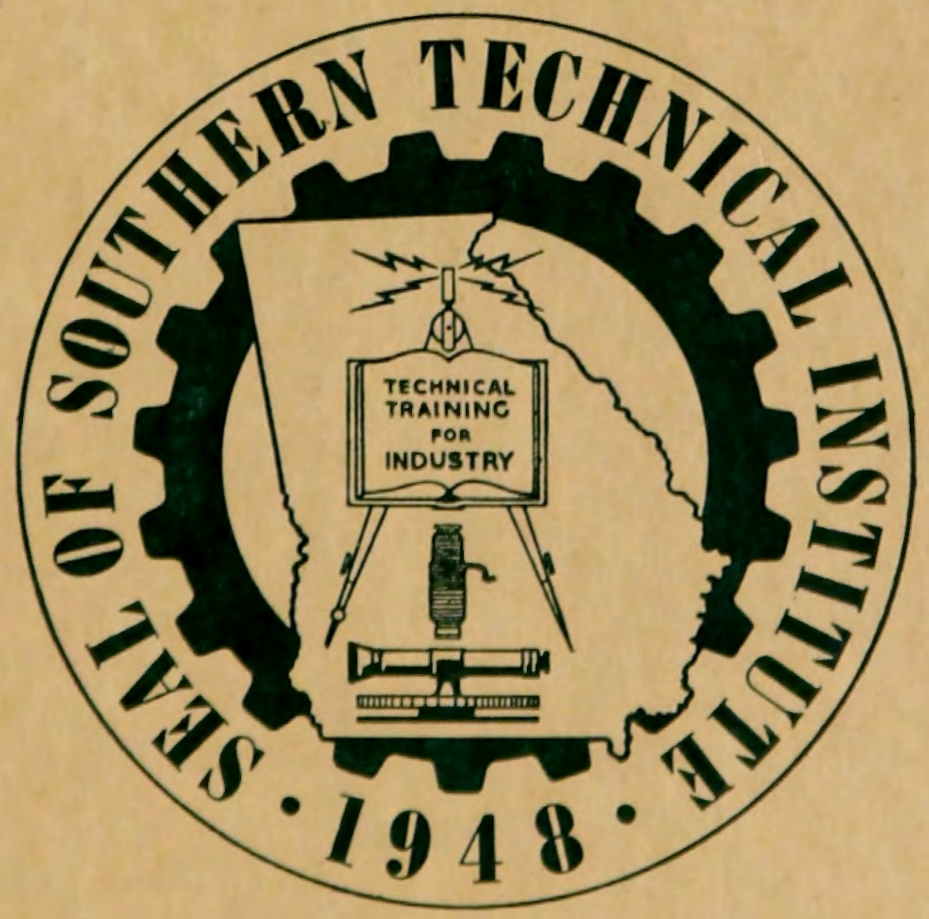


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SOUTHERN TECHNICAL INSTITUTE



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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?

High-school graduation and at least one year of algebra or passing scores on the G. E. D. tests and a year of algebra qualify one for entrance. Every applicant must supply the STI Registrar with an application for admission, a certificate of recommendation, and a high-school transcript; and if not a graduate, he must also obtain an official copy of G. E. D. test scores. See pages 24-26.

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 pages 23, 24.



Chamblee No. 7-3164

Atlanta No. 47-3164

Application for Admission to

SOUTHERN TECHNICAL INSTITUTE

CHAMBLEE, GEORGIA

Date _____ 19____

Name in Full _____
(Please Print) Last Name First Name Middle Name

Home Address _____
No. Street City State Telephone

Date of Birth _____ Age _____ Sex _____
Month Day Year

Next of Kin _____
Last Name First Name Middle Name Relationship

Address, Next of Kin _____
No. Street City State Telephone

Have you attended College? Yes _____ No _____ Date _____
From To

Name of College _____
City State

Do you qualify as a legal resident of Georgia? Yes_____No_____

SOUTHERN TECHNICAL INSTITUTE COURSES

(Indicate with X course desired)

Building Construction_____ Civil_____ Electrical_____ Electronics and Communications_____

Gas Fuel_____ Heating and Air Conditioning_____ Industrial_____ Mechanical_____

Check time you wish to enter. Sept_____ Jan._____ March_____ July_____ of year 19_____

Dormitory Room Desired? Yes_____ No_____ Are you a Veteran? Yes_____ No_____ "C" No._____

P. L. 346_____ P. L. 16_____ P. L. 550_____ Married?_____ Single?_____

Name of High School_____

Location_____ Did you graduate? Yes_____ No_____ When?_____

City

State

How did you receive information about Southern Technical Institute?

Newspaper Ads_____ Stories_____ Radio_____ Students_____ Catalogue_____

School Bulletin_____ Other Source (list)_____

Signature of Applicant

(No action can be taken on High School Graduates until receipt of Official High School Transcript)

A Unit of the Engineering Extension Division

Georgia Institute of Technology

University System of Georgia

SOUTHERN TECHNICAL INSTITUTE

CATALOGUE AND INFORMATION

1956 - 57

VOLUME IX

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

The Graduate's Reward—An Associate in Science Degree

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THREE-YEAR CALENDAR

1956

JULY

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CALENDAR 1956-57

Fall Quarter, 1956

- September 24—Registration for "new" (beginning) and "old" (returning) students.
Orientation for beginning students.
- September 25—Classes begin for returning students.
Orientation continues for beginning students.
- September 26—Late registration fees apply.
Classes begin for beginning students.
- September 29—Last day for registration. Last day for adding a subject to study list.
- October 27—Last day for dropping a subject from study list without penalty.
- November 3—End of deficiency report period.
- *November 22-25—Thanksgiving recess.
- December 15—End of term.
- *December 16-January 1—Christmas recess.

Winter Quarter, 1957

- January 2—Registration.
- January 3—Classes begin.
- January 4—Late registration fees apply.
- January 5—Last day for registration. Last day for adding a subject to study list.
- February 2—Last day for dropping a subject from study list without penalty.
- February 9—End of deficiency report period.
- March 16—End of term.
- *March 17-24—Spring recess.

Spring Quarter, 1957

- March 25—Registration.
- March 26—Classes begin.
- March 27—Late registration fees apply.
- March 30—Last day for registration. Last day for adding a subject to study list.
- April 27—Last day for dropping a subject from study list without penalty.
- May 4—End of deficiency report period.
- June 8—End of term.

Summer Quarter, 1957

- July 1—Registration.
- July 2—Classes begin.
- July 3—Late registration fees apply.
- *July 4—Holiday.
- July 6—Last day for registration. Last day for adding a subject to study list.
- August 3—Last day for dropping a subject from study list without penalty.
- August 10—End of deficiency report period.
- *September 2—Labor Day Holiday.
- September 14—End of term.

* * *

September 23—Registration for Fall Quarter, 1957.

* Official school holidays

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1955-1956

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C. V. MADDOX, *Dean of Students*

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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.

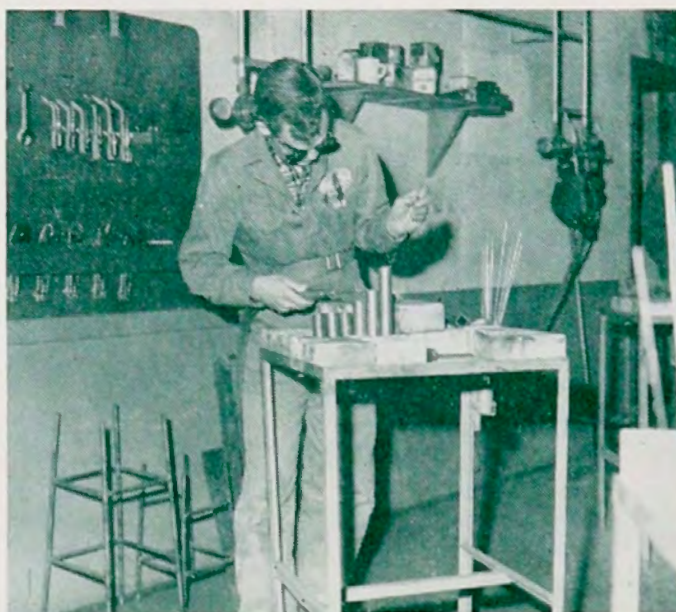
Because of this training, the engineering technician has a broad choice of technical positions at excellent beginning salaries and should qualify for rapid advancement. In the laboratory, the graduate serves as laboratory technician or engineering associate to carry out many of the tests, experiments, 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, supervises, operates, tests, sells, inspects, and manages.

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.



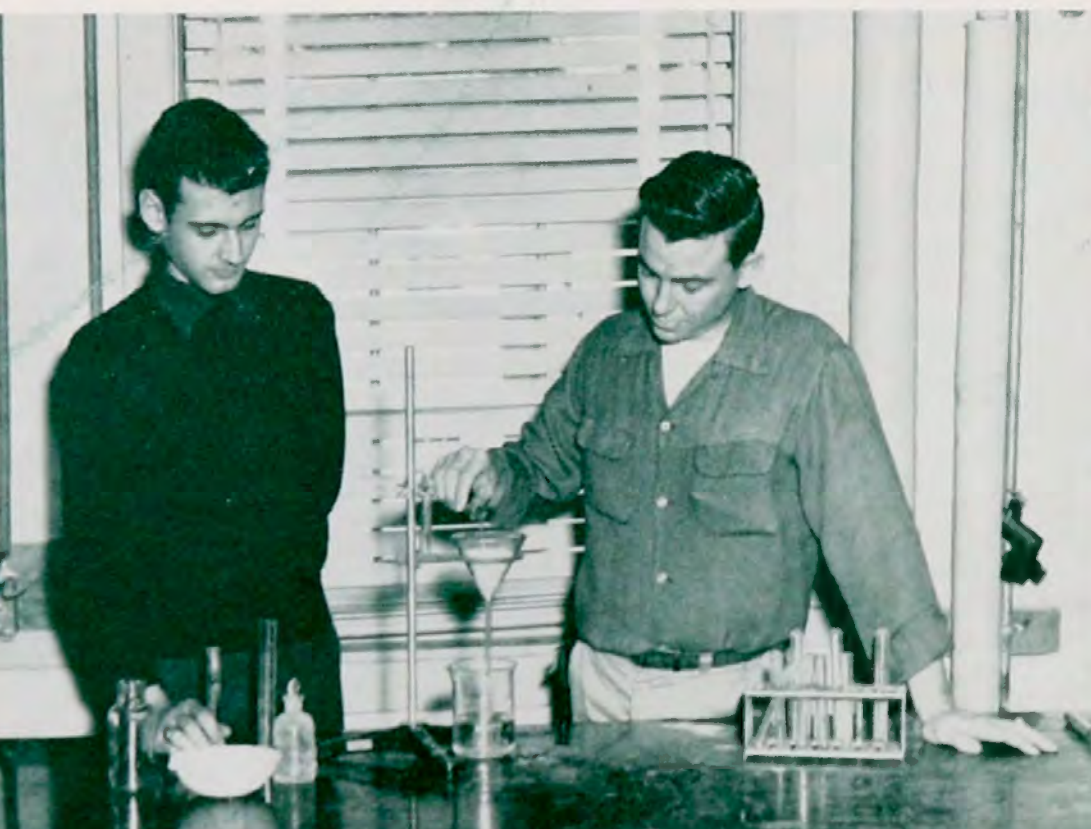
Mathematics

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

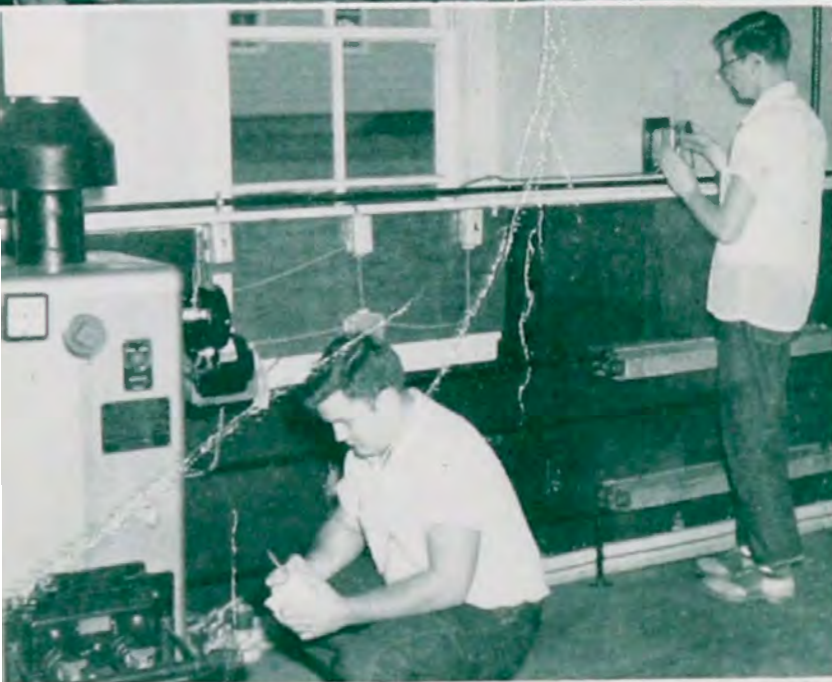
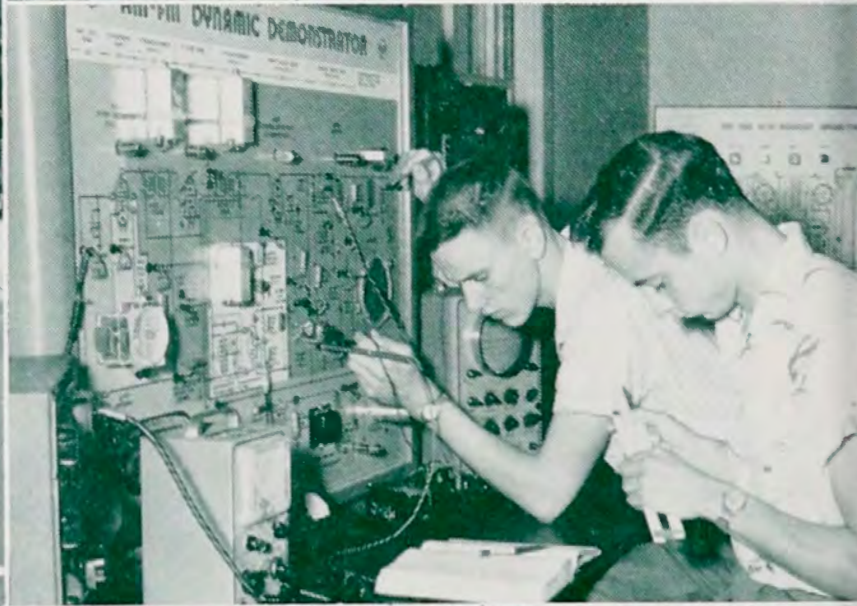
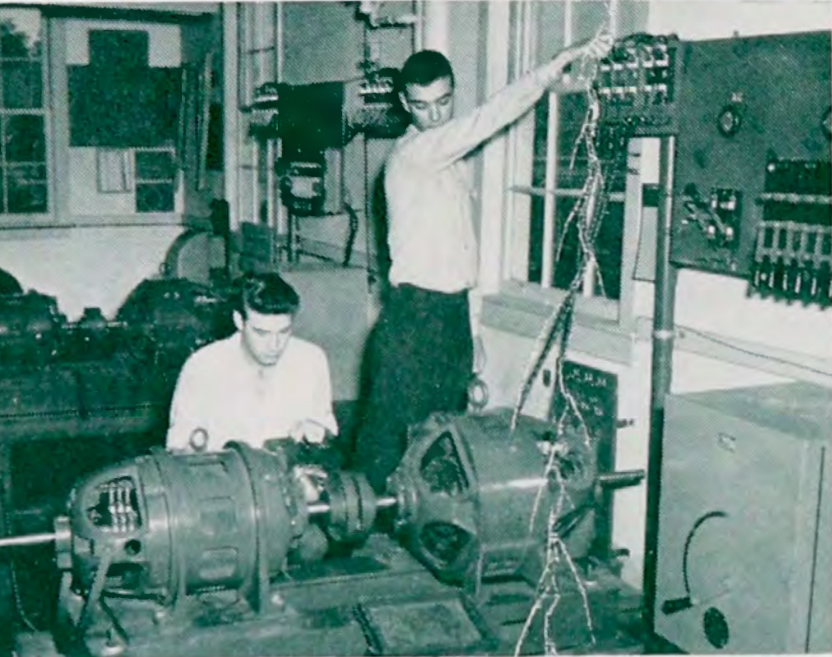
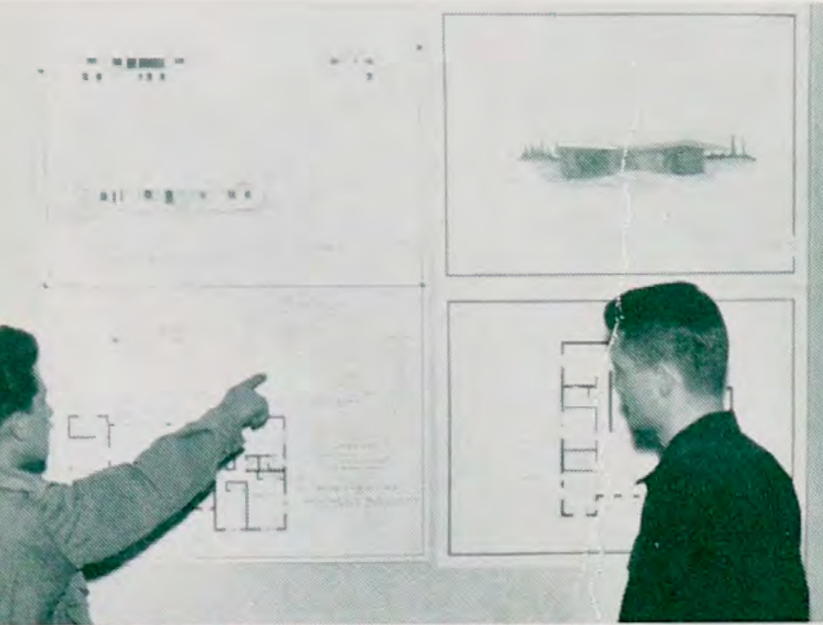
Every student who enrolls at Southern Tech is regarded as a potential supervisor — whatever the field of his specialty. All students, therefore, study, in addition to their specialized work, subjects which assist them to know people better; to guide, direct, and coordinate their efforts; to instruct 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 seven years of operation, the Southern Technical Institute has graduated and sent into industry 820 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 beds with innerspring mattresses, 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

