishes everyone a wonderful, sane, thankful time!

## Annual Editors Make Progress

"Goodness! Do I look like that?" "I'd just had my hair washed. Doesn't it look messy?" (Hoping somebody would say no.) "Can't you..."

## Thanksgiving Dance Certain To Be Outstanding Affair

Event Sponsored by Mech, Gas Fuel Clubs Set for Friday, November 21

By Joe Boggs

The first event on the social calendar for the Southern Tech student body is the Thanksgiving Dance. This dance, an annual affair sponsored in the past by the Mechanical Club, is this year being co-sponsored by the Mechanical Club and the Gas Fuel Club.



### Let's Have Another Good One!

For the big occasion have been organized by the committees of each club. It will be held on Friday, the 21st of November at the Southern Tech on Hood Avenue, in Chamblee, Georgia, adjacent to Lawson Hall. It will begin at 8:00 P.M. and last until 12:00 P.M. Refreshments will be furnished by Herbert and his group. This group of students has played at several dances and has proved to be a very successful one.

Dress for the dance is semi-formal.

All forthcoming pointers indicate that the dance will be a big success, but of course what really makes a dance a success is the attendance. With the increased enrollment the dance committees anticipate a much larger attendance at this one. Both the Mechanical and the Gas Fuel Clubs join in urging everyone to plan to attend.

Tickets are on sale by several men out of each department. Let's all get that Bonnie Lass and come out and make this a memorable occasion.

## Contributions to Fund Lag; S. Craig Gives \$50

...giving boy or girl would be assured. ...checks pour in, he urges. ...Thomas S. ...

## The Technician

Published monthly by the students of The Southern Technical Institute, Chamblee, Georgia.

(The Southern Technical Institute is the Georgia Institute of Technology's two-year, coeducational, boarding unit located at Chamblee, Georgia. STI was established in March, 1948, to train technicians for industry in these eight fields: Building Construction, Civil, Gas Fuel, Electrical, Electronics and Radio, Heating and Air Conditioning, Industrial, and Mechanical.)

The Technician welcomes criticism, suggestions, and contributions, but insists that these communications be signed and limited to 300 words.

THE STAFF

Editor-in-Chief: John Parente  
Business Manager: Pierce Sowell  
Photography Editor: Wood, Charles Ray  
Sports Editor: L. Y. Bryant, J. A. Nattress

ASSISTANTS: Joe Boggs, Harry Ward, Kendall Prince, Don Voyles

FACULTY ADVISERS: John Parente, Pierce Sowell, Wood, Charles Ray, L. Y. Bryant, J. A. Nattress

Member Associated Collegiate Press

only \$1.00. The \$1,000 the Sch... had set as its goal to be reached by January 1, 1953.

All alumni are urged to send their contribution as soon as possible to the Alumni Secretary, Southern Technical Institute, Chamblee, Ga. Checks should be made payable to Southern Tech Alumni Fund.

Mr. Wilkinson states that any amount will be most welcome. He also points out that if every graduate gave only \$2.00, the \$1,000

## Telephone Men Complete Course

According to Mr. W. R. Halstead, Head of the Electrical and Electronics and Radio department, the second class of men who graduated at STI under the sponsorship of the Southern Bell Telephone Company's training program have completed their courses and are now on their jobs and families.

The purpose of the training of men here was to enable them to qualify for the FCC second-radio-telephone license.

The first such class, composed of men from 8 different South- (Continued on Page 2)



## Student Council Elects Milton Smith President; Odom, Veep; Wood, Secy

Milton Smith, senior student from Thomaston, Ga., and a member of the Electronic and Radio Department, was recently elected president of the Student Council for the Fall Quarter.

E. Odom, who is also a senior from Thomaston, Ga., and a member of the Electrical Department, was elected to assist Mr. Smith as vice-president. Clifton G. Wood, senior student from Prince George's Park, Maryland, and a member of the Gas Fuel Department, was elected secretary-treasurer.

Other new members who were elected by their departments to represent them are Fred ... S. Thompson, Civil; Russell ... Tavior,

Conditioning; Loren Rose, Heating & Air Conditioning; M. P. Lane, Mechanical; and Carol Henry, Industrial.

The purpose of the Student Council is to enact and enforce regulations and regulations in the interest of the student body.



## Assembly Assured

Administration will hold a top quality assembly each quarter for information and staff.

These programs were held at the Moody Science Building, "to a large group of students and faculty members in the Navy auditorium at the Club House on Thursday, October 30.

The next general assembly will be held on Thursday, December 11, at which time an outstanding speaker will talk to the assembly or another film will be shown.

Students and faculty members are urged to attend these meetings, at which they are sure to get some-

THE TECHNICIAN'S LOG



1952

THE  
TECHNICIAN'S LOG

Students Gain Valuable Experience While Producing the Yearbook



Fast Action  
on  
the Court



Many Benefits are Derived from Intramural Activities

1953  
Basketball  
Squad





## 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.



Coach Arntson Shows 'Em How



Student Council  
at Work



The Glee Club Appears in Concert



Frequent  
Dances Are  
Held  
in the Gym

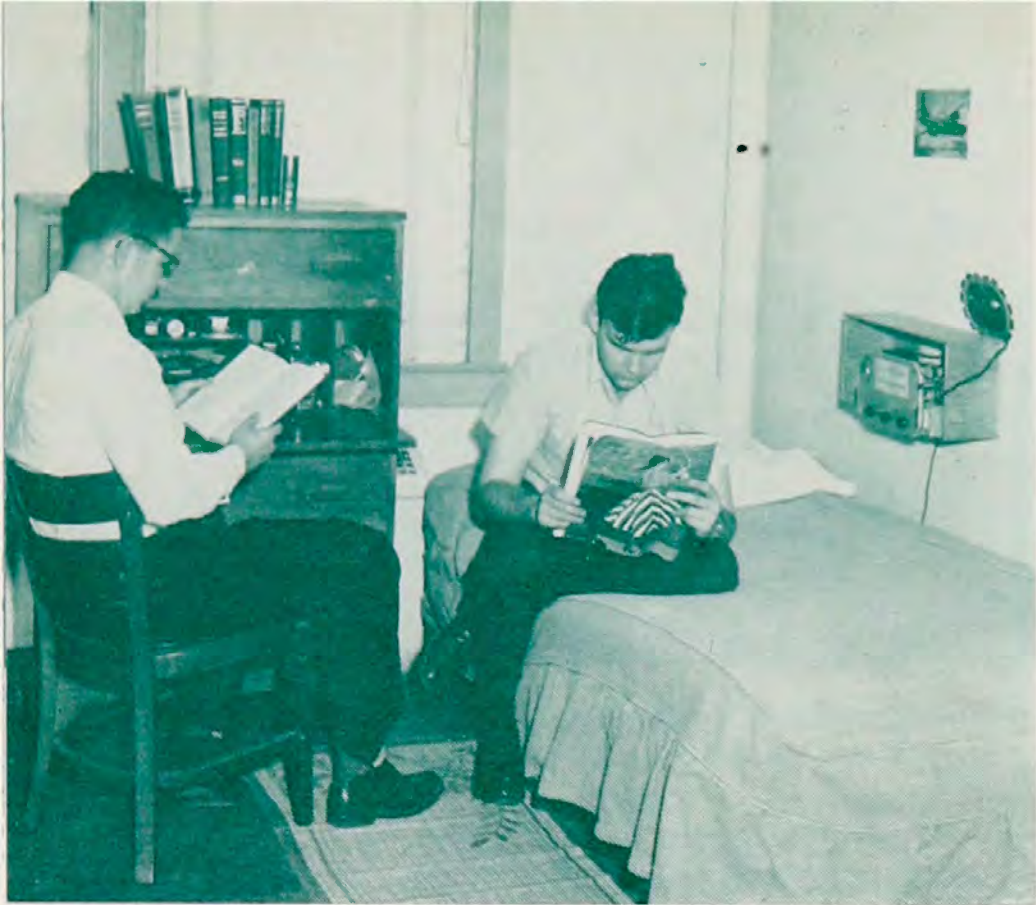
## CAMPUS ORGANIZATIONS

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 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 Honor Society





Dormitory Rooms Are  
Conducive to Study  
and Comfortable Living



STI's Most Popular Activity—Eating in School Cafeteria

Life Is Not All Eating  
and Sleeping—Instructors  
Still Give Tests!



