The august group of men who guide the educational policy of the state of Georgia is known as the Board of Regents. Appointed by the Governor of the state and approved by the State Senate these gentlemen, during the tenure of their office, work mightily to update and improve the educational level of the state. The excellence of our own school, Georgia Tech, is a monument to their industriousness and devotion.
Edwin Davies Harrison, was born in Ewa
dale, Arkansas, on January 8, 1916. He received the Bachelor of Science degree from the United States Naval Academy in 1939, the Master of Science from Virginia Polytechnic Institute in 1948, and the Doctor of Philosophy degree from Purdue University in 1952. He holds honorary doctorates from Jacksonville University, the University of Toledo, and from Purdue University. Tau Beta Pi and Omicron Delta Kappa are among the many professional fraternities and honoraries of which he is a member. In 1957 he became the respected President of Tech.
The Administration

Fred Wesley Ajax
Director, Public Relations

William Lawson Carmichael
Registrar and Director of Admissions

Ralph A. Hefner
Dean, General College and Professor, Mathematics

Jesse W. Mason
Dean, Engineering College and Professor, Chemical Engineering
George C. Griffin, Dean of Students

Jamie R. Anthony, Controller

Mario J. Goglia, Dean of the Graduate School and Regents Professor, Mechanical Engineering

Paul Weber, Dean of Faculties
W. Roane Beard, Executive Secretary, Georgia Tech National Alumni Association.

A. H. Barnes, Director of Dining Halls

James E. Dull, Associate Dean of Students.

A. P. Derosa, Director of Placement

Lawrence V. Johnson, Director, Engineering Extension Division.
George J. Budig
Assistant Dean of Students

Mrs. J. Henley Crosland
Director, Libraries

William M. Eastman
Associate Director of Admissions

Joe W. Gutheridge
Assistant to the President, Director of Development
Claude A. Petty, Jr., Director, Physical Plant

W. Eugene Nichols, Assistant Dean of Students

Horace W. Sturgis, Associate Registrar

James A. Strickland, Director, Counseling and Guidance
Robert E. Stiemke  
Director, Engineering Experiment;  
Professor, Civil Engineering

Rocker T. Staton  
Assistant Dean, Engineering College and  
Professor, Industrial Engineering

James Gordon Wohlford  
Director, Co-operative Division

Robert B. Wallace, Jr.  
Publications Director; Editor,  
THE GEORGIA TECH ALUMNUS
The act of an inquiring mind searching for knowledge is based on the premise that knowledge about nature and man is worth acquiring whether or not it promises to be useful in the immediate future. This act provides an essential stimulus for thinking and learning at a technical institute such as Georgia Tech, among both students and faculty members. The projects with which Georgia Tech is concerned, some of which are featured in this section, range in area of interest from the extremely practical to the totally theoretical, from the basic to the applied; together they form part of the rapidly accelerating quest for knowledge about man and the universe in which he lives . . .
Project Firefly is the name applied to the activity of a group of upper atmosphere scientists who are responsible primarily for determining the position, growth, and spectral characteristics of artificially produced clouds released at high altitudes by two-stage rockets. This project, conducted in conjunction with the Air Force Cambridge Research Center, recently supplied valuable information for use in the currently vital Saturn rocket project.

Graduate Research Assistant D. L. Albritton examines the portable photographic tracking unit used to record data on rocket shots for Project Firefly.

Microanalysis techniques involving a process called photometric titrations are being further developed by Dr. Herman Flaschka of the Chemistry Department and his assistant, P. O. Sawyer. The new methods of analysis will affect areas ranging from blood-testing to electronic semi-conductors.
The new Frank H. Neely Nuclear Research Center with its research reactor and laboratories for physical and biological research, the culmination of eight years of work, will provide facilities for the study of many phases of nuclear science. The reactor, fueled with highly enriched plates of aluminum-uranium alloy, is designed to produce a power of five megawatts from a core that is only two feet in diameter and two feet high. Intricate safety precautions will be observed to provide for a maximum of safety for personnel working in the reactor.