	Matriculation fee per quarter	Tuition fee per quarter	Medical fee per quarter	Student Activity fee per quarter	Total fees per quarter	Total fees per academic year
Residents of Georgia	\$81.50	-----	\$3.50	\$5.00	\$ 90.00	\$270.00
Non-residents of Georgia	\$81.50	\$95.00	\$3.50	\$5.00	\$185.00	\$555.00

NOTE: (a) Matriculation, tuition, student activity, and medical fees of veterans enrolled under PL 16, 894, and 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.

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	\$555.00
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 of \$68.00, \$68.00, and \$18.00.

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

PENALTY FEE

A penalty fee will be charged for failure to pay room and board costs or make satisfactory arrangements for delayed payment on or before the last date due. The penalty fee will be five dollars (\$5.00) for the first day following the date due and one dollar (\$1.00) for each of the next three days, the total not to exceed eight (\$8.00).

TUITION DEPOSIT

Although a student may be accepted for admission, he cannot be assured that a place will be reserved for him unless he makes a tuition deposit of \$25.00 within two weeks after receipt of the Certificate of Acceptance. This fee is applied to his expense if he enrolls; if he does not, it is refundable, provided he makes a written request for it thirty days before registration date of the quarter he was to enter.

KEY AND SECURITY DEPOSIT

A \$10.00 key and security deposit must be made by students who live in the STI dormitories. To assure reservation of a dormitory room,

the student must send this deposit with his application. 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.

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.

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.

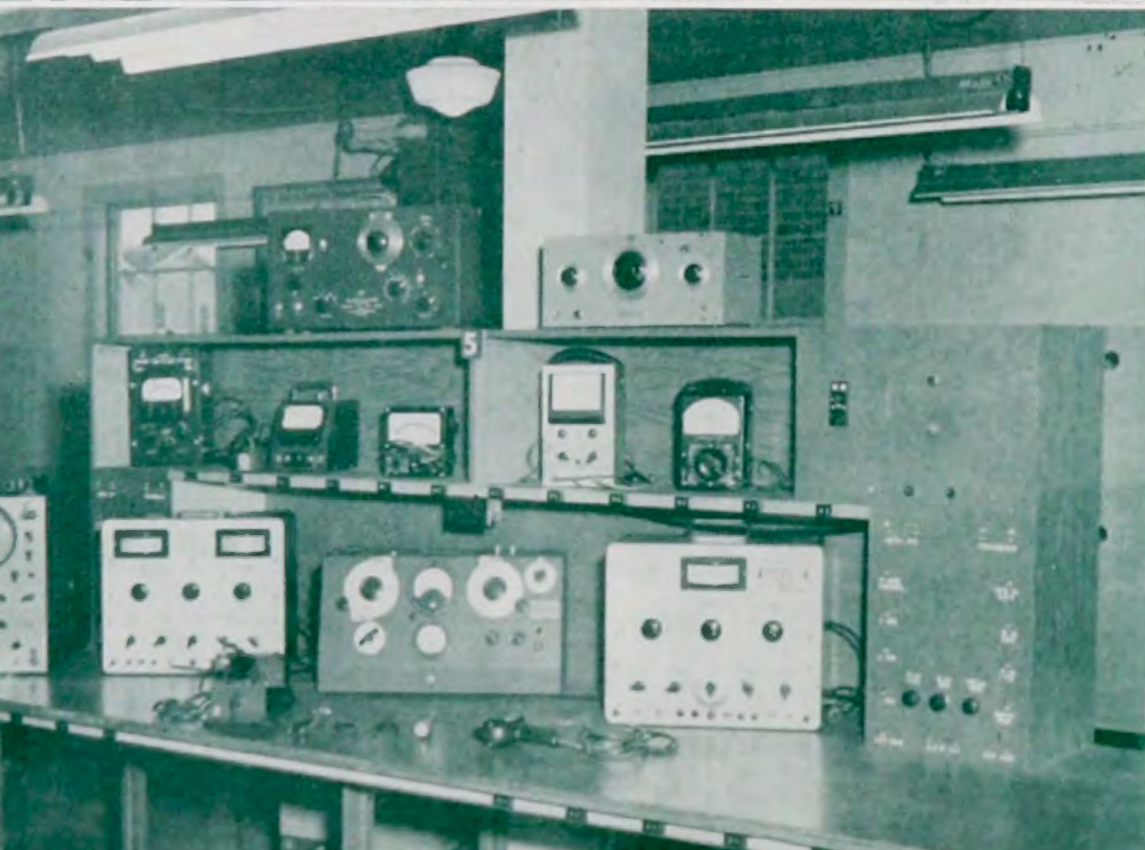
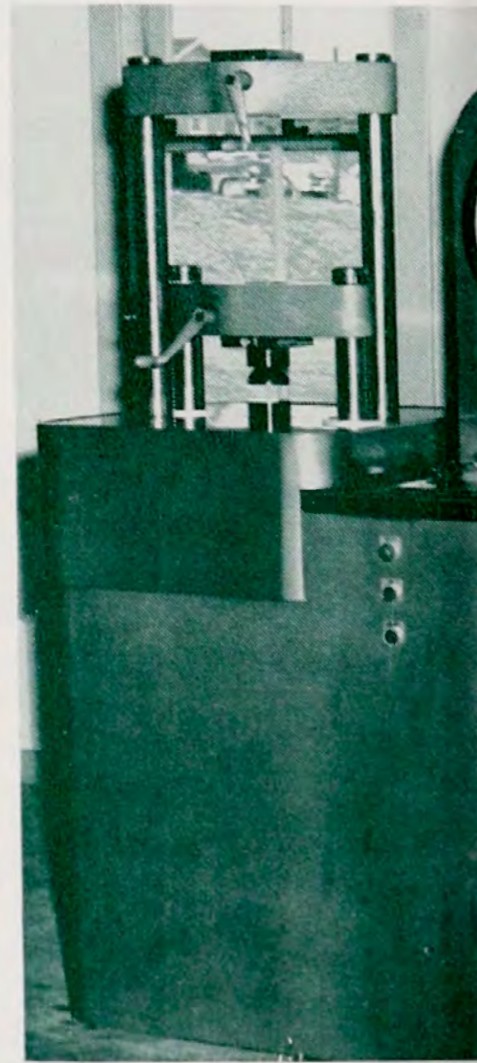
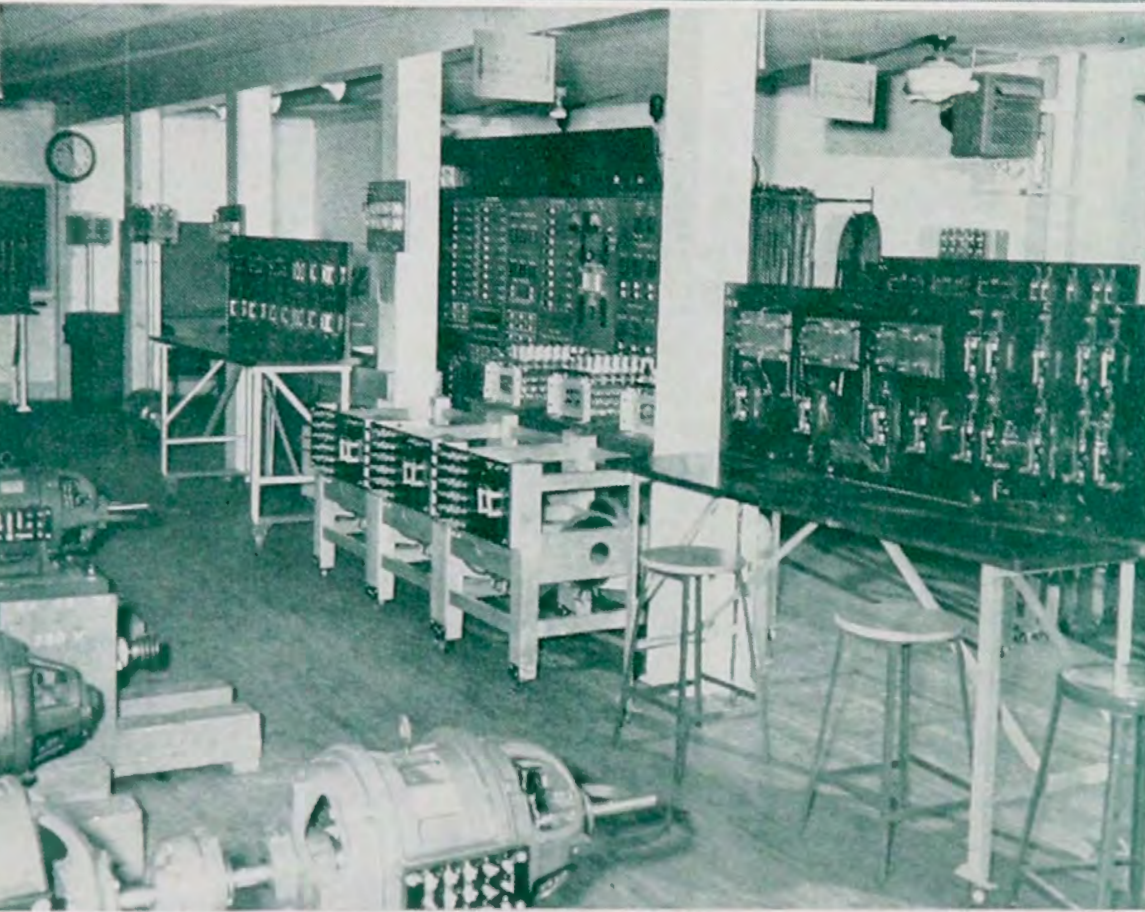
DEFINITION OF LEGAL RESIDENCE