# SOUTHERN TECHNICAL INSTITUTE

## COURSES OF STUDY

BUILDING CONSTRUCTION TECHNOLOGY

CIVIL TECHNOLOGY

ELECTRICAL TECHNOLOGY

ELECTRONICS AND COMMUNICATIONS TECHNOLOGY

GAS FUEL TECHNOLOGY

HEATING AND AIR CONDITIONING TECHNOLOGY

INDUSTRIAL TECHNOLOGY

MECHANICAL TECHNOLOGY

## ACCREDITATION

All eight of these courses are fully accredited by the Engineers' Council for Professional Development, the national agency which accredits technical institute and engineering curricula throughout the United States.

### 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.

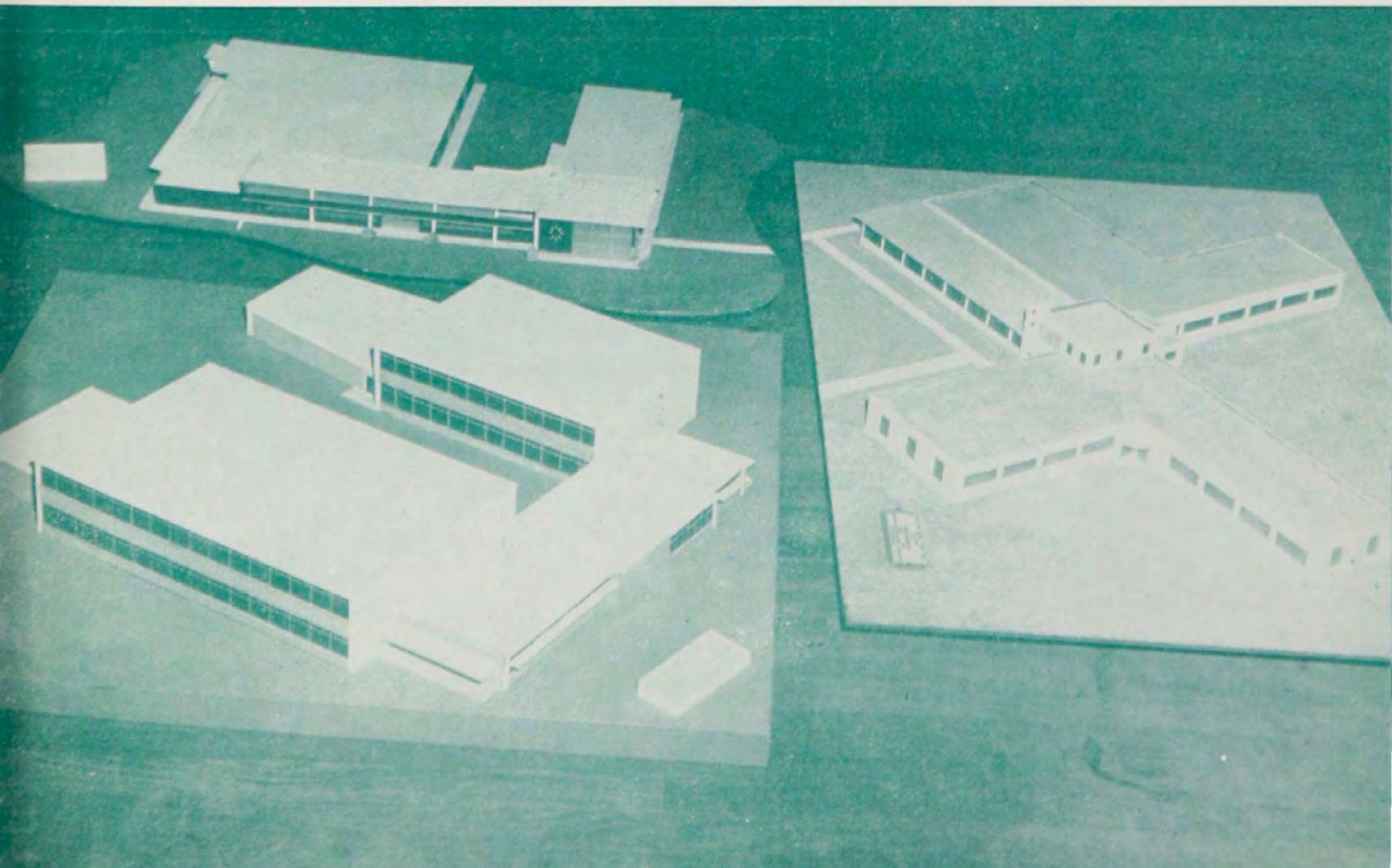
C L T: Class hours                      Laboratory hours                      Total quarter hours

First Quarter	Second Quarter
C L T	C L T
T. Dr. 11 (Tech. Draw. I)    0—6—2	Civil T. 32 (Elem. Surv.)    3—9—6
T. Eng. 11 (Comp. & Rhet.) 3—0—3	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. Math. 11 (Algebra)       5—3—6	T. Phys. 22 (Mechanics)    5—3—6
Mech. T. 37 (Gen. Woodwork) 0—6—2	
Total                            11—15—16	Total                            16—12—20
Third Quarter	Fourth Quarter
C L T	C L T
Arch. T. 31 (Graphics)       3—9—6	Arch. T. 12 (Arch. Hist.)    3—0—3
Arch. T. 33 (Bldg. Mat.)     3—0—3	Arch. T. 41 (Bldg. Design I) 3—12—7
Mech. T. 49 (Mech. of Mat.) 5—3—6	Civil T. 21 (Graphic Statics) 0—3—1
T. Phys. 32 (Ht., Sound, Light) 3—3—4	Ind. T. 51 (Contracts & Spec.) 3—0—3
	T. Phys. 12 (Electricity)    5—3—6
Total                            14—15—19	Total                            14—18—20
Fifth Quarter	Sixth Quarter
C L T	C L T
Arch. T. 51 (Bldg. Design II) 3—9—6	Arch. T. 55 (Costs, Estimates) 3—3—4
Arch. T. 52 (Wd., Stl. Const.) 3—6—5	Arch. T. 61 (Bldg. Design III) 3—9—6
Arch. T. 54 (Bldg. Equip.)    3—0—3	Arch. T. 62 (Concrete Const.) 3—6—5
Civil T. 63 (Struc. Draft.)    0—6—2	T. Eng. 62 (Tech. Writing)    2—0—2
T. Eng. 52 (Public Speaking) 2—0—2	Ind. T. 67 (Seminar)         1—0—1
Total                            11—21—18	Total                            12—18—18

## POSITIONS HELD BY STI GRADUATES IN BUILDING CONSTRUCTION

Engineering Draftsman  
Estimator-Expediter  
Template Maker  
General Contractor (Partner)  
Superintendent and Estimator  
Manager, Lumber Company  
Architectural Engineer  
Building Contractor  
Junior Engineer  
Engineering Assistant  
Assistant Superintendent (Lumber Company)  
Architectural Draftsman  
Architectural Draftsman and Estimator  
Building Materials Salesman  
Building Inspector  
Appraiser and Inspector