Micromeritics studies centered around fine-particle technology have been made of the effect of light on movement of small particles in the upper atmosphere, thermal conductivity of fine-particle dispersions in suitable solvents, high-temperature chemistry of pulverized coal, and air-pollution effects. These projects are conducted by the Engineering Experiment Station and the department of Chemical Engineering.
Catalase is an enzyme present in many living cells in nature. In studies made in the Radioisotopes and Bioengineering laboratories during the past two years, the effect of this enzyme as a protective agent for bacteria cells against ionizing radiation has been explored in connection with its possible use as a control for radiation sickness.

For almost three years research engineers of the Mechanical Engineering department have been studying the effects of sound on heat transfer and they have discovered that resonance causes local “hot spots.” This problem is directly applicable to rocket and jet engine design, for these engines often fail because of over-heating from this effect.
The MPA-I (muscle-powered aircraft), designed and built by James M. McAvoy as a master's thesis project. It weighs less than a man, and is expected to have a maximum speed of about twenty miles per hour and a maximum altitude of about ten feet. The particular problems for research in the project concerned low speeds of the aircraft.

One of the many experiments conducted in the Civil Engineering hydraulics laboratory is the experimental study of paths of flow of hot and cold water in a river bed. The data obtained was used by the Georgia Power Company in designing a power plant on the Chattahoochee River.
Dr. Henry McGee works with project involving the preparation of ultra high energy propellant.

The Chemical Engineering Department, using a unique and highly sophisticated device employing a time-of-flight mass spectrometer and cryogenic sampling system, is conducting experiments in cryochemistry to determine the origin of comets and the behavior of rocket fuels in space. These experiments are being conducted for the astro-physics branch of the National Aeronautics and Space Administration.

Paula Stevenson prepares to test solution for residual-insecticide research.

Concern over what ultimately happens to insect poisons once they reach soil and streams has resulted in a long-range study of insecticides at Georgia Tech. Dr. Robert S. Ingols, director of the School of Applied Biology who initiated the project, and Paula Stevenson, research assistant, seek to determine the level of tolerance possessed by the poison-consuming bacteria which are responsible for changing pesticides into harmless compounds.
The primary objectives of the school of Architecture are to train students in the technical aspect of design without neglecting the architect’s traditional role of bringing order and beauty to man’s possessive environment in a world characterized by an unprecedented volume of construction. This volume of construction is anticipated to continue throughout the coming decade necessitating an increased and lasting need for graduates of Georgia Tech's School of Architecture. Pursuing this end the school now lists four options for students in its program: Architectural Design, Structural Design, Industrial Design, and the area connected with work in the light construction industry. The first two of these courses are five year programs leading to a Bachelor of Architecture degree, and the latter two consist of a four year program culminating in a Bachelor of Science Degree. The Architecture department also has a list of course offerings applicable to the general college in an attempt to allow the engineering student to gain some knowledge and appreciation of modern art and architecture. The graduate curriculum in architecture prepares qualified students for the Master of Architecture Degree, including a specialized department within the school of Architecture which offers an individual course towards a Master of City Planning.
Aerospace Engineering

With the realization of man's dream of space travel, the role of the Aerospace and the Aeronautical Engineer has risen to a position of universal prominence. The school of Aerospace Engineering at Georgia Tech is ably prepared to offer students the training requisite to meet the increasing complexities of this field both through its theoretical curriculum and the physical plant of three buildings. These buildings enable the department to offer extensive laboratory experience to augment the classroom teaching. This school was initially established through a gift from the Daniel Guggenheim Fund for the promoting of aeronautics, and it has since offered some of the best education available in this field. The Aerospace department at Tech is today recognized throughout the nation as one of the most progressive departments of its kind. The school has, in addition to the well-known undergraduate program, considerable facilities for advanced work leading to a Master's Degree. The advanced work prepares the student for research, high-level design, capable industrial application, or the teaching of the technical phases of the aerospace curriculum.
The most recent addition to the various schools comprising the General College of Georgia Tech, the School of Applied Biology, was established in 1960 to breach the gap between the physical sciences of the engineer and the natural sciences. The curriculum at Tech is basically designed to prepare graduates for work in bio-engineering or give undergraduates a basic for further study in medicine or the various functional biological sciences. In addition to the practical instruction of full-time members of the academic staff of the School, several professors from the research department serve to provide the students with a theoretical approach to recent developments in the field of Applied Biology. Since the dedication of the Frank Neely Research Reactor on the Georgia Tech campus in the early part of 1963, it is anticipated that the scope of the biology department at Georgia Tech will be greatly increased. Also the acceptance of basic biological courses as replacements for the freshman chemistry requirement has served to enhance the interest in the field of biology at an otherwise technical institution.