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 guard-

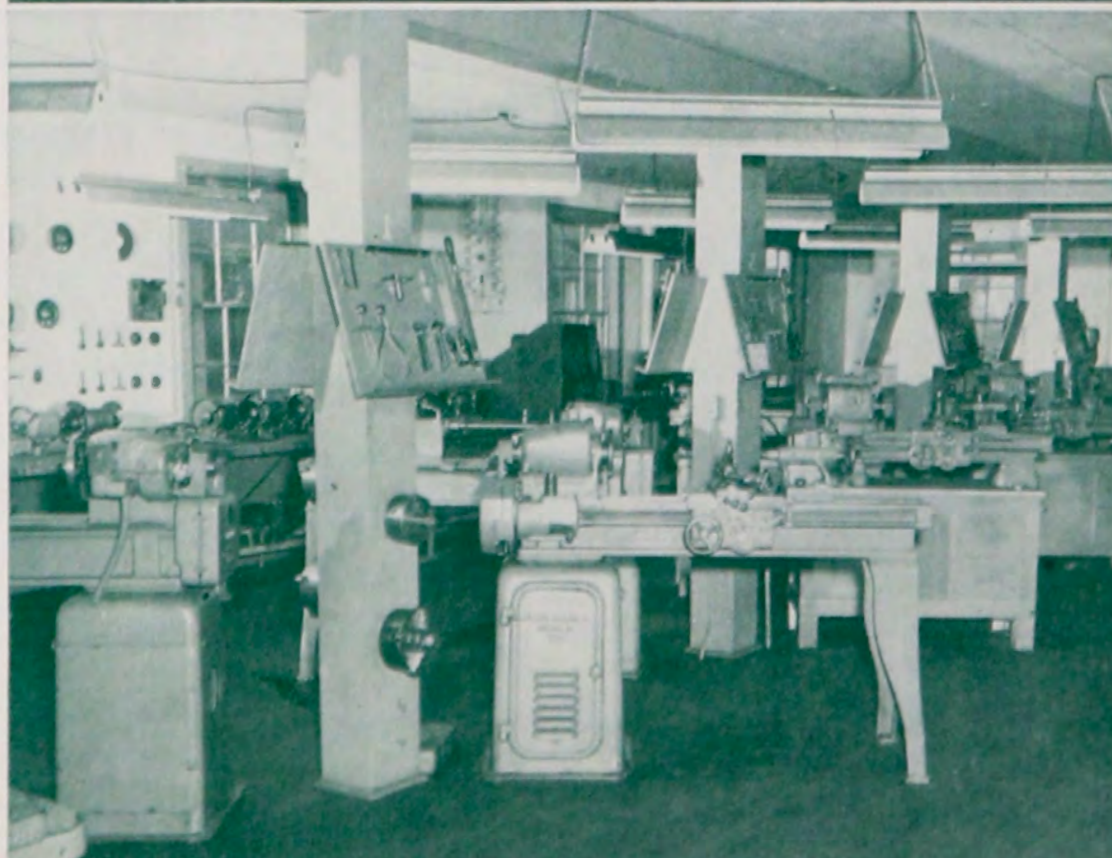
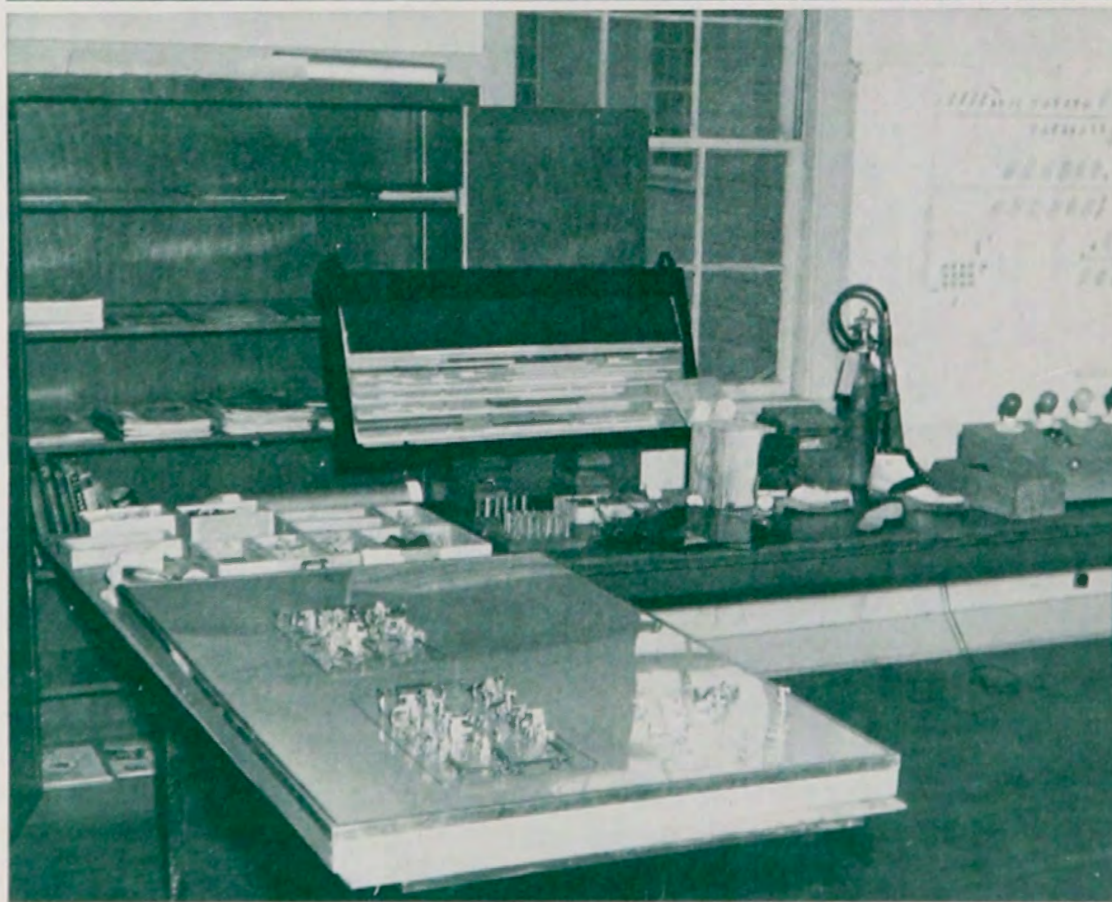
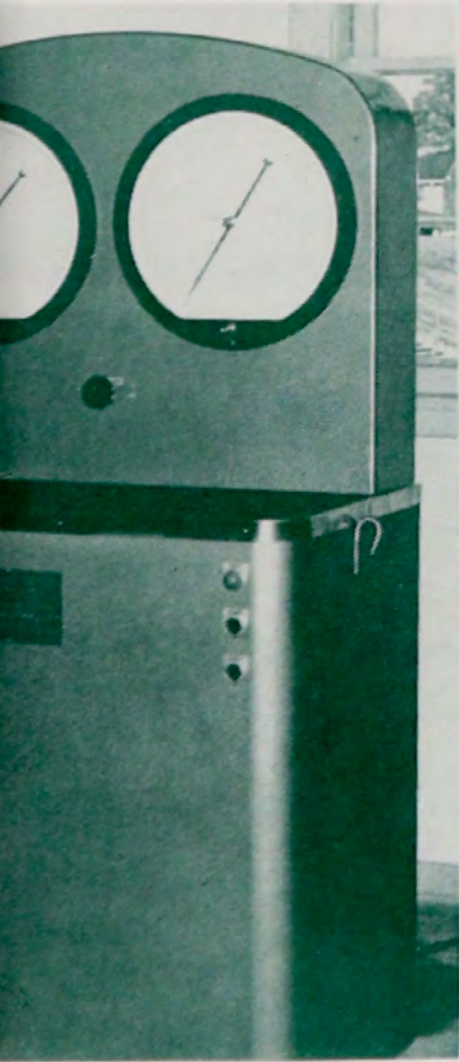
STI EQUIPMENT

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.



ian) 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 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.

GAS FUEL TECHNOLOGY FOUNDATION

The Liquefied Petroleum Gas Association recently abolished its scholarship program and established a loan fund to replace it.

Under the new plan of financial assistance, a student can borrow up to the full amount of his tuition and fees for six quarters at no interest until one year after he terminates his training in the Gas Fuel Technology course. Beginning one year after the termination of the Gas Fuel Technology course, the loan will bear interest at the rate of five per cent per annum. The student is allowed a period of five

years after completion of the course in which to repay the loan.

Information on how to secure one of these loans may be obtained from the Registrar, Southern Technical Institute, Chamblee, Georgia.

GRADE REPORTS

Reports on students are mailed to parents soon after the close of each academic quarter. Reports are also sent to parents at mid-quarter, if the students are failing in any subject. If a student is passing all subjects, no report is made on his work until the end of the quarter.

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.

ACADEMIC REQUIREMENTS

REQUIREMENTS FOR ADMISSION

A qualified student may enroll in the Southern Technical Institute at the beginning of any quarter—fall, winter, spring, or summer. If however, he enters in any quarter other than the fall, the school can not assure him that he can complete the six quarters' work in eighteen months' time, because of scheduling difficulties which are likely to arise.

To be accepted for admission, the applicant must be a graduate of an accredited high school or have passed satisfactorily the General Educational Development (GED) Tests. Since technical study requires aptitudes for and basic knowledge of algebra, English, and science, it is strongly recommended that high-school credits include two in algebra, two in science, and four in English.

No applicant will be accepted unless he has had at least one year of algebra. Even then he will be required to take Remedial



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.

Placement Service

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

A GE representative talks job opportunities with STI students.



ACADEMIC REQUIREMENTS

Algebra at STI or prove through examination his readiness for college algebra before being allowed to undertake the more advanced study.

Examinations will be given to entering freshmen to determine aptitude and ability in basic algebra.

If the applicant 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 Recommendation. (See page 26 and inside of back cover.
3. A high-school transcript, if a graduate; if not a high-school graduate, a high-school transcript and 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.

MINIMUM CLASS SIZES

No classes will be scheduled in service subjects (English, drawing, physics, mathematics, chemistry, and a number of specialized subjects serving more than one curriculum) with enrollments of less than twelve students; other subjects will not be offered with enrollments of 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, fines, and other financial obligations owed the school.

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.

Only one graduation exercise a year is 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.

CERTIFICATES OF RECOMMENDATION

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.

EXTRACURRICULAR ACTIVITIES

The Technician

Technician's Log

Athletics

Honor Society

Student Council

Campus Clubs



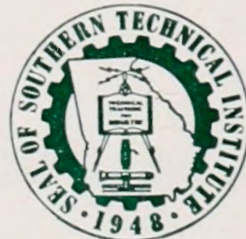
Officials of the Southern Technical Institute believe so strongly in the benefits of extracurricular activities that they urge every student to participate in them. These student activities are most helpful in developing good health, the social graces, well-rounded personalities, and dependable leadership. 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. VIII

Southern Technical Institute, Chamblee, Ga., January, 1956

No. 5

Student Council Chooses Shaw, Larson, Edwards

Dutton V. Shaw, George T. Larson and Jack E. Edwards were recently elected president, vice president, and secretary-treasurer, respectively, of the Southern Technical Institute Student Council by representatives of the school's eight departments and the Dormitory Council. They will serve for the Winter Quarter.

Mr. Shaw is a fifth-quarter Industrial Technology student from Decatur and has demonstrated his leadership abilities through participating and holding office in a number of campus activities.

Mr. Larson is from Eau Claire, Wis., and Miami, Fla. He is a fourth quarter, honor-roll student of Mechanical Technology.

Another out-of-state student, Mr. Edwards, whose home is West Palm Beach, Fla., is studying Electrical Technology. He too is in his fourth quarter and is a member of the STI Honor Roll.

It is felt that under the direction of these outstanding students, the Student Council and campus affairs are certain of a term of wise, progressive leadership.

100 New Students Among 686 Enrolled for Winter

Veterans Number 332; Non-Veterans, 354 E&C Has Most; Many Transfers Enroll

Six hundred and eighty-six students enrolled for the Winter Quarter's work at Southern Tech during registration week from January 4-7. One hundred of this number are in attendance at STI for their first time. Southern Tech enrolled 710 in the fall of 1955 and 600 one year ago at this time.

Of the 686, 354 are non-veterans and 332 are veterans. Three hundred and ten of the latter group are attending STI under the provisions of P. L. 550; 6 are on P. L. 346; 11 on 894; and 5 on P. L. 16.

Five hundred and twenty-six of the total enrollment are residents of Georgia, and 160 are non-residents coming from 34 states and five foreign countries.

685 Men, 1 Coed

One coed, Miss Barbara Jean Nolan, returns to continue her study of Building Construction Technology.

An enrollment breakdown by departments reveals:

Building Construction	114
Civil Technology	45
Electrical	60
Electronics & Communications	173
Gas Fuel	46
Heating & Air Conditioning	81
Industrial	54
Mechanical	113

Total 686

Southern Tech officials were pleased over two other facts in connection with the term's registration and enrollment: (1) 21 students who had previously been in attendance but not in the fall quarter returned for study, several after having spent two years in military service; and (2) a large number of the 100 new students are transfers from other colleges.

Important remaining dates on the Winter Quarter's calendar are:

February 4—Last day for dropping a subject from study list without penalty.
February 11—End of deficiency report period.
March 17—End of term.
March 18-25—Spring recess.

March 1 is Press Date for Annual

Fred Hoon, editor of Southern Tech's yearbook, at a recent staff meeting set March 1 as press date for the *Technician's Log*. In conjunction with setting the date the *Log* goes to the publisher. Editor Hoon gave February 1 as deadline for all writeups and pictures for the 1955-56 issue. The yearbook is scheduled for issuing the latter part of May.



Annexes Enjoy Recent Session Annexes Plan Enjoyable Party for February 2

Annexes' Wives Club, made final plans meeting on January 27 to be held Feb. 2 at 7 o'clock in The Green Room at Southern Tech. The admission tickets will be sold to club members also for sale. The public is invited.

Mr. Denny, recording secretary, reported that quite a number of prizes have been donated by local merchants, who are very cooperative.

Refreshments of coffee and doughnuts were served by the E & C Department and were enjoyed by all.

Through E&C STI Offers Special TV Course to Southern Bell Men

Beginning on February 13 Southern Tech's Electrical Department will offer a special, six-week course on closed-circuit TV through Southern Bell Telephone and Telegraph Company, Prof. W. R. Halstead, head of STI's ET & E departments, announces.

Heretofore, Mr. Halstead has offered the special courses for Southern Bell have been chiefly in preparation for the radio-telephone operator's license. This one, however, will be different, he says, and in the actual equipment used in television will be used throughout the program.

At present another six-week course, the fifteenth of its kind, is

being offered 17 Southern Bell men who are students at Southern Tech.

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

THE STAFF

Johnny L. Hartley Editor-in-Chief
James S. Kelly Sports Editor
Kelth Davis Feature Editor
Raymond Maddox Photography Editor

EDITORIAL ASSISTANTS
Clifford Blaisdell, Volney Smith, Albert L. Martin,
Dutton Shaw, William Nowell

FACULTY ADVISER—L. Y. Bryant
Member
Associated Collegiate Press

Goodman and McCullough Head STI's Largest Honor Roll of 103 Members

Southern Tech's Honor Roll for the Fall Quarter was a big 'un—the biggest yet, in fact.

One hundred and three of the 710 enrolled made it—made it by having no failures, incompletes, or conduct offenses and by achieving a 3.00 ("B") average or better over 15 credit hours of work.

And a couple of "brains" came through with perfect, all "A", 4.00 records. Lewis W. Goodman and John W. McCullough are the super-supers who established such records.

Mr. Goodman is a Building Construction student from Kannapolis, North Carolina. He is in his fifth quarter, and this is the fourth time he has made the Honor Roll. He is now holding a 3.80 overall average.

Mr. McCullough, from Conyers, Ala., is studying Electrical Technology



MCCULLOUGH GOODMAN
Head Honor Roll

has built a 3.83 record. This is the second time that he has made a 4.00 average.

Special tribute should be paid the 19 beginning students who achieved the Honor Roll in their first quarter at Southern Tech. Their names, course, and average follow: E. L. Albitz, GF, 3.89; F. B. Babitt, H&AC, 3.11; Paul Beecham, BC, 3.87; J. W. Burgeas, H&AC, 3.29; W. E. Calhoun, H&AC, 3.17; J. T. Cooper, CE, 3.47; C. E. Foster, 3.00; V. H. Hall, Mech, 3.10; D. E. Holliday, E&C, 3.68; H. L. Huff, BC, 3.25; R. L. Hughen, ET, 3.73; Richard Jenkins, BC, 3.18; J. L. King, H&AC, 3.70; S. O. Lovely, BC, 3.21; Donald Marlowe, Mech, 3.35; A. L. Martin, E&C, 3.35; J. V. Smith, E&C, 3.31; and F. E. Strickland, BC, 3.47.

Names, courses, and averages of the 82 other Honor Roll students are: A. R. Allen, E&C, 3.00; H. B. Anderson, GF, 3.78; W. P. Archer, H&AC, 3.35; B. E. Bates, IT, 3.17; L. M. Black, E&C, 3.22; C. C. Blaisdell, ET, 3.42; D. R. Burkhalter, IT, 3.12; J. A. Burns, H&AC, 3.11; F. E. Carlton, Civil, 3.00.

Dwight Carter, Mech, 3.00; P. M. Clark, H&AC, 3.25; C. R. Clayton, ET, 3.33; C. L. Coleman, GF, 3.09; R. P. Dale, BC, 3.25; G. D. Davis, IT, 3.00; W. J. Davis, E&C, 3.36; R. E. Denny, E&C, 3.06; C. B. DeVane, Civil, 3.00.

Technician Enters ACP All-American Critical Service

The *Technician*, Southern Tech's monthly student newspaper, has been entered in the 1955-56 Associated Collegiate Press's All-American Critical Service, sponsored annually by the University of Minnesota.

September, October, November, and December issues of the paper were mailed recently and will be judged upon effectiveness in coverage, content, and physical properties and given a rank in comparison with other papers in its class.

The *Technician* has been entered in six of the Critical Services and has won two All-American ratings and four First-Class Honor ratings.

Results of the judging will be announced in early April.

Edwards, ET, 3.06; R. L. English, BC, 3.76; Kerry Estes, GF, 3.00; R. E. Ethridge, E&C, 3.52; R. T. Frost, E&C, 3.47; R. E. Godfrey, ET, 3.61; P. E. Hambrick, ET, 3.66; R. N. Harding, E&C, 3.60.

J. L. Hartley, ET, 3.61; R. B. Horne, E&C, 3.50; A. K. Howard, E&C, 3.57; H. L. Howard, Mech, 3.16; C. E. Hull, E&C, 3.30; H. G. Humberger, E&C, 3.40; L. W. Israel, E&C, 3.33; J. H. Johnson, E&C, 3.55; J. L. Johnson, E&C, 3.55.

the Glee Weeks You!

Before, director of the Glee Club, has put on more members in a reorganized group. Links were drastically many of last quarter failed to return to term. needed, according to second tenors and there are openings in ranges. In addition student accompanist anyone interested in which pays a small Mr. Defore in the sing to sing are invited club, which meets every night from 7:30 to Green Room. Singing Director

THE TECHNICIAN'S LOG



Students Gain Valuable Experience While Producing
the Yearbook



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 and baseball. 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.