**Building Scale Models Which Conform to Standard Practices Is  
One Means of Solving Problems**



## 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					
<b>First Quarter</b>							
	<b>C</b>	<b>L</b>	<b>T</b>		<b>C</b>	<b>L</b>	<b>T</b>
Arch. T. 33 (Bldg. Materials)	3	—	0	—	3	—	1
T. Dr. 11 (Tech. Draw. I)	0	—	6	—	3	—	9
T. Eng. 11 (Comp. & Rhet.)	3	—	0	—	5	—	0
Ind. T. 12 (Human Relations)	3	—	0	—	5	—	3
T. Math. 11 (Algebra)	5	—	3	—	6	—	6
Total	14	—	9	—	13	—	18
<b>Second Quarter</b>							
	<b>C</b>	<b>L</b>	<b>T</b>		<b>C</b>	<b>L</b>	<b>T</b>
Civil T. 21 (Graphic Statics)	0	—	3	—	5	—	0
Civil T. 32 (Elem. Surv.)	3	—	9	—	6	—	6
T. Math. 21 (Trig., Analyt.)	5	—	0	—	5	—	3
T. Phys. 22 (Mechanics)	5	—	3	—	6	—	6
Total	13	—	15	—	16	—	20
<b>Third Quarter</b>							
	<b>C</b>	<b>L</b>	<b>T</b>		<b>C</b>	<b>L</b>	<b>T</b>
Civil T. 41 (Route Surv.)	3	—	6	—	5	—	5
Civil T. 42 (Highways)	3	—	0	—	5	—	5
Mech. T. 49 (Mech. of Mat.)	5	—	3	—	2	—	6
G. Phys. 32 (Ht., Sound, Light)	3	—	3	—	5	—	5
Total	14	—	12	—	16	—	20
<b>Fourth Quarter</b>							
	<b>C</b>	<b>L</b>	<b>T</b>		<b>C</b>	<b>L</b>	<b>T</b>
Civil T. 45 (Hydraulics)	5	—	0	—	3	—	0
Civil T. 62 (Land Surv.)	3	—	6	—	5	—	5
Civil T. 63 (Struc. Draft.)	0	—	6	—	2	—	2
T. Chem. 31 (Gen. Chemistry)	5	—	0	—	3	—	0
T. Eng. 21 (Comp. & Rhet.)	3	—	0	—	3	—	3
Total	16	—	12	—	17	—	20
<b>Fifth Quarter</b>							
	<b>C</b>	<b>L</b>	<b>T</b>		<b>C</b>	<b>L</b>	<b>T</b>
Arch. T. 55 (Costs, Estimates)	3	—	3	—	5	—	5
Arch. T. 62 (Concrete Const.)	3	—	6	—	3	—	3
Civil T. 51 (Top. & Con. Surv.)	2	—	6	—	2	—	2
Civil T. 64 (Constr. Methods)	3	—	3	—	3	—	4
T. Eng. 52 (Public Speaking)	2	—	0	—	2	—	2
Total	13	—	18	—	17	—	19
<b>Sixth Quarter</b>							
	<b>C</b>	<b>L</b>	<b>T</b>		<b>C</b>	<b>L</b>	<b>T</b>
Arch. T. 52 (Wd., Stl., Constr.)	3	—	6	—	5	—	5
Civil T. 44 (W. & S. Plt. Opr.)	3	—	0	—	3	—	3
T. Eng. 62 (Tech. Writing)	2	—	0	—	2	—	2
Ind. T. 51 (Contracts & Spec.)	3	—	0	—	3	—	3
Ind. T. 67 (Seminar)	1	—	0	—	1	—	1
T. Phys. 12 (Electricity)	5	—	3	—	6	—	6
Total	17	—	9	—	20	—	20



## 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 the technical sciences of mathematics, physics, and drawing; (2) general training in composition and rhetoric, personnel relations, contracts and specifications, technical writing, and public speaking; (3) specific training in the generation, transmission, distribution, and utilization of electrical power; electrical circuit theory and application, electron tubes, basic electronic circuits, instrumentation and test equipment, transformers, direct and alternating-current machinery, industrial control equipment, telephony, illumination, electrical drafting, and industrial electronic apparatus.

Graduates of the electrical course should be able to fill responsible positions as production and maintenance technicians, laboratory and research technicians, electrical draftsmen, project and control technicians, powerhouse 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
<b>First Quarter</b>		
C L T		C L T
T. Dr. 11 (Tech. Draw. I) ..	0—6—2	Elec. T. 21 (A-C Circuits I) ..
T. Eng. 11 (Comp. & Rhet.) ..	3—0—3	T. Eng. 21 (Comp. & Rhet.) ..
T. Math. 11 (Algebra) ..	5—3—6	T. Math. 21 (Trig., Analyt.) ..
T. Phys. 12 (Electricity) ..	5—3—6	T. Phys. 22 (Mechanics) ..
	Total ..	Total ..
	13—12—17	18—6—20
<b>Second Quarter</b>		
<b>Third Quarter</b>		
C L T		C L T
Elec. T. 31 (A-C Circuits II) ..	5—3—6	Elec. T. 45 (Rotating Mach.) ..
Elec. T. 33 (Electron Tubes) ..	5—3—6	Elec. T. 47 (Telephony) ..
T. Math. 31 (Applied Math.) ..	5—0—5	Elec. T. 48 (Polyphase Cir.) ..
T. Phys. 32 (Ht., Sound, Light) ..	3—3—4	Elec. T. 51 (Ind. Electronics) ..
	Total ..	Total ..
	18—9—21	18—9—21
<b>Fourth Quarter</b>		
<b>Fifth Quarter</b>		
C L T		C L T
Elec. T. 42 (A-C Machines I) ..	5—3—6	T. Dr. 62 (Elec. Drawing) ..
Elec. T. 43 (Illumination) ..	2—3—3	Elec. T. 52 (A-C Machines II) ..
Elec. T. 53 (Wiring Methods) ..	5—0—5	Elec. T. 61 (Elec. Power Distr.) ..
T. Eng. 52 (Public Speaking) ..	2—0—2	Elec. T. 64 (Seminar) ..
Ind. T. 12 (Human Relations) ..	3—0—3	T. Eng. 62 (Tech. Writing) ..
	Total ..	Ind. T. 51 (Contracts & Spec.) ..
	17—6—19	Ind. T. 67 (Seminar) ..
		Total ..
		16—9—19
<b>Sixth Quarter</b>		

## 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.

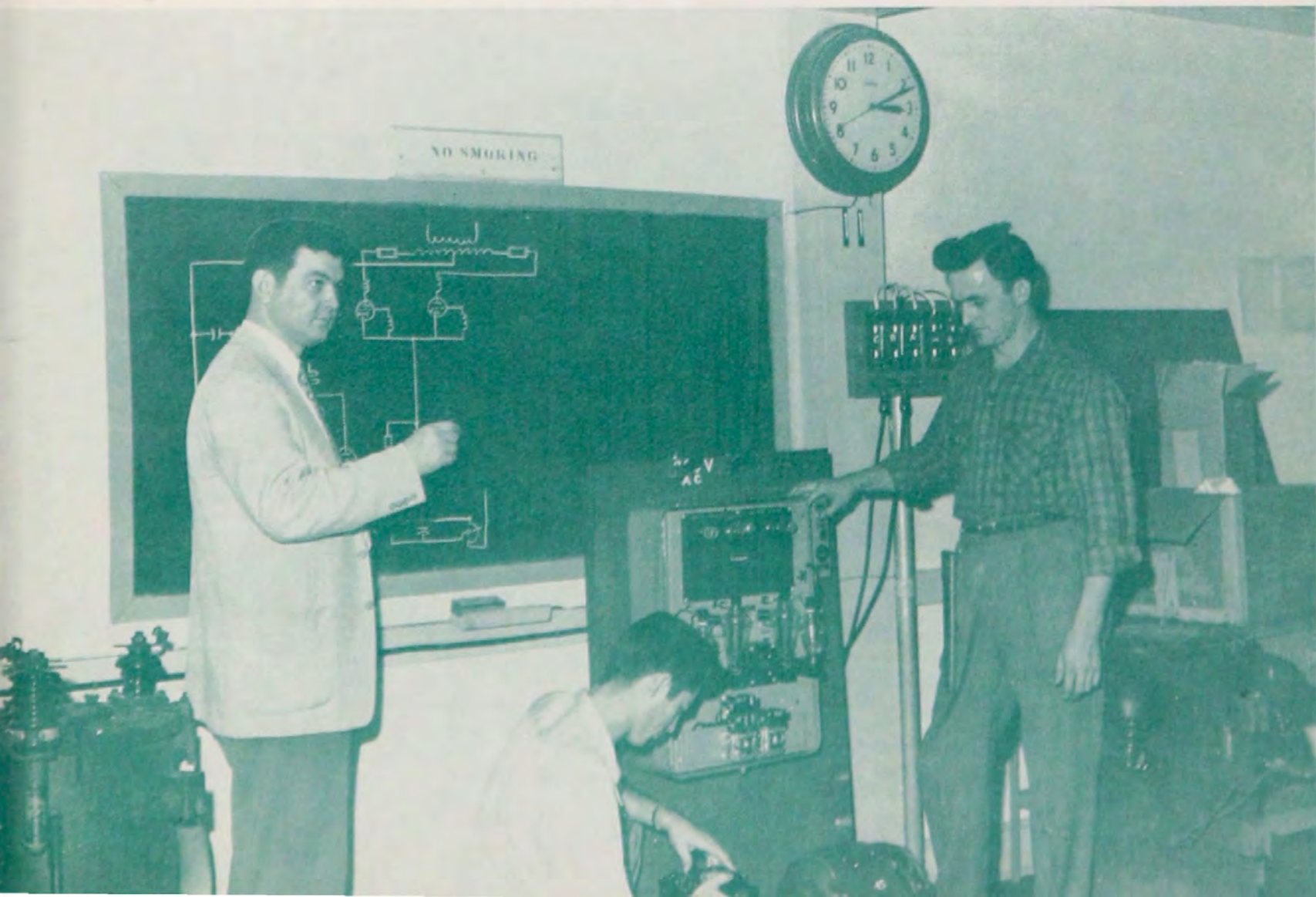
**GOVERNMENT:** engineering aide, electrician, building superintendent, power plant operator, inspector, draftsman, tester.