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.



Recent Basketball Squad



Student Council



The Glee Club



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 become a member of several live, progressive, campus-wide organizations, depending upon his interests and qualifications—the Photo Club, the Amateur Radio Club, the Glee Club, the Society for the Advancement of Management (SAM), the Toastmasters International, Circle "K," the Christian Association, and the American Society of Metals.

Superior scholastic achievement is recognized by membership in the Tau Alpha Pi Honor Society, and athletic prowess through the Monogram 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 student activities, chartering student organizations, and conducting group meetings.

Officers and Adviser of Toastmasters—One of STI's Most Active Clubs





Dormitory Rooms Are
Conducive to Study
and Comfortable Living

Meals Are Wholesome,
Appetizing, and
Economical



O Happy Day!



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—such as, 5—3—6—may be explained by the following example. T. Phys. 122 (Electricity) 5—3—6 indicates a 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 TECHNOLOGY

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, 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
<hr/>					
First Quarter					
	C	L	T		
Arch. T. 141 (Blueprint Read.)	3	0	3		
T. Dr. 111 (Tech. Draw. I)	0	6	2		
T. Eng. 111 (Comp. & Rhet.)	3	0	3		
Ind. T. 111 (Human Relations)	3	0	3		
T. Math. 111 (Algebra)	5	0	5		
Total	14	6	16		
<hr/>					
Second Quarter					
	C	L	T		
Civil T. 121 (Elem. Surv.)	3	9	6		
T. Eng. 112 (Comp. & Rhet.)	3	0	3		
T. Math. 112 (Trig., Analyt.)	5	0	5		
T. Phys. 121 (Mechanics)	5	3	6		
Total	16	12	20		
<hr/>					
Third Quarter					
	C	L	T		
Arch. T. 121 (Graphics)	3	9	6		
Arch. T. 142 (Bldg. Mat.)	3	0	3		
Civil T. 112 (Mech. of Mat.)	5	3	6		
T. Phys. 123 (Ht., Sound, Lt.)	3	3	4		
Total	14	15	19		
<hr/>					
Fourth Quarter					
	C	L	T		
Arch. T. 222 (Bldg. Design I)	3	12	7		
Arch. T. 231 (Arch. Hist.)	3	0	3		
Civil T. 111 (Graphic Statics)	0	3	1		
Ind. T. 243 (Business Law)	3	0	3		
T. Phys. 122 (Electricity)	5	3	6		
Total	14	18	20		
<hr/>					
Fifth Quarter					
	C	L	T		
Arch. T. 211 (Wd., Stl. Const.)	3	6	5		
Arch. T. 223 (Bldg. Design)	3	9	6		
Arch. T. 243 (Bldg. Equip.)	3	0	3		
Civil T. 212 (Struc. Draft.)	0	6	2		
T. Eng. 221 (Public Speaking)	3	0	3		
Ind. T. 261 (Seminar)	1	0	1		
Total	13	21	20		
<hr/>					
Sixth Quarter					
	C	L	T		
Arch. T. 212 (Concrete Const.)	3	6	5		
Arch. T. 224 (Bldg. Design)	3	9	6		
Arch. T. 244 (Costs, Estimates)	3	3	4		
Civil T. 213 (Struc. Draft.)	0	6	2		
T. Eng. 231 (Tech. Writing)	3	0	3		
Total	12	24	20		

POSITIONS HELD BY STI GRADUATES
IN BUILDING CONSTRUCTION

Engineering Draftsman
Estimator-Expediter
Template Maker
General Contractor
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

A Study in Costs and Estimates



CIVIL TECHNOLOGY

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

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

C	L	T	Class hours	Laboratory hours	Total quarter hours
First Quarter					
	C	L	T		
Arch. T. 142 (Bldg. Materials)	3	—	0—3		
T. Chem. 111 (Gen. Chemistry)	5	—	0—5		
T. Dr. 111 (Tech. Draw. I)	—	0	—6—2		
T. Eng. 111 (Comp. & Rhet.)	—	3	—0—3		
T. Math. 111 (Algebra)	—	5	—0—5		
Total			16—6—18		
Second Quarter					
	C	L	T		
Civil T. 111 (Graphic Statics)	—	0	—3—1		
Civil T. 121 (Elem. Surv.)	—	3	—9—6		
T. Eng. 112 (Comp. & Rhet.)	—	3	—0—3		
T. Math. 112 (Trig., Analyt.)	—	5	—0—5		
T. Phys. 121 (Mechanics)	—	5	—3—6		
Total			16—15—21		
Third Quarter					
	C	L	T		
Civil T. 112 (Mech. of Mat.)	—	5	—3—6		
Civil T. 122 (Route Surv.)	—	3	—6—5		
Civil T. 131 (Hwy. Const.)	—	3	—0—3		
T. Phys. 122 (Electricity)	—	5	—3—6		
Total			16—12—20		
Fourth Quarter					
	C	L	T		
Civil T. 223 (Land. Surv.)	—	3	—6—5		
Civil T. 232 (Heavy Const.)	—	3	—3—4		
T. Eng. 221 (Public Speaking)	—	3	—0—3		
Ind. T. 111 (Human Relations)	—	3	—0—3		
T. Phys. 123 (Ht., Sound, Lt.)	—	3	—3—4		
Total			15—12—19		
Fifth Quarter					
	C	L	T		
Arch. T. 212 (Concrete Const.)	—	3	—6—5		
Arch. T. 244 (Costs, Estimates)	—	3	—3—4		
Civil T. 212 (Struc. Draft.)	—	0	—6—2		
Civil T. 224 (Top., Con. Surv.)	—	2	—6—4		
Civil T. 241 (Hydraulics)	—	5	—0—5		
Total			13—21—20		
Sixth Quarter					
	C	L	T		
Arch. T. 211 (Wd., Stl. Const.)	—	3	—6—5		
Civil T. 213 (Struc. Draft.)	—	0	—6—2		
Civil T. 242 (W., S. Plt. Opr.)	—	3	—0—3		
Civil T. 251 (Photogrammetry)	—	0	—6—2		
T. Eng. 231 (Tech. Writing)	—	3	—0—3		
Ind. T. 243 (Business Law)	—	3	—0—3		
Ind. T. 261 (Seminar)	—	1	—0—1		
Total			13—18—19		

POSITIONS CIVIL TECHNOLOGY PREPARES FOR

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

Assistant to the City Engineer

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

Assistant to Professional Civil Engineer

Assistant to Hydraulic Engineer

Cartographer

Topographer

Topographic Draftsman

Structural Draftsman

Concrete Laboratory Technician

Inspector or Estimator on Heavy Construction Jobs

Subdivision Designer

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



ELECTRICAL TECHNOLOGY

The course in Electrical Technology is planned to provide (1) general training in 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	
First Quarter			
C L T		C L T	
T. Dr. 111 (Tech. Draw. I) ..	0—6—2	Elec. T. 111 (Elec. Meas.) ..	0—3—1
T. Eng. 111 (Comp. & Rhet.) ..	3—0—3	Elec. T. 121 (A-C Circuits) ..	5—3—6
Ind. T. 111 (Hum. Relations) ..	3—0—3	T. Eng. 112 (Comp. & Rhet.) ..	3—0—3
T. Math. 111 (Algebra) ..	5—0—5	T. Math. 112 (Trig., Analyt.) ..	5—0—5
T. Phys. 122 (Electricity) ..	5—3—6	T. Phys. 121 (Mechanics) ..	5—3—6
Total	16—9—19	Total	18—9—21
Second Quarter			
Third Quarter			
C L T		C L T	
Elec. T. 122 (A-C Circuits) ..	5—3—6	Elec. T. 223 (A-C Circuits) ..	3—3—4
Elec. T. 131 (Basic Electronics) ..	5—3—6	Elec. T. 232 (Ind. Electronics) ..	5—3—6
T. Math. 113 (Applied Math.) ..	5—0—5	Elec. T. 241 (Comm. Circuits) ..	5—3—6
T. Phys. 123 (Ht., Sound, Lt.) ..	3—3—4	Elec. T. 251 (D-C Machinery) ..	3—3—4
Total	18—9—21	Total	16—12—20
Fourth Quarter			
Fifth Quarter			
C L T		C L T	
Arch. T. 141 (Blueprint Read.) ..	3—0—3	T. Dr. 231 (Elec. Drawing) ..	0—6—2
Elec. T. 252 (A-C Machinery) ..	5—3—6	Elec. T. 253 (A-C Machinery) ..	5—3—6
Elec. T. 271 (Wiring Methods) ..	3—3—4	Elec. T. 273 (Elec. Power Dist.) ..	3—3—4
Elec. T. 272 (Illumination) ..	2—3—3	Elec. T. 274 (Seminar) ..	1—0—1
T. Eng. 231 (Tech. Writing) ..	3—0—3	T. Eng. 221 (Public Speaking) ..	3—0—3
Total	16—9—19	Ind. T. 243 (Business Law) ..	3—0—3
Sixth Quarter			
Sixth Quarter			
C L T		C L T	
		Ind. T. 261 (Seminar) ..	1—0—1
Total	16—9—19	Total	16—12—20

POSITIONS THAT ELECTRICAL TECHNOLOGY PREPARES FOR

Graduates in Electrical Technology are prepared for placement opportunities in many phases of electrical contracting, electric utility operation, electrical equipment manufacturing, and electrical equipment sales and servicing. Following are a few of the job titles of previous graduates.

Estimator, electrical installation.

Draftsman, electrical.

Sales representative, electrical equipment.

Engineering aide.

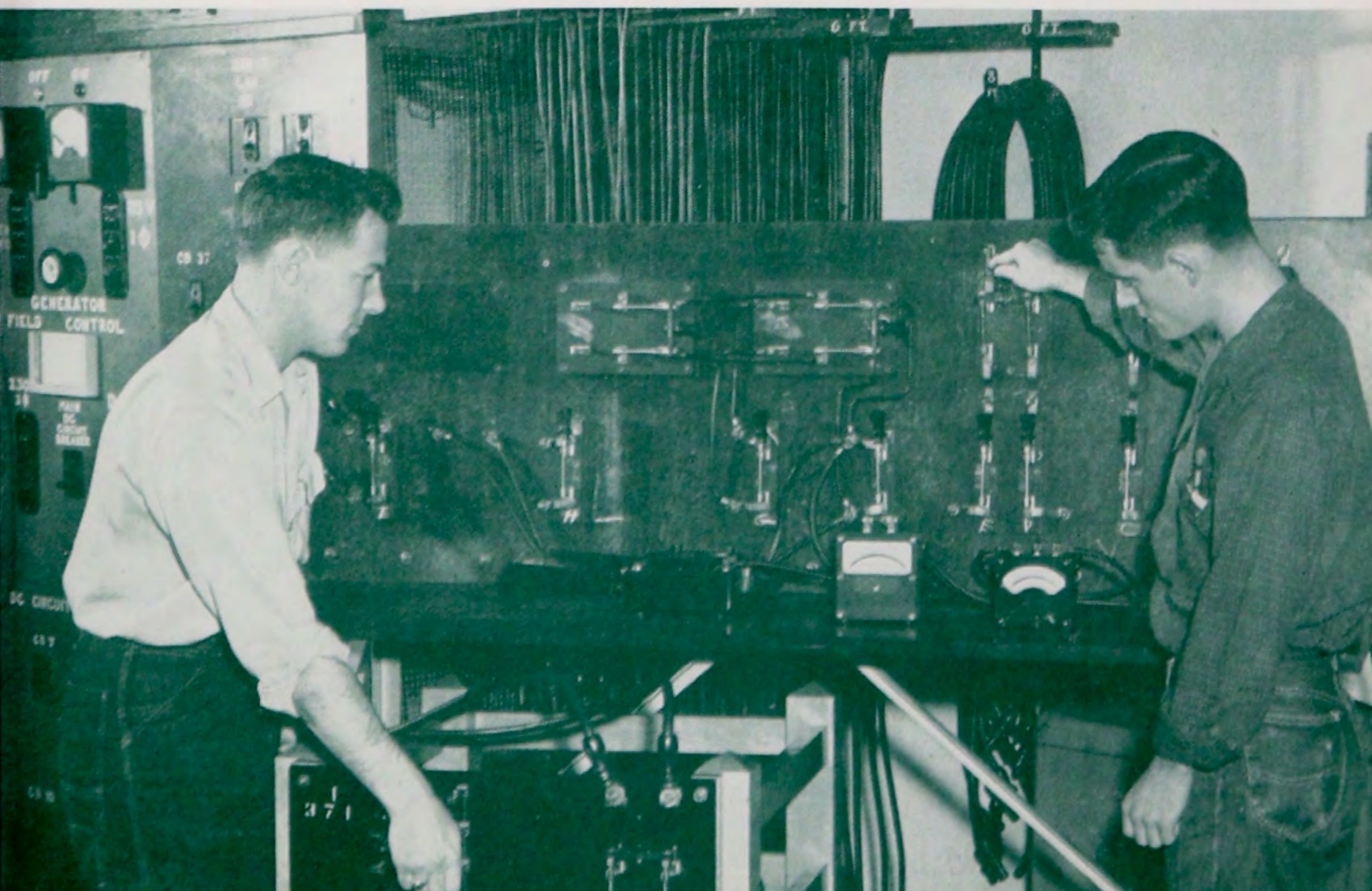
Laboratory technician, electrical.

Supervisor or foreman, electrical equipment manufacturing.

Building superintendent, industrial.

Instrument technician.

**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
First Quarter					
	C	L	T		
T. Dr. 111 (Tech. Draw. I)	0	6	2		
T. Eng. 111 (Comp. & Rhet.)	3	0	3		
Ind. T. 111 (Hum. Relations)	3	0	3		
T. Math. 111 (Algebra)	5	0	5		
T. Phys. 122 (Electricity)	5	3	6		
Total	16—9—19				
Second Quarter					
	C	L	T		
Elec. T. 111 (Elec. Meas.)	0	3	1		
Elec. T. 121 (A-C Circuits)	5	3	6		
T. Eng. 112 (Comp. & Rhet.)	3	0	3		
T. Math. 112 (Trig., Analyt.)	5	0	5		
T. Phys. 121 (Mechanics)	5	3	6		
Total	18—9—21				
Third Quarter					
	C	L	T		
Elec. T. 122 (A-C Circuits)	5	3	6		
Elec. T. 131 (Basic Electronics)	5	3	6		
T. Math. 113 (Applied Math.)	5	0	5		
T. Phys. 123 (Ht., Sound, Lt.)	3	3	4		
Total	18—9—21				
Fourth Quarter					
	C	L	T		
Elec. T. 223 (A-C Circuits)	3	3	4		
Elec. T. 232 (Ind. Electronics)	5	3	6		
Elec. T. 241 (Comm. Circuits)	5	3	6		
Elec. T. 254 (Elec. Machinery)	2	3	3		
Total	15—12—19				
Fifth Quarter					
	C	L	T		
Elec. T. 233 (Adv. Electronics)	3	3	4		
Elec. T. 242 (Comm. Circuits)	5	3	6		
Elec. T. 261 (Comm. Tech.)	5	6	7		
T. Eng. 231 (Tech. Writing)	3	0	3		
Total	16—12—20				
Sixth Quarter					
	C	L	T		
Elec. T. 243 (Comm. Circuits)	3	3	4		
Elec. T. 262 (Comm. Tech.)	5	3	6		
Elec. T. 263 (TV Technology)	5	3	6		
T. Eng. 221 (Public Speaking)	3	0	3		
Ind. T. 261 (Seminar)	1	0	1		
Total	17—9—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)