**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.

### Laboratories Are Indispensable in Confirming Technical Principles and Theories



## ELECTRONICS AND COMMUNICATIONS TECHNOLOGY

The course in Electronics and Communications Technology is planned to provide (1) general training in the technical sciences of mathematics, physics, and drawing; (2) general training in composition and rhetoric, personnel relations, technical writing, and public speaking; (3) specific training in electrical and electronic circuitry, transmission lines, radiation, antennas, wave filters, instrumentation and test equipment, rotating electric machinery, industrial electronic control equipment, telephony, AM and FM radio, television, and radar.

Graduates of the electronics course should be able to fill responsible positions as production and maintenance technicians and project and control technicians in the fields of radio, television, X-ray, and radar; electronics laboratory and research technicians, and electronic 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

<b>First Quarter</b>	<b>Second Quarter</b>
C L T	C L T
T. Dr. 11 (Tech. Draw. I)     0—6—2	Elec. T. 21 (A-C Circuits I) 5—3—6
T. Eng. 11 (Comp. & Rhet.)   3—0—3	T. Eng. 21 (Comp. & Rhet.)  3—0—3
T. Math. 11 (Algebra)         5—3—6	T. Math. 21 (Trig., Analyt.) 5—0—5
T. Phys. 12 (Electricity)    5—3—6	T. Phys. 22 (Mechanics)    5—3—6
Total                                13—12—17	Total                                18—6—20
<b>Third Quarter</b>	<b>Fourth Quarter</b>
C L T	C L T
Elec. T. 31 (A-C Circuits II) 5—3—6	Elec. T. 45 (Rotating Mach.) 5—3—6
Elec. T. 33 (Electron Tubes)  5—3—6	Elec. T. 47 (Telephony)       3—3—4
T. Math. 31 (Applied Math.)  5—0—5	Elec. T. 48 (Polyphase Cir.) 5—0—5
T. Phys. 32 (Ht., Sound, Light) 3—3—4	Elec. T. 51 (Ind. Electronics) 5—3—6
Total                                18—9—21	Total                                18—9—21
<b>Fifth Quarter</b>	<b>Sixth Quarter</b>
C L T	C L T
Elec. T. 46 (Radio I)         5—6—7	Elec. T. 67 (FM & Television) 5—3—6
Elec. T. 58 (Tran. L. & Ant.) 5—3—6	Elec. T. 68 (Microwaves)     3—3—4
Elec. T. 59 (Spec. Problems)  0—6—2	Elec. T. 69 (Advanced Radio) 5—6—7
T. Eng. 52 (Public Speaking)  2—0—2	T. Eng. 62 (Tech. Writing)  2—0—2
Ind. T. 12 (Human Relations)  3—0—3	Ind. T. 67 (Seminar)         1—0—1
Total                                15—15—20	Total                                16—12—20

## PLACEMENT POSSIBILITIES IN ELECTRONICS AND COMMUNICATIONS

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.

Serviceman 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)