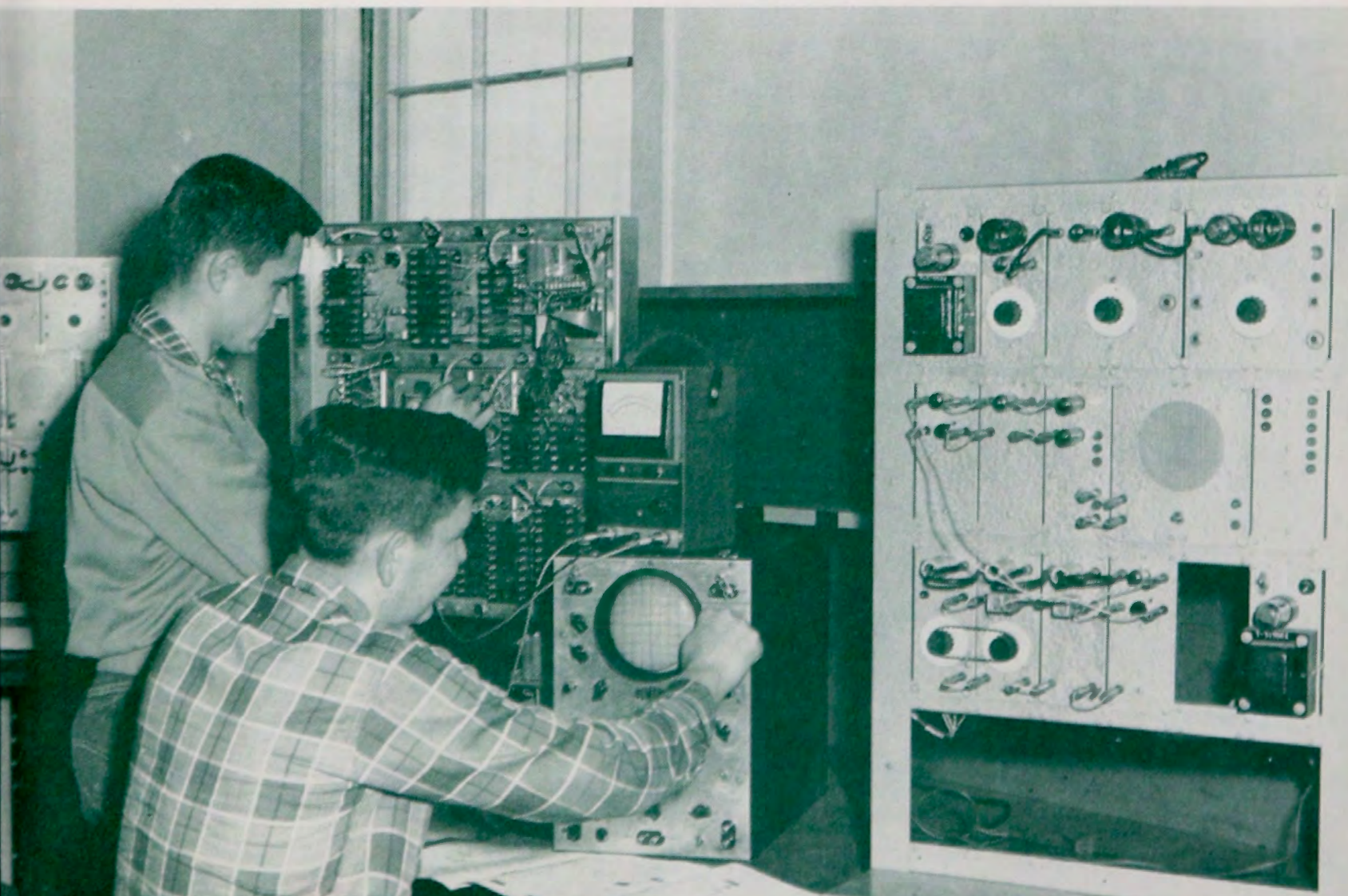
Civil Service Electronics Inspector

Civil Service Radio Maintenance, Construction

Warehouse (Electronic Equipment) Supervisor

Industrial Insurance Adjuster

Modern Laboratories Demonstrate Advanced Circuit Theory and Instrumentation



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.

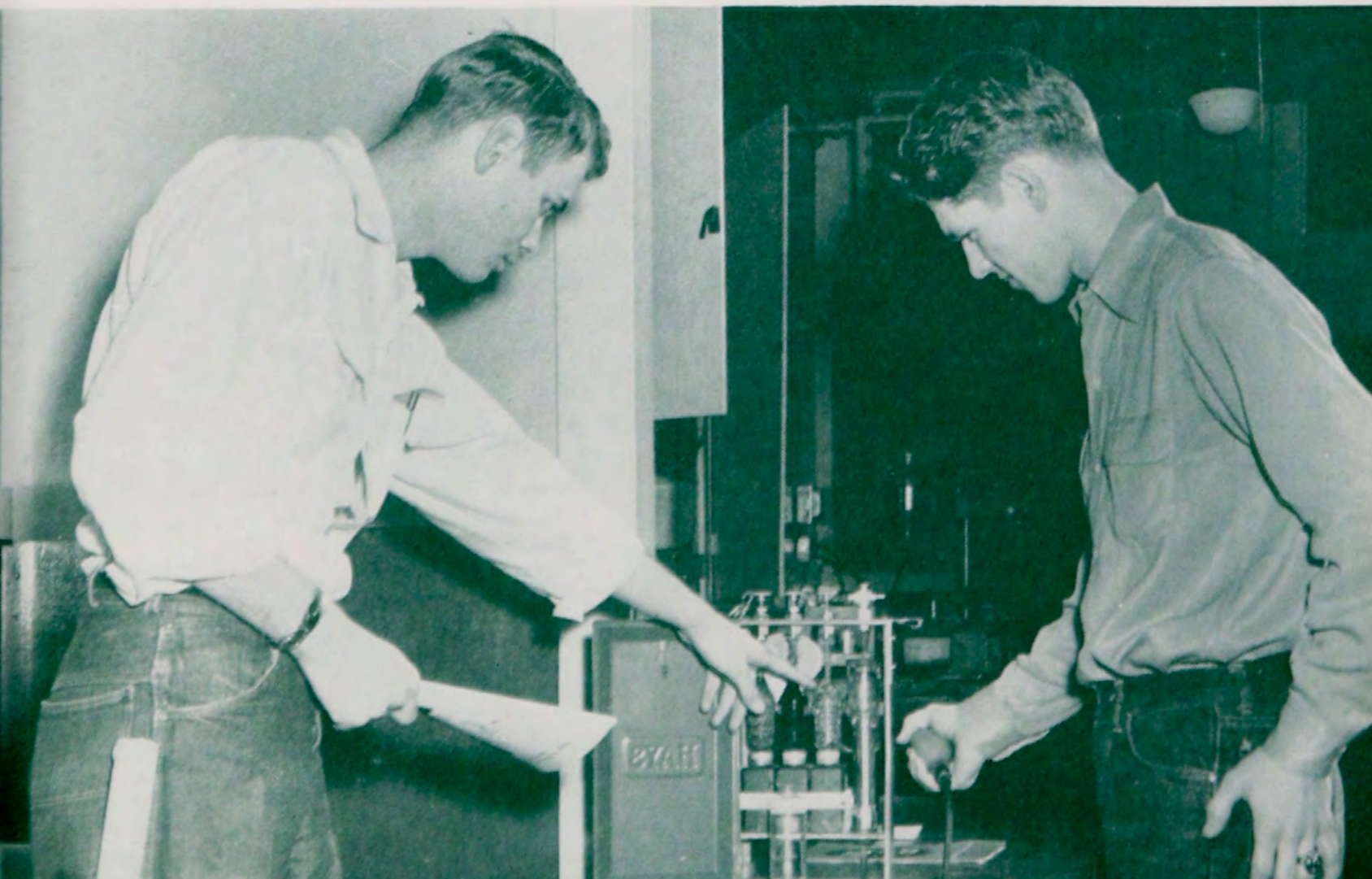
A more complete description of each subject is given in the back of this catalogue.

C	L	T:	Class hours	Laboratory	hours	Total quarter	hours
First Quarter				Second Quarter			
	C	L	T		C	L	T
T. Chem. 111 (Gen. Chemistry)	5	0	5	T. Dr. 112 (Tech. Draw. II)	0	6	2
T. Dr. 111 (Tech. Drawing I)	0	6	2	T. Eng. 112 (Comp. & Rhet.)	3	0	3
Gas T. 111 (Gas Survey)	1	0	1	Gas T. 112 (Theory of Gases)	5	0	5
Ind. T. 111 (Human Relations)	3	0	3	T. Math. 112 (Trig., Analyt.)	5	0	5
T. Math. 111 (Algebra)	5	0	5	T. Phys. 121 (Mechanics)	5	3	6
Total	14	6	16	Total	18	9	21
Third Quarter				Fourth Quarter			
	C	L	T		C	L	T
Arch. T. 141 (Blueprint Read.)	3	0	3	Gas T. 222 (Gas Util. II)	5	3	6
T. Eng. 112 (Comp. & Rhet.)	3	0	3	H&AC T. 221 (Air Cond. I)	5	3	6
Gas T. 121 (Gas Util. I)	3	3	4	Ind. T. 122 (Ind. Accounting)	1	3	2
Ind. T. 241 (Ind. Sales & Pur.)	2	0	2	T. Phys. 122 (Electricity)	5	3	6
Mech. T. 121 (Gen. Mtl. Shop)	0	6	2	Total	16	12	20
T. Phys. 123 (Ht., Sound, Lt.)	3	3	4				
Total	14	12	18				
Fifth Quarter				Sixth Quarter			
	C	L	T		C	L	T
T. Dr. 221 (Mach. Sketching)	0	6	2	T. Eng. 221 (Public Speaking)	3	0	3
T. Eng. 231 (Tech. Writing)	3	0	3	Gas T. 223 (Ind. Gas Util.)	5	3	6
Gas T. 231 (Gas Equip. I)	5	3	6	Gas T. 232 (Gas Equip. II)	3	3	4
H&AC T. 231 (Refrigeration I)	3	3	4	Ind. T. 213 (Supv. Training)	5	0	0
Ind. T. 242 (Small Bus. Mgt.)	3	0	3	Ind. T. 261 (Seminar)	1	0	1
Ind. T. 243 (Business Law)	3	0	3	Mech. T. 225 (Gen. Sht. Metal)	0	6	2
Total	17	12	21	Total	17	12	21

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

The Gas Fuel Lab Is the Best Equipped of Its Kind in the Nation



HEATING & 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				Second Quarter			
	C	L	T		C	L	T
T. Chem. 111 (Gen. Chemistry)	5	0	5	T. Dr. 112 (Tech. Drawing II)	0	6	2
T. Dr. 111 (Tech. Drawing I)	0	6	2	T. Eng. 111 (Comp. & Rhet.)	3	0	3
Ind. T. 111 (Human Relations)	3	0	3	Gas T. 112 (Theory of Gases)	5	0	5
T. Math. 111 (Algebra)	5	0	5	T. Math. 112 (Trig., Analyt.)	5	0	5
Mech. T. 121 (Gen. Mtl. Shop)	0	6	2	T. Phys. 122 (Electricity)	5	3	6
Total	13-12-17			Total	18-9-21		
Third Quarter				Fourth Quarter			
	C	L	T		C	L	T
Arch. T. 141 (Blueprint Read.)	3	0	3	Elec. T. 281 (Ind. Electricity)	5	3	6
T. Dr. 221 (Mach. Sketching)	0	6	2	T. Eng. 112 (Comp. & Rhet.)	3	0	3
Gas T. 121 (Gas Util. I)	3	3	4	H&AC T. 221 (Air Cond. I)	5	3	6
H&AC 111 (Fuels & Burners)	5	0	5	T. Phys. 123 (Ht., Sound, Lt.)	3	3	4
T. Phys. 121 (Mechanics)	5	3	6	Total	16-9-19		
Total	16-12-20			Total	16-9-19		
Fifth Quarter				Sixth Quarter			
	C	L	T		C	L	T
T. Eng. 231 (Tech. Writing)	3	0	3	T. Eng. 221 (Public Speaking)	3	0	3
H&AC T. 222 (Air Cond. II)	5	6	7	H&AC T. 223 (Air Cond. III)	5	6	7
H&AC T. 231 (Refrigeration I)	3	3	4	H&AC T. 232 (Refriger. II)	3	3	4
Ind. T. 241 (Ind. Sales & Pur.)	2	0	2	Ind. T. 243 (Business Law)	3	0	3
Mech. T. 225 (Gen. Sht. Metal)	0	6	2	Ind. T. 261 (Seminar)	1	0	1
Total	13-15-18			Mech. T. 226 (Sht. M. Layout)	0	6	2
Total	13-15-18			Total	15-15-20		

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)