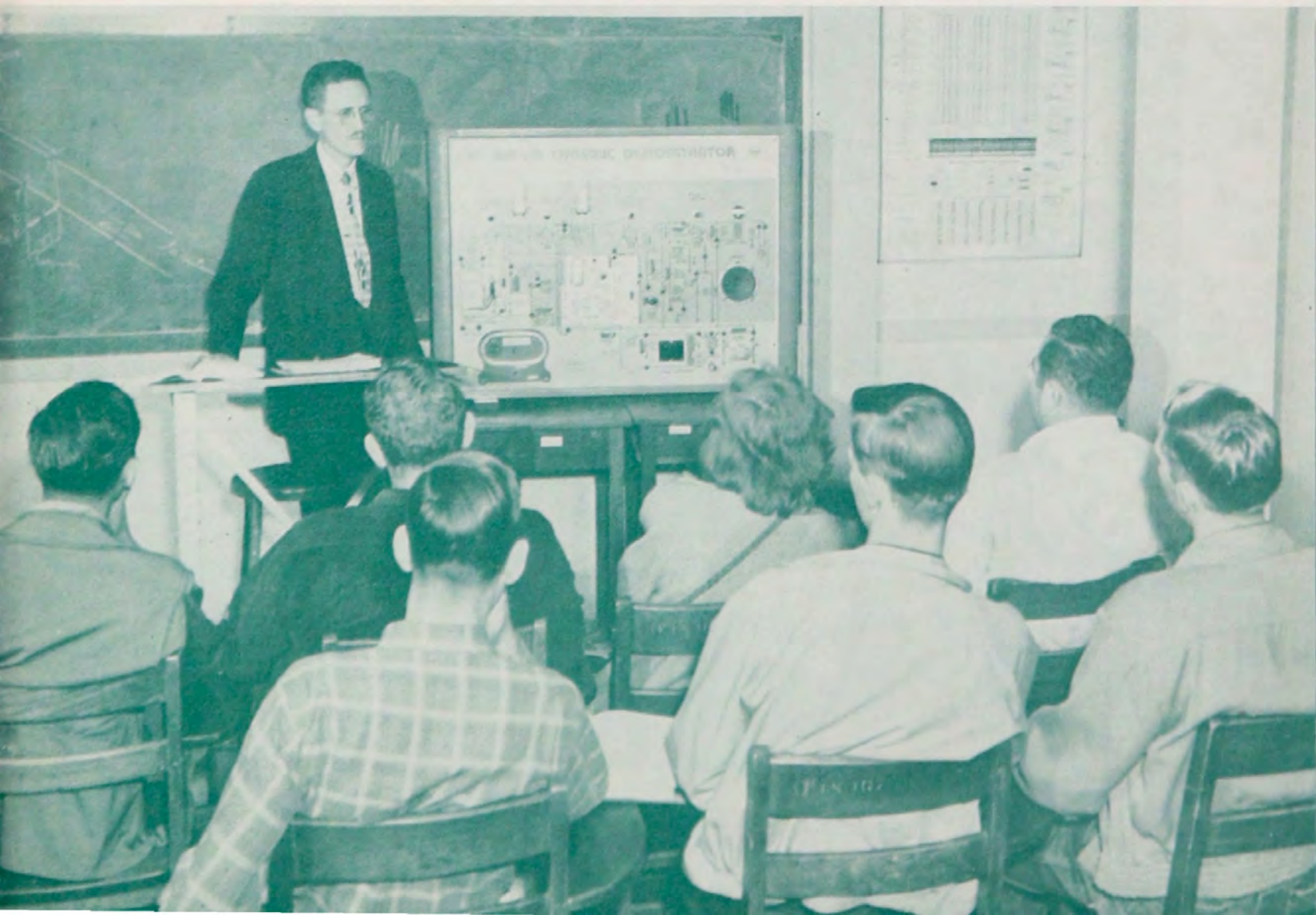
Civil Service Electronics Inspector

Civil Service Radio Maintenance, Construction

Warehouse (Electronic Equipment) Supervisor

Industrial Insurance Adjuster

**Lectures and Demonstrations Play Major Roles in Effective Instruction**



## 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
<b>First Quarter</b>					
	C	L	T		
T. Chem. 31 (Gen. Chemistry)	5	0	5		
T. Dr. 11 (Tech. Drawing I)	0	6	2		
Gas T. 13 (Gas Survey)	1	0	1		
Ind. T. 12 (Human Relations)	3	0	3		
T. Math. 11 (Algebra)	5	3	6		
Total			14-9-17		
<b>Second Quarter</b>					
	C	L	T		
T. Dr. 21 (Tech. Draw. II)	0	6	2		
T. Eng. 11 (Comp. & Rhet.)	3	0	3		
Gas T. 21 (Theory of Gases)	5	0	5		
T. Math. 21 (Trig., Analyt.)	5	0	5		
T. Phys. 22 (Mechanics)	5	3	6		
Total			18-9-21		
<b>Third Quarter</b>					
	C	L	T		
Arch. T. 24 (Blueprint Read.)	3	0	3		
T. Eng. 21 (Comp. & Rhet.)	3	0	3		
Gas T. 31 (Gas Util. I)	3	3	4		
Ind. T. 32 (Ind. Sales & Pur.)	3	0	3		
Mech. T. 24 (Gen. Metal Shop)	0	6	2		
T. Phys. 32 (Ht., Sound, Light)	3	3	4		
Total			15-12-19		
<b>Fourth Quarter</b>					
	C	L	T		
Gas T. 41 (Gas Util. II)	5	3	6		
Mech. T. 41 (Air Condition. I)	5	3	6		
T. Phys. 12 (Electricity)	5	3	6		
Total			15-9-18		
<b>Fifth Quarter</b>					
	C	L	T		
T. Dr. 41 (Mach. Sketching)	0	6	2		
T. Eng. 62 (Tech. Writing)	2	0	2		
Gas T. 51 (Gas Equip. I)	5	3	6		
Ind. T. 51 (Contracts & Specs.)	3	0	3		
Ind. T. 68 (Small Bus. Mgt.)	3	0	3		
Mech. T. 53 (Refrigeration I)	3	3	4		
Total			16-12-20		
<b>Sixth Quarter</b>					
	C	L	T		
T. Eng. 52 (Public Speaking)	2	0	2		
Gas T. 61 (Gas Equip. II)	3	3	4		
Gas T. 62 (Ind. Gas Util.)	3	3	4		
Ind. T. 62 (Supv. Training)	5	0	5		
Ind. T. 67 (Seminar)	1	0	1		
Mech. T. 68 (Sheet Metal)	0	6	2		
Total			14-12-18		

## 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

**Many Specialists Are Called in to Share Their Knowledge and Experience**



## 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
Mech. T. 24 (Gen. Metal Shop)	0	6	2
Total			13-15-18

### Second Quarter

	C	L	T
T. Dr. 21 (Tech. Drawing II)	0	6	2
T. Eng. 11 (Comp. & Rhet.)	3	0	3
Gas T. 21 (Theory of Gases)	5	0	5
T. Math. 21 (Trig., Analyt.)	5	0	5
T. Phys. 12 (Electricity)	5	3	6
Total			18-9-21

### Third Quarter

	C	L	T
Arch. T. 24 (Blueprint Read.)	3	0	3
Elec. T. 32 (Ind. Electricity)	5	3	6
Gas T. 31 (Gas Util. I)	3	3	4
Mech. T. 38 (Fuels & Burners)	3	0	3
T. Phys. 32 (Ht., Sound, Light)	3	3	4
Total			17-9-20

### Fourth Quarter

	C	L	T
T. Eng. 21 (Comp. & Rhet.)	3	0	3
Gas T. 41 (Gas Util. II)	5	3	6
Mech. T. 41 (Air Condition. I)	5	3	6
T. Phys. 22 (Mechanics)	5	3	6
Total			18-9-21

### Fifth Quarter

	C	L	T
T. Eng. 62 (Tech. Writing)	2	0	2
Ind. T. 32 (Ind. Sales & Pur.)	3	0	3
Mech. T. 52 (Air Condition. II)	5	6	7
Mech. T. 53 (Refrigeration I)	3	3	4
Mech. T. 68 (Gen. Sheet Metal)	0	6	2
Total			13-15-18

### 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
Mech. T. 69 (Sht. Mtl. Layout)	0	6	2
Total			14-15-19



## 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

Laboratory Technician (Refrigeration)

Individual Work Projects Are Also Vital in the Learning Process



## INDUSTRIAL TECHNOLOGY

The student in Industrial Technology is trained primarily for supervisory and management positions in the manufacturing industries. However, the very nature of the broad curriculum, stressing principles and practices of scientific management, enables a graduate to compete successfully for a variety of positions. These range from almost every phase of factory planning and operation to technical sales, positions with casualty and fire insurance companies that require knowledge of industrial safety, many staff department positions with transportation, distributing and utility companies, and to the operation of private business.

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.)	3	0	3
Ind. T. 23 (Job Evaluation)	2	0	2
T. Math. 21 (Trig., Analyt.)	5	0	5
Mech. T. 24 (Gen. Metal Shop)	0	6	2
T. Phys. 22 (Mechanics)	5	3	6
Total	15	15	20

### Third Quarter

	C	L	T
T. Eng. 21 (Comp. & Rhet.)	3	0	3
Ind. T. 22 (El. Ind. Safety)	3	0	3
Ind. T. 58 (Methods Imprvt.)	3	0	3
Mech. T. 11 (Tools & Methods)	3	0	3
Mech. T. 34 (Machine Shop I)	0	6	2
T. Phys. 12 (Electricity)	5	3	6
Total	17	9	20

### Fourth Quarter

	C	L	T
T. Eng. 52 (Public Speaking)	2	0	2
Ind. T. 43 (Time, Mot'n Study)	2	3	3
Ind. T. 45 (Matls. Handling)	2	0	2
Ind. T. 47 (Wage Incentives)	2	0	2
Ind. T. 52 (Prod. Control)	3	0	3
Ind. T. 61 (Ind. Economics)	5	0	5
T. Phys. 32 (Ht., Sound, Light)	3	3	4
Total	19	6	21

### Fifth Quarter

	C	L	T
T. Dr. 41 (Mach. Sketching)	0	6	2
T. Eng. 62 (Tech. Writing)	2	0	2
Ind. T. 32 (Ind. Sales & Pur.)	3	0	3
Ind. T. 42 (Labor Relations)	2	0	2
Ind. T. 63 (Quality Control)	2	0	2
Ind. T. 68 (Small Bus. Mgt.)	3	0	3
Mech. T. 59 (Inspec. Methods)	3	0	3
Total	15	6	17

### Sixth Quarter

	C	L	T
Ind. T. 41 (Plant Layout)	2	3	3
Ind. T. 51 (Contracts & Spec.)	3	0	3
Ind. T. 62 (Supv. Training)	5	0	5
Ind. T. 66 (Industry Analysis)	0	6	2
Ind. T. 67 (Seminar)	1	0	1
Ind. T. 69 (Cost Control)	2	0	2
Mech. T. 54 (Jigs & Fixtures)	2	3	3
Total	15	12	19

## TYPES OF JOBS FOR WHICH THE INDUSTRIAL TECHNICIAN IS TRAINED

- |   |  |
|---|--|
| <p>1. PERSONNEL function:<br/>         Personnel Director<br/>         Employment Manager<br/>         Recreation Directors<br/>         Union Negotiator<br/>         Safety Director<br/>         Public Relations Director<br/>         Training Director<br/>         Personnel Counselors and Interviewers</p> <p>2. QUALITY function:<br/>         Chief Inspector<br/>         Product and Process Development Technicians<br/>         Raw Material Sampler<br/>         Process Inspector<br/>         Statistical Quality Control Technician<br/>         Product Designers</p> <p>3. METHODS and COST function:<br/>         Time Study Men<br/>         Motion Study Men<br/>         Methods Technicians<br/>         Cost Control Technicians</p> | <p>Estimators (Cost of manufacturing new products.)<br/>         Industrial Engineer's Assistants</p> <p>4. EQUIPMENT function:<br/>         Works or Plant Engineer<br/>         Master Mechanic<br/>         Engineering Draftsman</p> <p>5. PLANNING function:<br/>         Schedulers<br/>         Dispatchers<br/>         Planning Superintendents<br/>         Production Control Technicians</p> <p>6. PRODUCTION function —<br/>         Start at the supervisory level and rise to:<br/>         Assistant Foreman<br/>         Foreman<br/>         General Foreman<br/>         Superintendents<br/>         Plant Managers<br/>         General Managers<br/>         Safety Technician</p> |
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**Charts and Other Visual Aids Are Employed Extensively in Classroom Work**



## 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.

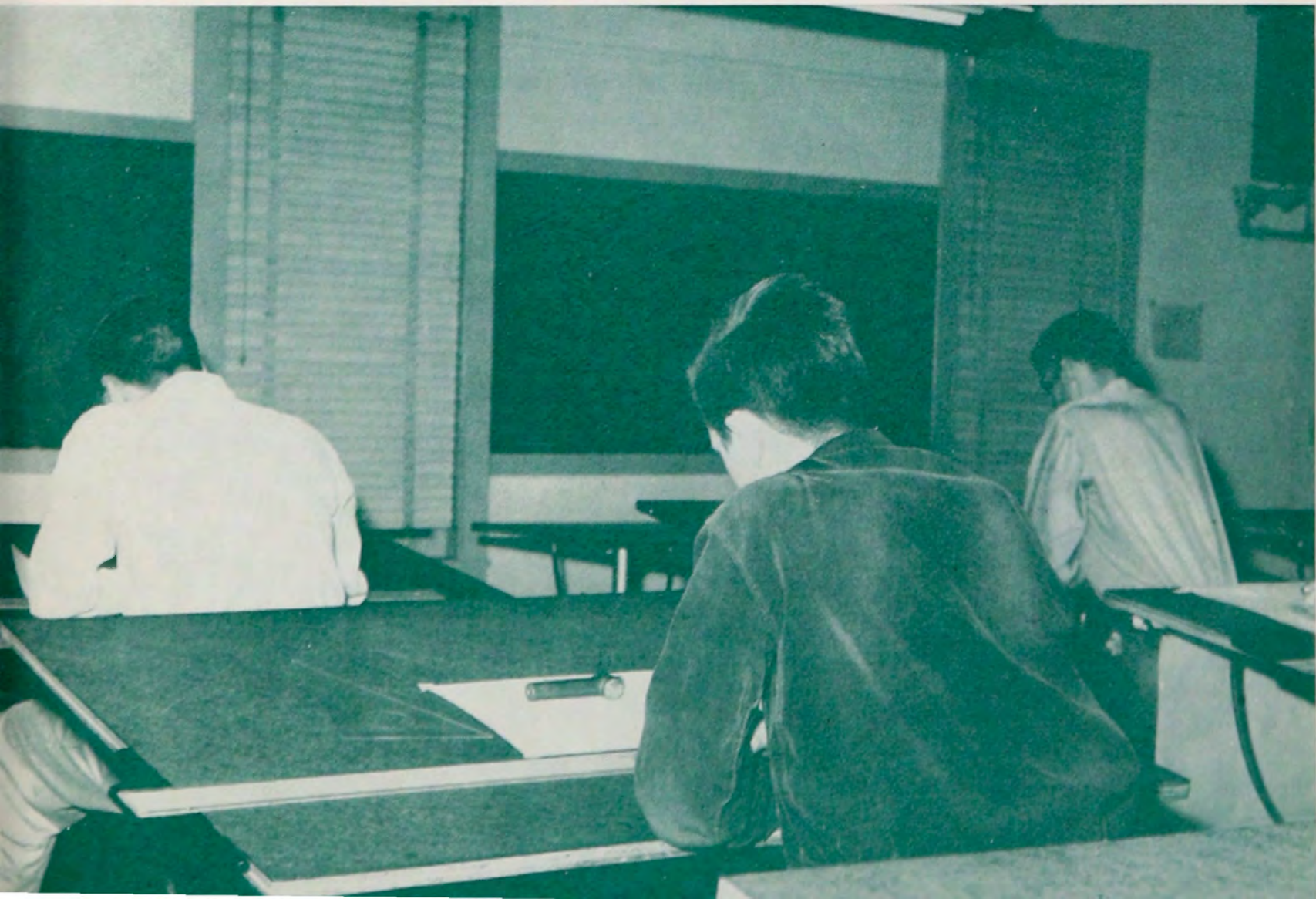
C L T: Class hours      Laboratory hours      Total quarter hours

First Quarter	Second Quarter
C L T	C L T
T. Dr. 11 (Tech. Draw. I)      0—6—2	T. Dr. 21 (Tech. Draw. II)    0—6—2
T. Eng. 11 (Comp. & Rhet.)    3—0—3	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. Math. 11 (Algebra)          5—3—6	Mech. T. 34 (Machine Shop I) 0—6—2
Mech. T. 11 (Tools & Methods) 3—0—3	T. Phys. 22 (Mechanics)       5—3—6
Mech. T. 24 (Gen. Metal Shop) 0—6—2	Total                                13—15—18
Total                                14—15—19	
Third Quarter	Fourth Quarter
C L T	C L T
Ind. T. 22 (El of Ind. Safety)   3—0—3	T. Eng. 52 (Public Speaking) 2—0—2
Ind. T. 58 (Methods Imprvmt.)   3—0—3	Ind. T. 43 (Time, Mot'n Study) 2—3—3
Mech. T. 37 (Gen. Woodwork)   0—6—2	Mech. T. 47 (Pattern Making) 0—6—2
Mech. T. 42 (Met., Heat Tr.)    3—0—3	Mech. T. 49 (Mech. of Mat)    5—3—6
Mech. T. 44 (Machine Shop II) 0—6—2	T. Phys. 32 (Ht., Sound, Light) 3—3—4
T. Phys. 12 (Electricity)       5—3—6	Total                                12—15—17
Total                                14—15—19	
Fifth Quarter	Sixth Quarter
C L T	C L T
T. Dr. 41 (Mach. Sketching)    0—6—2	T. Dr. 61 (Machine Draw.)    0—6—2
Elec. T. 32 (Ind. Electricity)    5—3—6	Ind. T. 41 (Plant Layout)      2—3—3
T. Eng. 62 (Tech. Writing)      2—0—2	Ind. T. 62 (Supv. Training)    5—0—5
Ind. T. 32 (Ind. Sales & Pur.)   3—0—3	Ind. T. 67 (Seminar)            1—0—1
Mech. T. 57 (Welding)          0—6—2	Mech. T. 54 (Jigs & Fixtures) 2—3—3
Mech. T. 59 (Inspec. Methods) 3—0—3	Mech. T. 55 (Tool Engr. Prob.) 3—0—3
Total                                13—15—18	Total                                13—18—19

## 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  
Tool Designer  
Time Study Engineer  
Production Supervisor  
Turbine Installation Supervisor

**The Drawing Board Is a Graphic Means of Self-Instruction**



## 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** 3—6—5  
Prerequisites—Mech T. 49 and Civil T. 21  
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. 49

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, resultants 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; the interpretation and plotting of field notes of topographic surveys.

**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; super-elevation 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 or concurrently

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. 44—WATER AND SEWAGE PLANT OPERATION** 3—0—3

Prerequisite—Civil T. 45 or concurrently

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

Prerequisite—T. Phy. 22 and Mech. T. 49

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** 2—6—4

Prerequisite—Civil T. 32

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  
ELECTRONICS AND COMMUNICATIONS  
TECHNOLOGY**

**Elec. T. 21—A-C CIRCUITS I** 5—3—6

Prerequisite—T. Math. 11, T. Phys. 12

Fundamentals of alternating-current theory and practice as applied to single-phase circuits. Generation of alternating emf, resistance networks, Thevenin's theorem; resistance, capacitance, and inductance; reactance, impedance, and phase relations; conductance, susceptance, and admittance; series and parallel RLC circuits; resonant and anti-resonant circuits; complex notation, use of the slide rule, and metering and instrumentation.

**Elec. T. 31—A-C CIRCUITS II** 5—3—6

Prerequisite—Elec. T. 21, T. Math. 21

Advanced alternating-current theory and practice as applied to single-phase circuits. Further analysis of series and parallel circuits using complex notation; coupled-circuit theory, impedance transformation, transformer theory, mutual inductance, and reflected impedance; construction, classification, cooling methods, regulation, loss determination, and efficiency of single-phase transformers; per unit method of calculation; conversion efficiency, ripple factor, transformer utilization factor, and circuit analysis of single-phase half-wave, full-wave, and bridge rectifier circuits.

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

Prerequisite—T. Phys. 12, T. Math. 21

Electrical fundamentals, circuit analysis, electrical machinery, con-

trol circuits, and industrial applications of electrical equipment. This is a survey course for non-electrical students.

**Elec. T. 33—ELECTRON TUBES** 5—3—6

Prerequisite—Elec. T. 21, T. Math. 21

Basic study of the control of free electrons in elementary electronic circuits. Classification and characteristics of high-vacuum tubes; tube characteristic curves; rectification and amplification; basic amplifier circuits; load lines, amplification factor, transconductance, plate resistance, and stage gain; classification and characteristics of gas-filled, vapor-filled, and cathode-ray tubes; metering and instrumentation.

**Elec. T. 42—A-C MACHINES I** 5—3—6

Prerequisite—Elec. T. 45, Elec. T. 48

Construction, characteristics, operation and control, and industrial applications of polyphase induction motors and single-phase motors.

**Elec. T. 43—ILLUMINATION** 2—3—3

Prerequisite—Elec. T. 31

Illumination principles and practices. Modern illumination principles, calculations, and equipment are coordinated in design problems of complete fluorescent and incandescent lighting installation.