**Ability to Interpret Blueprints and Drawings of All Kinds Is
Essential**



INDUSTRIAL TECHNOLOGY

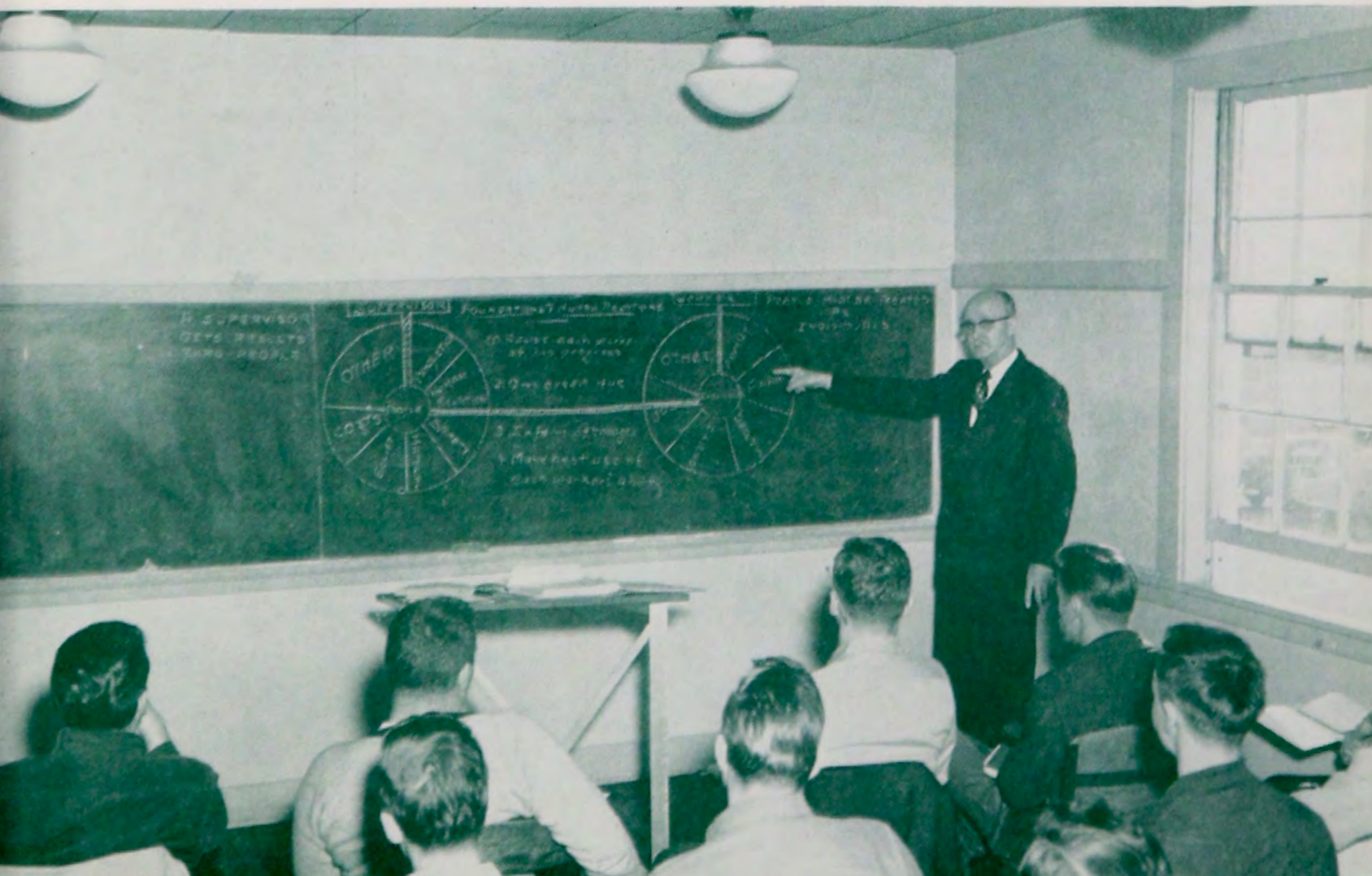
The student in Industrial Technology is trained primarily for supervisory and management positions in the manufacturing industries. However, the very nature of the broad curriculum, stressing principles and practices of scientific management, enables a graduate to compete successfully for a variety of 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. 111 (Gen. Chemistry)	5—0—5	
T. Dr. 111 (Tech. Draw. I)	0—6—2	
Ind. T. 111 (Human Relations)	3—0—3	
T. Math. 111 (Algebra)	5—0—5	
Mech. T. 111 (Tools, Methods)	5—0—5	
Total	18—6—20	
Second Quarter		
	C L T	
T. Dr. 112 (Tech. Draw. II)	0—6—2	
T. Eng. 111 (Comp. & Rhet.)	3—0—3	
Ind. T. 121 (Job Evaluation)	2—0—2	
T. Math. 112 (Trig., Analyt.)	5—0—5	
Mech. T. 121 (Gen. Mtl. Shop)	0—6—2	
T. Phys. 121 (Mechanics)	5—3—6	
Total	15—15—20	
Third Quarter		
	C L T	
T. Eng. 112 (Comp. & Rhet.)	3—0—3	
Ind. T. 122 (Ind. Accounting)	1—3—2	
Ind. T. 131 (Methods Imprvt.)	3—0—3	
Ind. T. 151 (Ind. Safety)	3—0—3	
Mech. T. 122 (Machine Shop)	0—6—2	
T. Phys. 122 (Electricity)	5—3—6	
Total	15—12—19	
Fourth Quarter		
	C L T	
T. Eng. 221 (Public Speaking)	3—0—3	
Ind. T. 223 (Ind. Economics)	5—0—5	
Ind. T. 232 (Mot., T. Study)	2—3—3	
Ind. T. 233 (Matls. Handling)	2—0—2	
Ind. T. 234 (Prod. Control)	3—0—3	
T. Phys. 123 (Ht., Sound, Lt.)	3—3—4	
Total	18—6—20	
Fifth Quarter		
	C L T	
T. Dr. 221 (Mach. Sketching)	0—6—2	
T. Eng. 231 (Tech. Writing)	3—0—3	
Ind. T. 212 (Labor Relations)	2—0—2	
Ind. T. 224 (Wage Incentives)	2—0—2	
Ind. T. 235 (Quality Control)	2—0—2	
Ind. T. 241 (Ind. Sales & Pur.)	2—0—2	
Ind. T. 242 (Small Bus. Mgt.)	3—0—3	
Mech. T. 214 (Inspec. Meth.)	3—0—3	
Total	17—6—19	
Sixth Quarter		
	C L T	
Ind. T. 213 (Supv. Training)	5—0—5	
Ind. T. 225 (Cost Control)	2—0—2	
Ind. T. 236 (Plant Layout)	2—3—3	
Ind. T. 237 (Ind. Analy.)	0—6—2	
Ind. 243 (Business Law)	3—0—3	
Ind. T. 261 (Seminar)	1—0—1	
Mech. T. 215 (Jigs & Fixtures)	2—3—3	
Total	15—12—19	

TYPES OF JOBS FOR WHICH THE INDUSTRIAL TECHNICIAN IS TRAINED

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

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					
	C	L	T		
T. Dr. 111 (Tech. Draw. I)	0	6	2		
T. Eng. 111 (Comp. & Rhet.)	3	0	3		
Ind. T. 111 (Human Relations)	3	0	3		
T. Math. 111 (Algebra)	5	0	5		
Mech. T. 111 (Tools, Methods)	5	0	5		
Mech. T. 121 (Gen. Mtl. Shop)	0	6	2		
Total			16-12-20		
Second Quarter					
	C	L	T		
T. Dr. 112 (Tech. Draw. II)	0	6	2		
T. Eng. 112 (Comp. & Rhet.)	3	0	3		
T. Math. 112 (Trig., Analyt.)	5	0	5		
Mech. T. 122 (Machine Shop I)	0	6	2		
T. Phys. 121 (Mechanics)	5	3	6		
Total			13-15-18		
Third Quarter					
	C	L	T		
Ind. T. 131 (Methods Impvt.)	3	0	3		
Ind. T. 151 (Ind. Safety)	3	0	3		
Mech. T. 112 (Met. Heat Tr.)	3	0	3		
Mech. T. 123 (Mach. Shop II)	0	6	2		
Mech. T. 131 (Gen. Woodwrk.)	0	6	2		
T. Phys. 122 (Electricity)	5	3	6		
Total			14-15-19		
Fourth Quarter					
	C	L	T		
Civil T. 112 (Mech. of Mat.)	5	3	6		
T. Eng. 221 (Pub. Speaking)	3	0	3		
Ind. T. 232 (Mot., T. Study)	2	3	3		
Mech. T. 232 (Pat. Making)	0	6	2		
T. Phys. 123 (Ht., Sound, Lt.)	3	3	4		
Total			13-15-18		
Fifth Quarter					
	C	L	T		
T. Dr. 221 (Mach. Sketching)	0	6	2		
Elec. T. 281 (Ind. Electricity)	5	3	6		
T. Eng. 231 (Tech. Writing)	3	0	3		
Ind. T. 241 (Ind. Sales & Pur.)	2	0	2		
Mech. T. 214 (Inspec. Methods)	3	0	3		
Mech. T. 224 (Welding)	0	6	2		
Total			13-15-18		
Sixth Quarter					
	C	L	T		
T. Dr. 231 (Machine Draw.)	0	6	2		
Ind. T. 213 (Supv. Training)	5	0	5		
Ind. T. 236 (Plant Layout)	2	3	3		
Ind. T. 243 (Business Law)	3	0	3		
Ind. T. 261 (Seminar)	1	0	1		
Mech. T. 215 (Jigs & Fixtures)	2	3	3		
Mech. T. 225 (Gen. Sht. Metal)	0	6	2		
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

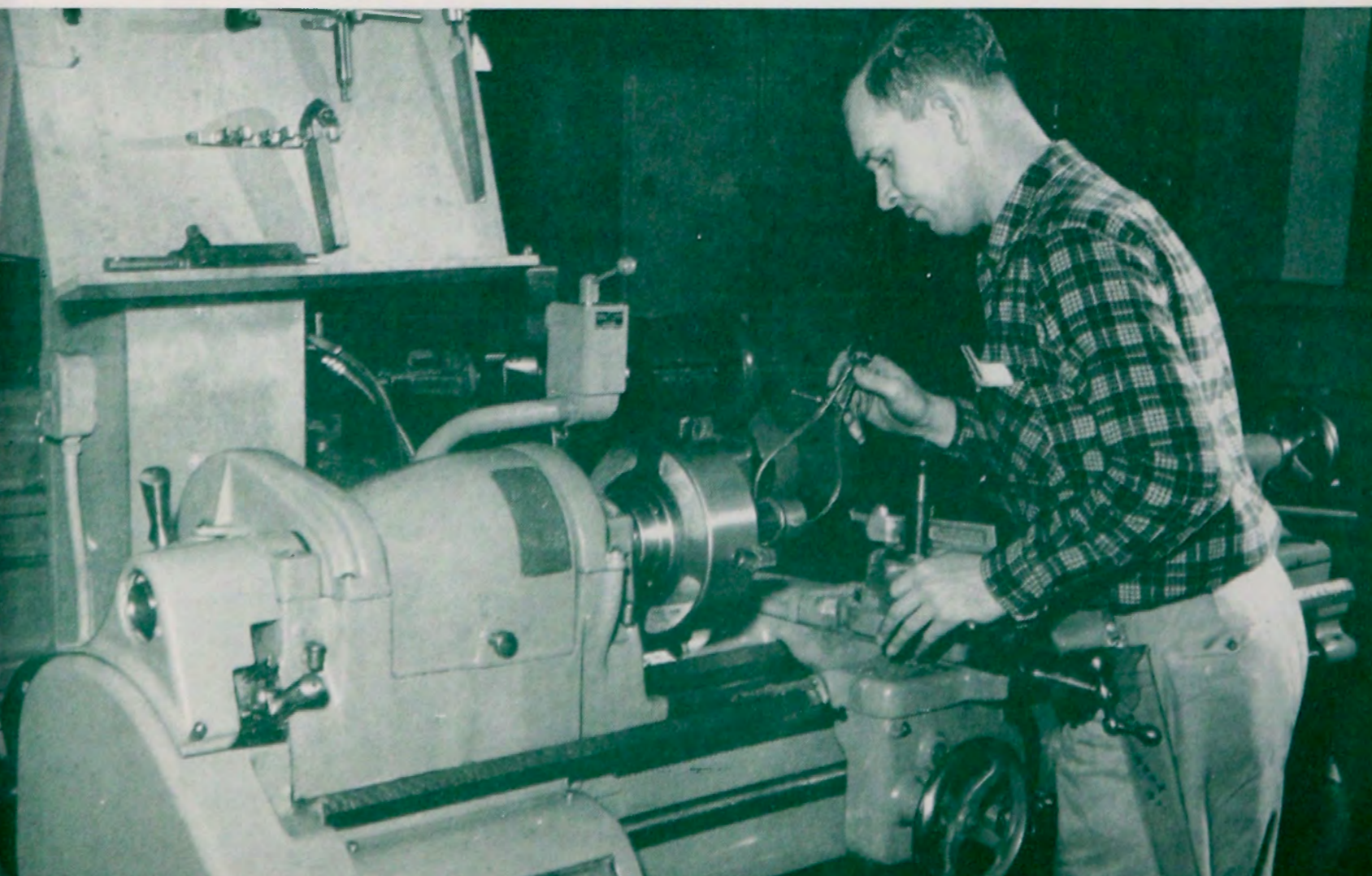
Tool Designer

Time Study Engineer

Production Supervisor

Turbine Installation Supervisor

Individual Work Projects Are Also Vital in the Learning Process



SUBJECT DESCRIPTIONS

BUILDING CONSTRUCTION TECHNOLOGY

- Arch. T. 121—GRAPHICS** 3—9—6
 Prerequisite—T. Drawing 111 Orvold
 An introductory study in architectural drawing and in the principles of visual design. This subject equips the student with a basic knowledge of drawing sections, plans, perspective, and presentation drawing in ink.
 Text: Ramsey and Sleeper, *Architectural Graphic Standards*.
- Arch. T. 141—BLUEPRINT READING** 3—0—3
 Prerequisite—None Muller
 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.
 Text: Dalzell, *Blue Print Reading for the Building Trades*. Vols. 1, 2.
- Arch. T. 142—BUILDING MATERIALS** 3—0—3
 Prerequisite—None Orvold
 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.
 Text: Gay and Parker, *Materials and Methods of Architectural Construction*.
- Arch. T. 211—WOOD AND STEEL CONSTRUCTION**
 Prerequisites—Civil T. 112 and Civil T. 111 3—6—5
 A study of the design of beams, girders, and columns in both steel and wood. Included is a study of the various timber fasteners, steel and timber trusses, and steel frameworks. Vaughn
 Texts: Parker, *Simplified Mechanics and Strength of Materials*. AISC Handbook, *Steel Construction Manual*.
- Arch. T. 212—CONCRETE CONSTRUCTION** 3—6—5
 Prerequisite—Civil T. 112 Vaughn
 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.
 Texts: Parker, *Simplified Mechanics and Strength of Materials*. ACI, *Reinforced Concrete Design Handbook*.
- Arch. T. 222—BUILDING DESIGN** 3—12—7
 Prerequisites—Arch. T. 121 and Arch. T. 142 Orvold
 Residential design. This subject requires of each student a com-

plete presentation drawing, a complete set of working drawings, and a complete set of specifications for a dwelling house. Scale models will be built from working drawings by groups of students.

Text: Dietz, *Dwelling House Construction*.

Arch. T. 223—BUILDING DESIGN 3—9—6

Prerequisites—Arch. T. 222, Arch. T. 211 or concurrently

Architectural design, working and structural drawings of more complex structures than those studied in Arch. T. 222. Structural computations are required. Vaughn

Texts: Same as for Arch. T. 121 and Arch. T. 222.

Arch. T. 224—BUILDING DESIGN 3—9—6

Prerequisite—Arch. T. 223 Vaughn

A continuation of Arch. T. 223 with the necessary working and structural drawings. More complex structures than those in Arch. T. 223 are studied and a small scale model is required.

Texts: Same as for Arch. T. 223.

Arch. T. 231—ARCHITECTURAL HISTORY 3—0—3

Prerequisite—None Orvold

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.

Text: Hamlin, *A History of Architecture*.

Arch. T. 243—BUILDING EQUIPMENT 3—0—3

Prerequisite—T. Phys. 123 Vaughn

A brief survey of the principles of heating, ventilating, plumbing, air conditioning, lighting and electrical wiring of buildings from the construction viewpoint.

Text: Gay and Fawcett, *Mechanical and Electrical Equipment of Buildings*.

Arch. T. 244—COSTS AND ESTIMATES 3—3—4

Prerequisite—Arch. T. 142 Orvold

Preparation of material and labor quantity surveys from actual working drawings and specifications.

Text: Pulver, *Construction Estimates and Costs*.

CHEMISTRY, TECHNICAL

T. Chemistry 111—GENERAL CHEMISTRY 5—0—5

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

Text: Currier and Rose, *General and Applied Chemistry*.

CIVIL TECHNOLOGY

- Civil T. 111—GRAPHIC STATICS** 0—3—1
Prerequisite—To be taken concurrently with T. Phy. 121
Graphical methods of calculating reactions, stresses, resultants and their application in various structural problems. Holladay
Text: Holladay, *Graphic Statics*.
- Civil T. 112—MECHANICS OF MATERIALS** 5—3—6
Prerequisites—T. Phys. 121 and T. Math. 112 Myatt
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.
Text: Parker, *Simplified Mechanics and Strength of Materials*.
- Civil T. 121—ELEMENTARY SURVEYING** 3—9—6
Prerequisite—To be taken concurrently with T. Math 112
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. Holladay
Text: Breed and Hosmer, *Elementary Surveying*, Vol. I.
- Civil T. 122—ROUTE SURVEYING** 3—6—5
Prerequisite—Civil T. 121 Holladay
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 laboratory group must lay out a complete highway location with each student submitting a complete set of plans, profiles, cross sections and earthwork computations for this location.
Text: Skelton, *Route Surveys*.
- Civil T. 131—HIGHWAY CONSTRUCTION** 3—0—3
Prerequisite—Civil T. 122 or concurrently Holladay
A study of highway location, grading, drainage, surfacing, maintenance, and administration.
Text: Bruce and Clarkeson, *Highway Design and Construction*.
- Civil T. 212—STRUCTURAL DRAFTING** 0—6—2
Prerequisite—T. Drawing 111 Myatt
Structural steel framing practices and preparation of shop drawings for steel fabrication.
Texts: AISC, *Steel Construction Manual*. AISC, *Structural Shop Drafting*, Vol. I.