**Elec. T. 45—ROTATING MACHINES** 5—3—6

Prerequisite—Elec. T. 31

Construction, characteristics, operation and control, and industrial applications of direct-current motors and generators. The latter portion of the course consists of a survey of the principles and operating characteristics of three-phase induction motors, single-phase motors, synchronous generators, and synchronous motors.

**Elec. T. 46—RADIO I** 5—6—7

Prerequisite—Elec. T. 47, Elec. T. 51

Radio receivers and receiver circuits. Tuned-radio-frequency, regenerative, superregenerative, and superheterodyne receivers. Biasing methods, tuning circuits, radio-frequency and audio-frequency amplifiers, amplifier coupling methods and analysis, regenerative and degenerative circuits, basic oscillator circuits, decoupling networks; modulation, detection, and detector circuits; power supplies and power amplifiers, metering and instrumentation; construction of superheterodyne receiver.

**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. Matched transmission lines with distributed and lumped constants, attenuators, constant-k filters, and m-derived filters are considered in detail.

**Elec. T. 48—POLYPHASE CIRCUITS** 5—0—5

Prerequisite—Elec. T. 31, Elec. T. 33, T. Math. 31

Polyphase distribution systems, transformer connections, circuit analysis, and rectifier circuits.

- Elec. T. 51—INDUSTRIAL ELECTRONICS** 5—3—6  
 Prerequisite—Elec. T. 31, Elec. T. 33  
 Study of basic industrial electronic circuits and application of these circuits to such devices as electronic timers, voltage regulators, electrostatic air cleaners, generator and motor control systems, 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 synchronous generators, synchronous motors, and synchronous converters.
- Elec. T. 53—WIRING METHODS** 5—0—5  
 Prerequisite—Elec. T. 45, Elec. T. 48  
 Types of wiring and wiring methods used in buildings. The course material includes wire sizes, types of insulation, electrical fittings, service entrances, distribution centers, branch circuit layout, switching arrangements, motor control circuits, and a thorough examination of the recommendations of the National Electrical Code and the National Electrical Manufacturers Association with illustrative applications of wiring procedures.
- 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 requirements for radio-telegraph and radio-telephone licenses are covered in detail.
- Elec. T. 58—TRANSMISSION LINES AND ANTENNAS** 5—3—6  
 Prerequisite—Elec. T. 46 or concurrently  
 High-frequency transmission line concepts and practical applications. 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 provides experience in the use of standard radio-frequency measuring equipment. The latter part of the course deals with propagation, basic antenna theory, antennas for low-frequency and high-frequency work, and measuring techniques.
- Elec. T. 59—SPECIAL PROBLEMS IN ELECTRONICS** 0—6—2  
 Prerequisite—Elec. T. 46 or concurrently  
 Special projects dealing with the study, modification, or 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—Elec. T. 46 and permission of course adviser  
 Either basic or advanced projects, depending 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

Construction, operation, and maintenance of power distribution lines, substations, electric utility organization, and the types of customer loads supplied by electric utilities.

**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 five quarters work

Special projects dealing with study, modification, design, testing, and/or construction of laboratory equipment beyond the scope of the regular laboratory assignments. Projects are assigned to individual students. A complete written report is submitted on each project.

**Elec. T. 67—FM AND TELEVISION**

5—3—6

Prerequisite—Elec. T. 46

Principles of frequency modulation, methods of modulation and detection, FM transmitter and receiver circuits; FCC standards of television transmission, camera and picture tubes, composite video signal, television receiver circuits, power supplies, video amplifiers, deflection generators, alignment procedures, servicing, transmitter circuits.

**Elec. T. 68—MICROWAVES**

3—3—4

Prerequisite—Elec. T. 46, Elec. T. 58

Microwave techniques, theory and practice in pulse circuits. UHF amplifiers, transit-time effects, wave guides and cavity resonators; dynatrons, transitrons, klystrons, and magnetrons; multivibrators and trigger circuits; principles of radar, types of scan, radar transmitting and receiving systems, synchronization, and specific study of ASC-1 and APS-3 radar systems.

**Elec. T. 69—ADVANCED RADIO**

5—6—7

Prerequisite—Elec. T. 46

Advanced study of radio communication circuits. AM transmitters, power amplifiers, phase inverters, push-pull amplifiers, and modulator circuits; alignment and tuning of AM, FM, and TV receivers; servicing techniques and trouble-shooting procedures.

## **ENGLISH, TECHNICAL**

**T. Eng. 11—COMPOSITION AND RHETORIC**

3—0—3

Grammar study and drill, punctuation, correct usage, sentence structure, elimination of errors in sentence structure, and writing for comprehension.

**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.

## **GAS FUEL TECHNOLOGY**

**Gas 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.

**Gas T. 21—THEORY OF GASES** 5—0—5  
This course presents the foundation for later study of the utilization of gas and the equipment used in its handling. It covers the gas laws, specific gravity of gases, effect of pressure and temperature, meter correction factors, heating values of various fuel gases, and the chemistry of combustion. In connection with LP-Gases, physical characteristics, heating values, limits of flammability, the general gas law, boiling points and vapor pressures, dew point and bubble point pressures, volume correction factors and filling densities, vaporization, and gas-air mixtures are covered.

**Gas T. 31—GAS UTILIZATION I** 3—3—4  
Prerequisite—Gas T. 21

A study of the fundamental principles of gas utilization including gas burner operation and design, orifice capacities, burner capacities, requirements for proper combustion, safety pilots, thermostats and other controls used on gas appliances. Laboratory work is devoted to the operation and adjustment of burners and controls.

**Gas T. 41—GAS UTILIZATION II** 5—3—6  
Prerequisite—Gas T. 31

The application of utilization principles to gas ranges, water heaters,

refrigerators, space heating equipment, and LP-Gas carburetion. Installation and servicing of appliances, sizing and operating cost of water heaters and space heaters are thoroughly covered. In the laboratory program students get actual experience in the installation and adjustment of a wide variety of domestic and commercial appliances. Special attention is given to electric controls used with various types of heating equipment.

**Gas T. 51—GAS EQUIPMENT I** 5—3—6  
Prerequisite—Gas T. 21

This course is a study of the equipment used in the handling of gas from the gas mains or storage container to the appliance. It includes LP-Gas containers, regulators, container accessories, vaporization capacities of containers, sizing of relief valves, gas piping, high and low pressure pipe sizing, and gas meters. Special emphasis is given to recognized safe practices in connection with the installation of all types of gas equipment. Actual experience in making gas installations, pipe and tube working, regulator repair and testing, and a study of containers and accessories are included in the laboratory program.

**Gas T. 61—GAS EQUIPMENT II** 3—3—4  
Prerequisite—Gas T. 51

A study of the equipment used in the handling of LP-Gas in bulk: pumps, compressors, liquid meters, tank cars, tank trucks, and bulk plants. Laboratory work is devoted to a study of this type of gas equipment and includes visits to bulk plants and LP-Gas standby plants.

**Gas T. 62—INDUSTRIAL GAS UTILIZATION** 3—3—4  
Prerequisite—Gas T. 21, Gas T. 31, Gas T. 51 or concurrently.

A study of combustion equipment, controls, and appliances relating to the industrial utilization of gas fuel. The laboratory program is devoted to work with the industrial equipment covered in the class sessions.

## 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  
 Prerequisite—Ind. T. 22  
 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  
 Prerequisite—Mech. T. 11, Mech. T. 34, Ind. T. 45, Ind. T. 58  
 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** 2—0—2  
 Prerequisite—Ind. T. 12  
 Personnel policies, selection and employment, interviewing and testing, 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  
 Prerequisite—Ind. T. 58  
 Principles of motion economy, tools for motion study, time study methods and practice; standard data and formula construction; use of methods-time measurements 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  
 Prerequisite—Ind. T. 58  
 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  
 Prerequisite—Ind. T. 58  
 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  
Prerequisite—Ind. T. 22  
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** 5—0—5  
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, with special emphasis on setting up, maintaining, and interpreting statistical 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  
Prerequisite—Ind. T. 68  
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 manufacturing 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 engineer or the technician.