- Civil T. 213—STRUCTURAL DRAFTING** 0—6—2
 Prerequisite—T. Drawing 111 Myatt
 Preparation of detail drawings for concrete structures.
 Text: ACI, *Manual of Standard Practice for Detailing Reinforced Concrete Structures.*
- Civil T. 223—LAND SURVEYS** 3—6—5
 Prerequisite—Civil T. 121 Holladay
 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 azimuth determination; Georgia Land Lot System of land subdivision.
 Texts: ASCE, *Manual on Land Subdivision.* The Department, *Mimeographed Notes.*
- Civil T. 224—TOPOGRAPHIC AND CONTOUR SURVEYING** 2—6—4
 Prerequisite—Civil T. 121 Holladay
 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; theory, description and purposes of the many types of maps, plans and profiles used by engineers; hydrographic surveying; altimetry.
 Text: Breed and Hosmer, *Higher Surveying*, Vol. II.
- Civil T. 232—HEAVY CONSTRUCTION** 3—3—4
 Prerequisite—Arch. T. 142 Holladay
 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.
 Texts: Peurifoy, *Construction Planning, Equipment, and Methods.* CM Reprint, *Concrete Mixing and Placing.*
- Civil T. 241—HYDRAULICS** 5—0—5
 Prerequisite—T. Phy. 121 and Civil T. 112 Myatt
 Elementary principles of hydraulics with special emphasis on static pressures, flow through pipes, channels, and over weirs.
 Text: Hammond, *Hydraulics.*
- Civil T. 242—WATER AND SEWAGE PLANT OPERATION** 3—0—3
 Prerequisite—Civil T. 241 or concurrently Myatt

A study of operation of water and sewage treatment plants and the tests made in these plants.

Texts: Hardenberg, *Operation of Water Treatment Plants*. Hardenberg, *Operation of Sewage Treatment Plants*.

Civil T. 251—PHOTOGRAMMETRY 0—6—2

Prerequisite—Civil T. 121 and Civil T. 224 Holladay

The preparation of maps and charts from aerial photographs by Stereoscopic and ground surveying methods. Specifications and requirements for aerial surveys.

Text: Same as for Civil T. 224.

DRAWING, TECHNICAL

T. Dr. 111—TECHNICAL DRAWING I 0—6—2

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

Text: French and Vierch, *Engineering Drawing*, 8th Ed.

T. Dr. 112—TECHNICAL DRAWING II 0—6—2

Prerequisite—T. Dr. 111 Muller

Continuation of topics introduced in Technical Drawing 111, plus threads and fasteners, sectioning, conventional representation, working drawings, and ink tracings.

Text: French and Vierch, *Engineering Drawing*, 8th Ed.

T. Dr. 221—MACHINE SKETCHING 0—6—2

Prerequisite—T. Dr. 112 Muller

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.

Text: French and Vierch, *Engineering Drawing*, 8th Ed.

T. Dr. 222—MACHINE DRAWING 0—6—2

Prerequisite—T. Dr. 112 Lockwood

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

Text: French and Vierch, *Engineering Drawing*, 8th Ed.

T. Dr. 231—ELECTRICAL DRAWING 0—6—2

Prerequisites—T. Dr. 111, Elec. T. 223 Muller

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.

Text: Bishop, *Electrical Drafting and Design*, 3rd Ed.

ELECTRICAL TECHNOLOGY

ELECTRONICS AND COMMUNICATIONS TECHNOLOGY

Elec. T. 111—ELECTRICAL MEASUREMENTS 0—3—1

Prerequisite—T. Phys. 122 Spaeth

Basic laboratory study of the operational characteristics of electrical instruments and meters. Permanent-magnet moving-coil, moving-iron, and electro-dynamic movements. Multimeters, vacuum-tube voltmeters, cathode-ray oscilloscopes, audio oscillators, and signal generators.

Text: *Laboratory Notes.*

Elec. T. 121—ALTERNATING-CURRENT CIRCUITS

5—3—6

Prerequisites—T. Math. 111, T. Phys. 122 Edwards

Fundamentals of alternating-current theory and practice as applied to single-phase circuits. Properties of resistance, inductance, and capacitance. Resistance networks. Thevenin's theorem as applied to resistance networks. Generation of alternating emf's and elementary wave-shape analysis. Reactance, impedance, and phase relations in series and parallel circuits. Resonant circuits. Complex notation, vector analysis, and use of the slide rule.

Text: Siskind, *Electrical Circuits, Direct and Alternating Current.*

Elec. T. 122—ALTERNATING-CURRENT CIRCUITS

5—3—6

Prerequisites—Elec. T. 121, Elec. T. 111, T. Math. 112 Carter

Advanced alternating-current theory and practice as applied to single-phase circuits. Further analysis of series and parallel circuits using complex notation and vector analysis. Admittance, conductance, and susceptance. Anti-resonant circuits. Coupled-circuit theory, impedance transformation, transformer theory, mutual inductance, and reflected impedance. Thevenin's theorem as applied to complex circuits. Construction, classification, regulation, loss determination, and efficiency of single-phase transformers. Per-unit method of calculation.

Text: Siskind, *Electrical Circuits, Direct and Alternating Current.*
Siskind, *Electrical Machines, Direct and Alternating Current.*

Elec. T 131—BASIC ELECTRONICS

5—3—6

Prerequisites—Elec. T. 121, Elec. T. 111 Blair

Basic study of the control of free electrons in elementary electronic circuits. Electron emission, classification and characteristics of high-vacuum tubes, tube characteristic curves. Rectification, amplification, amplification factor, trans-conductance, plate resistance, load lines, stage gain, and basic amplifier circuits. Types of bias. Classification and characteristics of gas-filled, vapor-filled, and cathode-ray tubes. Hard-tube and soft-tube voltage regulator circuits. Conversion efficiency, ripple factor, and circuit analysis of single-phase half-wave, full-wave, and bridge rectifier circuits.

Texts: Slurzberg and Osterheld, *Essentials of Radio. RCA Receiving Tube Manual.*

Elec. T. 223—ALTERNATING-CURRENT CIRCUITS

3—3—4

Prerequisites—Elec. T. 122, T. Math. 113 Carter

Study of polyphase circuits, balanced and unbalanced, including circuit analysis, distribution systems, transformers and transformer connections, rectifier circuits, and instrumentation.

Text: Siskind, *Electrical Circuits, Direct and Alternating Current.*

Elec. T. 232—INDUSTRIAL ELECTRONICS

5—3—6

Prerequisites—Elec. T. 122, Elec. T. 131, T. Math. 113

Study of basic industrial electronic circuits and application of these circuits to such devices as electronic timers, voltage regulators, electrostatic air cleaners, motor and generator control systems, web and register control systems, photo-electric systems, and induction and dielectric heating equipment. Youngblood

Text: Chute, *Electronics in Industry.*

Elec. T. 233—ADVANCED ELECTRONICS

3—3—4

Prerequisite—Elec. T. 261 or concurrently Youngblood

Study of special electronic circuits, including special amplifier and oscillator circuits, non-sinusoidal wave generators, pulsing circuits, clamping, advanced study of transients, transistor principles and circuitry, and servo-mechanisms.

Text: Navships 900,016, *Radar Electronic Fundamentals.*

Elec. T. 241—COMMUNICATIONS CIRCUITS

5—3—6

Prerequisites—Elec. T. 122, Elec. T. 131 Halstead

Study of the operating principles of telephone equipment and circuits. Local-battery and common-battery manual exchanges, step-by-step and all-relay automatic exchanges. Basic relay circuits for digital control. Matched transmission lines for audio frequencies, distributed and lumped line constants, pads and attenuators, constant-k and m-derived filters for low-pass, high-pass, band-pass, and band-elimination. "Pi," "T," and "L" sections.

Text: Albert, *Fundamentals of Telephony.*

Elec. T. 242—COMMUNICATIONS CIRCUITS

5—3—6

Prerequisite—Elec. T. 261 or concurrently Allen

High-frequency transmission line concepts and practical applications. Impedance-matching concepts and methods, transmission-line circle diagram, propagation, standing waves, basic antenna theory, antennas for low-frequency and high-frequency applications, and high-frequency measuring techniques.

Texts: Everitt, *Communication Engineering.* American Radio Relay League, *Antenna Manual.*

Elec. T. 243—COMMUNICATIONS CIRCUITS

3—3—4

Prerequisites—Elec. T. 233, Elec. T. 242 Allen

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

Texts: Navships 900, 017, *Radar System Fundamentals*. Navships 900, 028, *Microwave Techniques*.

Elec. T. 251—DIRECT-CURRENT MACHINERY 3—3—4
Prerequisites—Elec. T. 122, T. Math. 113 Halstead

Construction, characteristics, operation and control, and industrial applications of direct-current motors and generators. Electrical and mechanical characteristics of the various standard forms of field and armature windings.

Text: Siskind, *Electrical Machines, Direct and Alternating Current*.

Elec. T. 252—ALTERNATING-CURRENT MACHINERY 5—3—6
Prerequisites—Elec. T. 223, Elec. T. 251 Halstead

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

Text: Siskind, *Electrical Machines, Direct and Alternating Current*.

Elec. T. 253—ALTERNATING-CURRENT MACHINERY 5—3—6
Prerequisite—Elec. T. 252 Halstead

Construction, characteristics, operation and control, and industrial applications of synchronous generators, synchronous motors, and synchronous converters.

Text: Siskind, *Electrical Machines, Direct and Alternating Current*.

Elec. T. 254—ELECTRICAL MACHINERY 2—3—3
Prerequisite—Elec. T. 223 or concurrently. Halstead

Survey of electrical rotating machines, direct and alternating current. Construction, characteristics, operation and control, and industrial applications of d-c, single-phase a-c, and polyphase a-c motors and generators.

Text: Siskind, *Electrical Machines, Direct and Alternating Current*.

Elec. T. 261—COMMUNICATIONS TECHNOLOGY 5—6—7
Prerequisites—Elec. T. 241, Elec. T. 232 Spaeth

Study of voltage amplification as applied to radio-frequency and audio-frequency circuits. Analysis of amplifier circuits and coupling methods, radio-frequency tuning circuits, regenerative and degenerative circuits, decoupling networks, and basic oscillator circuits. Construction, tuning, and alignment of superheterodyne receivers.

Text: Slurzberg and Osterheld, *Essentials of Radio*.

Elec. T. 262—COMMUNICATIONS TECHNOLOGY 5—3—6
Prerequisite—Elec. T. 233 Goodwin

Advanced study of radio communication circuits. Amplitude-mod-

ulated transmitters, power amplifiers, phase inverters, push-pull amplifiers, and modulator circuits. Broadcast studio techniques, recorders and recording, and control room equipment.

Text: Marcus and Levy, *Elements of Radio Servicing*.

Elec. T. 263—TELEVISION TECHNOLOGY 5—3—6

Prerequisite—Elec. T. 233 Goodwin

Principles of frequency modulation, methods of modulation and demodulation, FM transmitter and receiver circuits. Federal Communications Commission standards for television transmission. Camera and picture tubes, composite video signal, television receiver circuits, power supplies, video amplifiers, deflection circuits, alignment procedures, transmitter circuits, and color television.

Text: Grob, *Basic Television, Principles and Servicing*.

Elec. T. 271—WIRING METHODS 3—3—4

Prerequisite—Elec. T. 252 or concurrently Meintzer

Types of wiring and wiring methods used in buildings. Selection of wire sizes, fuses, circuit breakers, insulation, distribution systems, control circuits, and service entrances. Design and layout of electrical wiring systems for lighting, motors, and control circuits in accordance with standard practice and the recommendations of the National Electrical Code.

Text: Abbott and Smith, *National Electrical Code Handbook*.

Elec. T. 272—ILLUMINATION 2—3—3

Prerequisite—Elec. T. 122 Blair

Illumination principles and practices. Modern illumination principles, calculation procedures, and equipment are coordinated in design problems of complete fluorescent and incandescent lighting installations.

Text: Westinghouse, *Lighting Handbook*.

Elec. T. 273—ELECTRIC POWER DISTRIBUTION 3—3—4

Prerequisite—Elec. T. 253 or concurrently Halstead

Generation, transmission, and distribution of electric power. Load-center distribution, substation operation, system and line protection, circuit analysis of distribution lines, and electric utility practices.

Text: Skrotzi, *Electric Transmission and Distribution*.

Elec. T. 274—SEMINAR 1—0—1

Prerequisite—Completion of four quarters of work

Scheduled meetings at which individual students present oral and written reports on important developments in the field of electrical power. Each report is followed by group discussion and criticism.

Text: None. Halstead

Elec. T. 281—INDUSTRIAL ELECTRICITY 5—3—6

Prerequisites—T. Math 112, T. Phys. 122 Meintzer

Survey course for non-electrical students. Electrical fundamentals,

circuit analysis, electric machinery, control circuits, wiring methods, and industrial applications of electrical equipment.

Text: Lister, *Electric Circuits and Machines*.

ENGLISH, TECHNICAL

T. Eng. 111—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. Carroll, Staff

Texts: Hodges, *Harbrace College Handbook*. Grant and Foreman, *Exercises in Writing and Thinking*. Harper, *American College Dictionary*.

T. Eng. 112—COMPOSITION AND RHETORIC 3—0—3

Prerequisite—T. Eng. 111 Hays, Staff

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

Texts: Hodges, *Harbrace College Handbook*. Grant and Foreman, *Exercises in Writing and Thinking*. Shurter, *Effective Letters in Business*. Harper, *American College Dictionary*.

T. Eng. 221—PUBLIC SPEAKING 3—0—3

Prerequisite—T. Eng. 112 Carroll, Staff

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.

Text: Monroe, *Principles of Speech*.

T. Eng. 231—TECHNICAL WRITING 3—0—3

Prerequisite—T. Eng. 112 Hays, Staff

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.

Texts: Gaum, Graves and Hoffman, *Report Writing*. Selected reports from industrial organizations.

GAS FUEL TECHNOLOGY

Gas. T. 111—GAS SURVEY 1—0—1

Clifford

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

Text: *The LP-Gas Handbook*.

Gas T. 112—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. Clifford

Text: Lecture Notes.

Gas T. 121—GAS UTILIZATION I 3—3—4

Prerequisite—Gas T. 112 Clifford

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.

Text: Clifford, *A Practical Guide to LP-Gas Utilization*.

Gas T. 222—GAS UTILIZATION II 5—3—6

Prerequisite—Gas T. 121 Clifford

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.

Text: Same as for Gas T. 121.

Gas T. 223—INDUSTRIAL GAS UTILIZATION 5—3—6

Prerequisites—Gas T. 112, Gas T. 121, Gas T. 131 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. Clifford

Text: Shnidman (Ed.), *Gaseous Fuels*.

Gas T. 231—GAS EQUIPMENT I 5—3—6

Prerequisite—Gas T. 112 Clifford

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.

Text: Same as for Gas T. 222.

Gas T. 232—GAS EQUIPMENT II 3—3—4
Prerequisite—Gas T. 231 Clifford

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.

Text: Lecture Notes.

HEATING AND AIR CONDITIONING TECHNOLOGY

H & AC T. 111—FUELS AND BURNERS 5—0—5
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. Taylor

Text: Burkhardt, *Domestic Oil Burners*. Haines, *Automatic Control for Heating and Air Conditioning*.

H & AC T. 221—AIR CONDITIONING I 5—3—6
Prerequisite—T. Phys. 123 or concurrently Taylor

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.

Text: Severns and Fellows, *Heating, Ventilating, and Air Conditioning Fundamentals*.

H & AC T. 222—AIR CONDITIONING II 5—6—7
Prerequisite—H & AC T. 221 Taylor

A continuation of the work given in H & AC T. 221 with laboratory work in design of domestic or commercial heating systems. This subject includes selection of equipment and its placement on blueprints.

Texts: Severns and Fellows, *Heating, Ventilating, and Air Conditioning Fundamentals*. Trane, *Air Conditioning Manual*.

H & AC T. 223—AIR CONDITIONING III 5—6—7
Prerequisite—H & AC T. 222 Taylor

A continuation of H & AC T. 222. The laboratory work covers the calculation of cooling loads, selection and arrangement of equipment, and drawings of the system.

Texts: Severns and Fellows, *Heating, Ventilating, and Air Conditioning Fundamentals*. Trane, *Air Conditioning Manual*.

H & AC T. 231—REFRIGERATION I 3—3—4

Prerequisite—T. Phys. 123 or concurrently Taylor

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.

Text: King, *Basic Refrigeration*.

H & AC T. 232—REFRIGERATION II 3—3—4

Prerequisite—H & AC T. 231 Taylor

A continuation of H & AC T. 231 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.

Texts: King, *Basic Refrigeration*. American Standard Safety Code for Mechanical Refrigeration.

INDUSTRIAL TECHNOLOGY

Ind. T. 111—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. Steinkamp

Text: Uris and Shapin, *Working with People*.

Ind. T. 121—JOB EVALUATION 2—0—2

McClure

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

Text: Smyth and Murphy, *Job Evaluation and Employee Rating*.

Ind. T. 122—INDUSTRIAL ACCOUNTING 1—3—2

A course designed to give the student a sound foundation in general accounting principles, familiarization with cost accounting theory and practices, and a working knowledge of the use of accounting data and its relationship to industrial management. McCool

Text: Specthrie, *Industrial Accounting—Brief Course and Workbook*.

Ind. T. 131—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. McCool

Text: Mundel, *Motion and Time Study*. Osborn, *Applied Imagination*.

- Ind. T. 151—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. McClure
 Text: Blake, *Industrial Safety*.
- Ind. T. 152—SAFETY STANDARDS** 3—0—3
 Prerequisite—Ind. T. 151 McClure
 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.
 Text: Association of Casualty and Surety Companies, *Handbook of Industrial Safety Standards*.
- Ind. T. 212—LABOR RELATIONS** 2—0—2
 Prerequisite—Ind. T. 111 Steinkamp
 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.
 Texts: Scott, Clothier, and Spriegel, *Personnel Management*. Malin and Unterberger, *The Taft Hartley Act in Operation*.
- Ind. T. 213—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. Steinkamp
 Text: Heyel, *Foreman's Handbook*.
- Ind. T. 223—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. McClure
 Text: Grant, *Principles of Engineering Economy*.
- Ind. T. 224—WAGE INCENTIVES** 2—0—2
 Prerequisite—Ind. T. 131 McCool
 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.
 Text: Loudon, *Wage Incentives*.
- Ind. T. 225—COST CONTROL** 2—0—2
 Prerequisite—Ind. T. 122 and Ind. T. 242 McCool
 Control of material and labor costs, determination of labor requirements, cost studies for use in estimating product prices.
 Text: March, *Cost Accounting*.

- Ind. T. 232—MOTION AND TIME STUDY** 2—3—3
 Prerequisite—Ind. T. 131 McClure
 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.
 Text: Mundel, *Motion and Time Study*.
- Ind. T. 233—MATERIALS HANDLING** 2—0—2
 Selection and use of modern equipment and methods for handling material in the industrial processes. Nahari
 Text: Barker, Footlik, et al., *Industrial Materials Handling*.
- Ind. T. 234—PRODUCTION CONTROL** 3—0—3
 Prerequisite—Ind. T. 131 McCool
 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.
 Text: McNiece, *Production Forecasting, Planning, and Control*.
- Ind. T. 235—QUALITY CONTROL** 2—0—2
 Principles of inspection and quality control, with special emphasis on setting up, maintaining, and interpreting statistical control charts.
 Text: Rice, *Control Charts*. McClure
- Ind. T. 236—PLANT LAYOUT** 2—3—3
 Prerequisites—Mech. T. 111, Mech. T. 122, Ind. T. 233, Ind. T. 131 McCool
 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.
 Texts: Apple, *Plant Layout and Materials Handling*. Apple, *Lab Manual for Plant Layout*.
- Ind. T. 237—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. Nahari
- Ind. T. 241—INDUSTRIAL SALES AND PURCHASING** 2—0—2
 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. Steinkamp
 Texts: Lester, *Sales Engineering*.
- Ind. T. 242—SMALL BUSINESS MANAGEMENT** 3—0—3
 Prerequisite—Ind. T. 122 McCool
 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.

Text: Kelly and Lawyer, *How to Organize and Operate a Small Business*.

Ind. T. 243—BUSINESS LAW 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. Steinkamp.

Texts: Charles, *College Law*. Charles, *Study Reports for College Law*.

Ind. T. 253—SAFETY SUPERVISION 3—0—3

Prerequisite—Ind. T. 151 McClure

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.

Text: None.

Ind. T. 261—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. Steinkamp

Text: Lecture Notes, Visiting Specialists.

MATHEMATICS, TECHNICAL

T. Math. 10—REMEDIAL ALGEBRA 5—0—0

A brief review of the fundamentals of algebra, of common and decimal fractions of arithmetic, and a few of the basic theorems of plane geometry. Wilkinson

Text: Keller and Zant, *Basic Mathematics*.

T. Math. 111—TECHNICAL ALGEBRA 5—0—5

Prerequisite—Two units of high school algebra or T. Math 10

Fundamental operations in algebra, factoring, fractions, exponents, radicals, complex numbers, linear equations, systems of linear equations, determinants, quadratic equations, quadratic systems in two unknowns, ratio, proportion and variation, graphical solution of simultaneous equations, and logarithms. Smith

Text: Fulmer and Reynolds, *College Algebra*.

T. Math. 112—APPLIED TRIGONOMETRY AND ANALYTIC GEOMETRY 5—0—5

Prerequisite—T. Math. 111 Maddox

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.

Text: Heineman, *Plane Trigonometry*.

T. Math. 113—APPLIED MATHEMATICS 5—0—5

Prerequisite—T. Math 112 Wilkinson

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.

Text: Longley, Smith and Wilson, *Analytic Geometry and Calculus*.

MECHANICAL TECHNOLOGY

Mech. T. 111—TOOLS AND METHODS 5—0—5

An introduction to the field of metal work and industrial manufacturing for mechanical and industrial 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. Arntson

Text, Begeman, *Manufacturing Processes*.

Mech. T. 112—METALLURGY AND HEAT TREATING

3—0—3

Prerequisites—Mech. T. 111 and Mech. T. 121

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. Freeman

Text: Schragar, *Elementary Metallurgy and Metallography*.

Mech. T. 121—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.

Text: Henry Ford Trade School, *Shop Theory*. Cuba

Mech. T. 122—MACHINE SHOP I 0—6—2

Prerequisite—T. Dr. 111 Freeman

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.

Text: Shuman, *Machine Shop Work*.

- Mech. T. 123—MACHINE SHOP II** 0—6—2
 Prerequisite—Mech. T. 122 Freeman
 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.
 Text: Shuman, *Machine Shop Work*.
- Mech. T. 131—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. Lockwood
 Text: Hjorth, *Principles of Woodworking*.
- Mech. T. 214—INSPECTION METHODS** 3—0—3
 Prerequisites—Mech. T. 121 and 122 Arntson
 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.
 Text: Michelon, *Industrial Inspection Methods*.
- Mech. T. 215—JIGS AND FIXTURES** 2—3—3
 Prerequisites—Mech. T. 121 and 122 Arnston
 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.
 Text: Jones, *Jig and Fixture Design*.
- Mech. T. 224—WELDING** 0—6—2
 Prerequisite—Mech. T. 121 Cuba
 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.
 Text: Rossi, *Welding and Its Application*.
- Mech. T. 225—GENERAL SHEET METAL** 0—6—2
 Prerequisite—T. Dr. 111 Arntson
 Shop problems including layouts and methods of fabrication of sheet metal.
 Text: Bruce, *Sheet Metal Shop Practice*.
- Mech. T. 226—SHEET METAL LAYOUT** 0—6—2
 Prerequisite—Mech. T. 225 Arntson
 A continuation of Mech. T. 225 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.

Text: Bruce, *Sheet Metal Shop Practice*.

Mech. T. 232—PATTERN MAKING

0—6—2

Prerequisite—Mech. T. 131

Lockwood

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.

Text: McCaslin, *Wood Pattern Making*.

PHYSICS, TECHNICAL

T. Physics 121—MECHANICS

5—3—6

Prerequisite—T. Math 112 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.

Defore, Lambert, Staff

Texts: Blackwood and Kelly, *General Physics*, 2nd Ed. Defore, Clark, and Crawford, *Physics Laboratory Exercises*, 2nd Ed.

T. Physics 122—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.

Defore, Hurst, Staff

Texts: Same as for T. Phys. 121.

T. Physics 123—HEAT, SOUND, LIGHT

3—3—4

Prerequisite—T. Physics 121

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.

Defore, Hutcheson, Staff

Texts: Same as for T. Phys. 121.

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.

* * *

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.

* * *

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.

* * *

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.

* * *

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 \$95.00 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.

* * *

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.

* * *

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.

* * *

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.

* * *

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.

A placement examination will be given to entering freshmen to determine aptitude and ability in basic algebra, and remedial courses in this subject will be provided for those students not meeting minimum requirements.

* * *

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.

SPECIAL NOTICE TO BEGINNING STUDENTS—All beginning students are expected to be on the STI campus by 10 A.M. of the first day in the quarter to participate in scheduled registration and orientation activities.



SOUTHERN TECHNICAL INSTITUTE
CHAMBLEE, GEORGIA

Tel. 47-3164

LAWRENCE V. JOHNSON
Director

L. Y. BRYANT
Registrar

CERTIFICATE OF RECOMMENDATION
(RESIDENT OF GEORGIA)

(Complete Sections I and II)

I. (Certificate to be signed by two alumni or alumnae of Georgia Tech or Southern Tech residing in the State of Georgia)*

Name of Applicant _____

Address of Applicant _____
(Street) (City) (County) (State)

We, the undersigned citizens of the State of Georgia and alumni or alumnae of Georgia Tech or Southern Tech, hereby certify that we are personally acquainted with the above-named applicant; that he is of good moral character; bears a good reputation in his community; and that in our opinion he is a fit and suitable person for admission to Southern Technical Institute, and is able to pursue successfully the course of study for which he wishes to register.

Date _____ Signed _____

Address _____
(City) (County)

Date _____ Signed _____

Address _____
(City) (County)

*If there are no alumni or alumnae residing in the county of the residence of the applicant, then the above certificate may be signed by the Judge of the Superior Court of the Circuit in which the applicant resides.

Judge of the Superior Court of the Circuit of the State of Georgia

II. (The following certificate to be signed by the Ordinary or Clerk of the Superior Court of the County in which the applicant resides)

This is to certify that _____ is a bona fide resident of the above-mentioned county, is of good
(Name of Applicant)

moral character, and bears a good reputation in the community in which he resides.

Date _____ Signed _____

Title _____

Address _____
(City) (County)

**A Unit of the Engineering Extension Division
Georgia Institute of Technology**

Tel. 47-3164



SOUTHERN TECHNICAL INSTITUTE
CHAMBLEE, GEORGIA

LAWRENCE V. JOHNSON
Director

L. Y. BRYANT
Registrar

CERTIFICATE OF RECOMMENDATION
(NON-RESIDENT OF GEORGIA)

- I. (A non-resident of the State of Georgia shall submit a certificate from two alumni or alumnae of the institution that he desires to attend, or from two reputable citizens of the community in which he resides; in addition, he must have a certificate from a judge of a court of record)

Name of Applicant _____

Address of Applicant _____

We, the undersigned, hereby certify that we are personally acquainted with the above-named applicant; that he is of good moral character; bears a good reputation in his community; and that in our opinion he is a fit and suitable person for admission to Southern Technical Institute, and is able to pursue successfully the course of study for which he wishes to register.

Date _____ Signed _____
(Check one) Alumnus, Ga. Tech (); Southern Tech (); or, Citizen of Community ()

Address _____
(City) (State)

Date _____ Signed _____
(Check one) Alumnus, Ga. Tech (); Southern Tech (); or, Citizen of Community ()

II. (Certificate to be signed by a judge of a court of record of the county or parish in which the applicant resides)

This is to certify that _____ is a bona fide resident of _____,
(Name of Applicant) (County or Parish)

is of good moral character, and bears a good reputation in the community in which he resides.

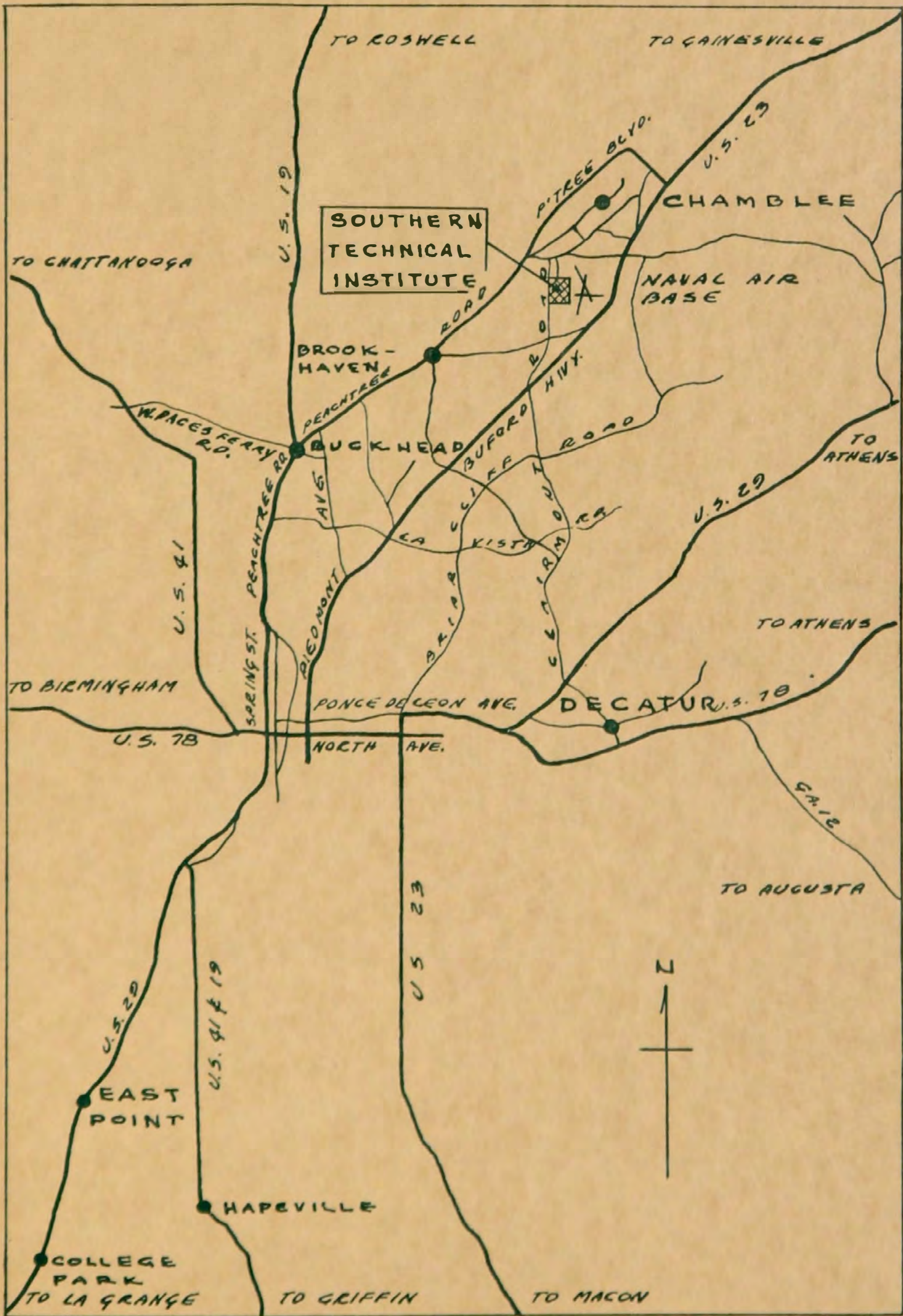
Date _____ Signed _____

Title _____

Address _____
(City) (County) (State)

**A Unit of the Engineering Extension Division
Georgia Institute of Technology**

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Thirteen Miles North of Atlanta