### **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. 34—MACHINE SHOP I** 0—6—2  
 Prerequisite—T. Dr. 11  
 Fundamentals 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. 37—GENERAL WOODWORK** 0—6—2  
 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** 3—0—3  
 Prerequisite—Mech. T. 11 and Mech. T 24  
 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. 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. 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. 49—MECHANICS OF MATERIALS** 5—3—6  
 Prerequisites—T. Phys. 22 and T. Math. 21  
 A study of coplanar forces and force systems, truss solutions, force systems in space, friction and centroids; direct stress, properties of materials, riveted and welded joints, torsion, stresses in beams, beam deflections, and columns.

- 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 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. 49  
A study of the applications of principles of strength and rigidity 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. 59—INSPECTION METHOD** 3—0—3  
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.
- 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. 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, radial 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 Laws, 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.

## HELPFUL REMINDERS

REACHING CHAMBLEE, 13 miles north of Atlanta.

BY PLANE—To Atlanta Municipal Airport; ride airport bus into city to Biltmore Hotel; board Oglethorpe trolley and ride to end of line; engage taxi to STI.

BY TRAIN OR BUS INTO CITY—Get Oglethorpe trolley at Broad and Walton Streets or anywhere on Peachtree north of Broad; ride to end of line; engage taxi to STI.

BY AUTOMOBILE—

From east over Routes 12, 78, or 29—Come to Decatur; take Clairmont Avenue and Clairmont Road to STI.

From northeast over Route 23—To Clairmont Road, 12 miles north of Atlanta, then north on Clairmont to STI.

From north over Route 19—To Buckhead, out Peachtree Road to Clairmont Road, and then to STI.

From northwest over Route 41—To West Paces Ferry, Buckhead, Peachtree Road, Clairmont Road, and STI.

From west over Route 78—On North Avenue, to Piedmont Avenue (Route 23); out Piedmont and Buford Highway to Clairmont Road and north to STI.

From south over Routes 41, 42, 29, and 19—To Ponce de Leon Avenue, east to Piedmont Avenue (Route 23), to Buford Highway, Clairmont Road, and STI.

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WHAT TO BRING—Students should remember to bring bed linens (4 sheets, 2 pillowcases), 2 blankets, a pillow; a bathrobe; a desk lamp; and any other personal items which would add to comfort, convenience, and attractiveness of his room—radio, curtains, pictures, etc.

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SCHOOL CLOTHING—STI students dress informally. A few do wear suits; many choose slacks, shirt, and warm jacket; others find khaki or denim trousers and matching shirt appropriate and acceptable. Regardless of what he chooses to wear, every student should bring clothing suitable for wear in shops and labs.

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DRAFT DEFERMENT—Southern Tech students are subject to the same draft-deferment regulations accorded other college students over the nation. A student is deferred for his first school year as long as his work is satisfactory, and for the second if he makes the upper half of the class scholastically or successfully passes the College Qualification Test.

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LAUNDRY SERVICE—The school operates no laundry. However, the STI dormitories are equipped with washing machines, which many students find economical and convenient. Commercial firms make scheduled pickups and deliveries to the dormitories for dry cleaning and laundry.

PAYMENT OF EXPENSES—All fees (\$90.00 for residents of Georgia and \$75.00 additional for non-residents) and cost of books and supplies (about \$25.00 per quarter) are payable in advance on registration day. A \$10.00 key and security deposit is also required of boarding students. Room and board at \$152.00 per quarter may be paid for in three installments of \$68.00, \$68.00, and \$18.00.

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CAUTION TO VETERANS—Monthly subsistence checks are paid by the government directly to the P. L. 550 (Korean) veteran, and the veteran is personally responsible to the school for his expenses. Veterans, however, do not begin to receive their checks until at least a month and a half after they are enrolled. They, therefore, should come prepared to pay in advance for all fees, books and supplies, and two installments on room and board.

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APARTMENTS FOR MARRIED COUPLES—The school has available comfortable, inexpensive, conveniently located one-, two-, and three-bedroom apartments for married couples. Interested students should request an application for an apartment from the STI Registrar and return it with his Application for Admission.

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STUDENT AUTOMOBILES—STI students are permitted to keep automobiles on the campus as long as they operate them safely, courteously, and moderately. If this principle is violated, privilege of keeping the car at school will be denied.

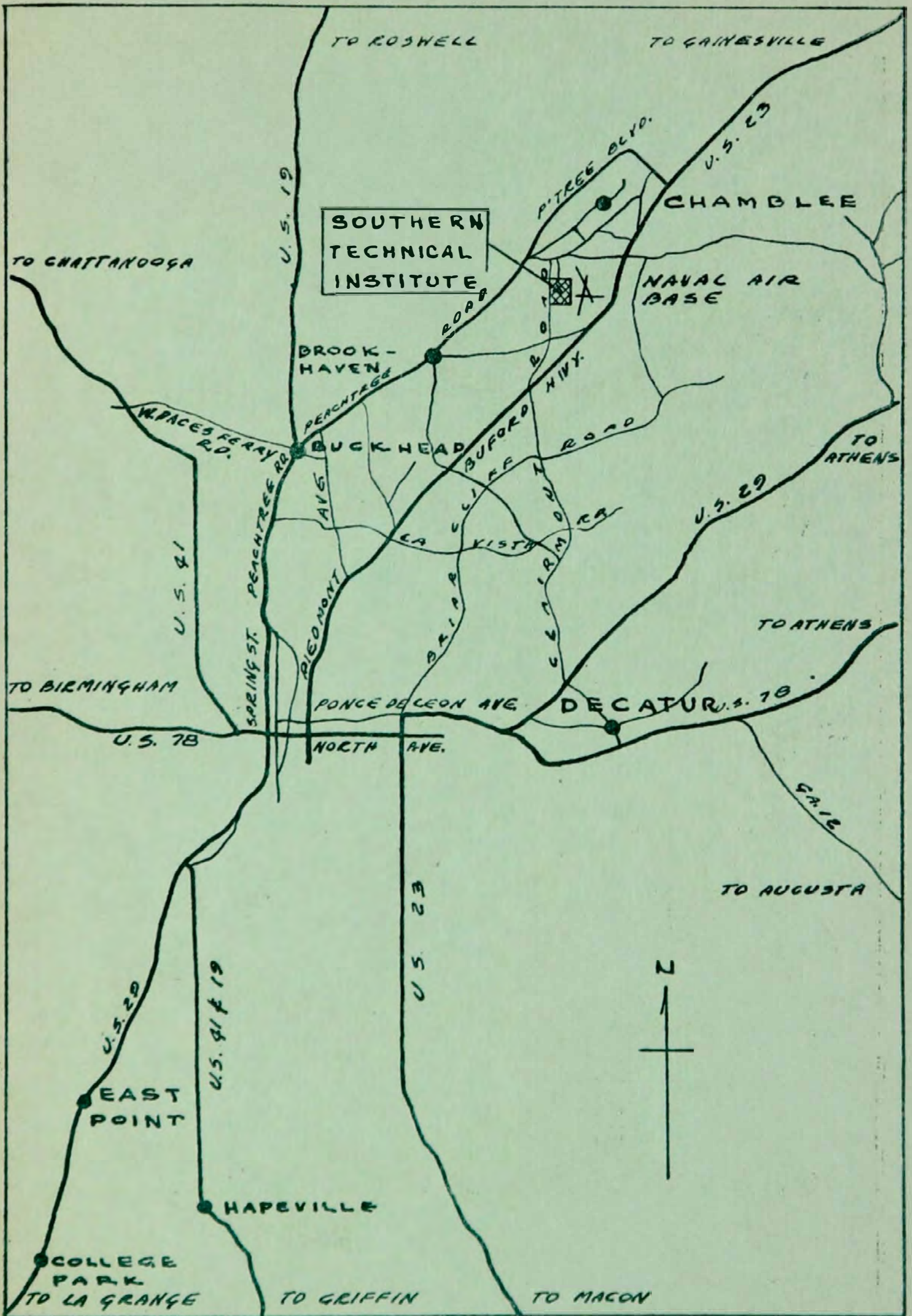
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ENTRANCE EXAMINATIONS—No examinations to determine whether a student will or will not be admitted are required, although a battery of tests for guidance and counseling purposes are administered to each student in his first week of school.

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EVENING SCHOOL CLASSES—Southern Tech conducts no evening school classes at the present time, all of its offerings being confined to day work between the hours 8:00 A.M. to 6:00 P.M. However, five curricula parallel to those offered by STI may be obtained in the evening on the main campus of the Georgia Institute of Technology.

Students who wish may take part of their training in the Engineering Evening School on the main campus and later transfer their credits to Southern Technical Institute to complete their courses, or vice versa.



Thirteen Miles North of Atlanta