Psychology

The School of Psychology services an important dual function on the Tech campus. Primarily, it offers courses which permit students to gain training in the basic and applied aspects of the science of behavior. Also, it offers a program of studies leading to the degree, Bachelor of Science in Applied Psychology. The general objective of all courses is to provide the student with an understanding of human behavior and its effects in personal, family, and industrial problems. The school pointedly emphasizes the experimental approach, and the application of scientifically derived facts to the study and solution of human problems. The curriculum in Psychology is designed to prepare students for work in industrial positions, particularly in personnel and training departments, and for work with psychologists and engineers in research dealing with human factors in equipment design. The department also provides excellent preparation for graduate study in fields of psychology.
The School of Chemistry plays a dual role on the Georgia Tech campus; it is a service department as well as a degree granting department. It teaches the elementary courses in Chemistry that are so important to the modern engineer, and at the same time it offers programs leading to the B.S., M.S., and Ph.D. Degrees in Chemistry. In regard to its service function it is interesting to note that a recent exhaustive study found that the student's performance in freshman chemistry is the best single indicator of his overall performance at Tech. In the past few years the Chemistry department has incorporated a series of new courses designed to aid the advanced technical education of exceptionally adept Tech men. These have included such courses as Chemistry 110, a course specially designed to allow the gifted freshman speedy advancement through his basic courses. Also, advanced courses in qualitative and quantitative analysis have been incorporated in the curriculum. Chemistry is perhaps the broadest of the sciences, extending as it does from Biology and Medicine on the one hand to theoretical physics on the other. It offers almost unlimited possibilities for research. Thus it is not surprising that at Georgia Tech more Ph.D's have been earned in Chemistry than in any other field.
Chemical Engineering

Chemical Engineering involves the development and the operation of industrially useful chemical processes or the conversion of some discovery of chemistry into a practical industrial operation. In today's accelerated industrial and manufacturing age, the chemical engineer is constantly being called upon to apply his knowledge in an extremely wide range of industries. By strictly limiting the number of students in the junior and senior classes, the school has been able to maintain the highest of standards and to provide graduates who are recognized for their training in this field. In addition to the Bachelor's Degree offered for completion of the four-year undergraduate program, the School of Chemical Engineering also offers instruction culminating in a Master's Degree.

Ceramic Engineering

The School of Ceramic Engineering at Georgia Tech is dedicated to the training of personnel who can solve the problems connected with the production of stable materials and products for present and future needs. Most of these materials and products made from them are made stable by treatment at high temperatures and often are tailored to meet very specific requirements. Not only are clay bricks, terra cotta, porcelain, and glass considered as ceramics, but also nose cones, dielectric components, memory cells for computers, synthetic diamonds, uranium fuel elements, and other such items. Through the training he receives at Georgia Tech, the ceramic engineering graduate is able to serve industry as well as himself in a wide variety of ways.
Civil Engineering is the oldest of our present non-military branches of the engineering profession. Yet the field is one of rapidly changing theories and methods to better meet its traditional responsibility of service to man by conceiving, planning, designing, and constructing the facilities that make possible man's civilized existence. The faculty of the School of Civil Engineering strives to provide an educational environment that will equip their students for a useful professional career in one of the branches of civil engineering such as city and regional planning, construction, hydraulics, materials fabrication, radiological health, sanitary engineering, soil mechanics and foundations, structures, surveying, and photogrammetry, transportation, and water resources. Graduate study is also offered in many areas.
In answer to the demands of present day technology, the school of Electrical Engineering offers programs leading to the Bachelor's degree, the Master's degree, and the Doctorate. The possession of any or all of these degrees prepare the electrical engineering graduate to enter almost any phase of his profession. Accordingly, all students are required to master the fundamentals of mathematics, physics and electrical theory which enable them to quickly learn the techniques essential to any specified job in the field. Last year the school was brought to the threshold of a new era of accomplishment due to the opening of its new three million-dollar physical plant located on the Tech campus. In occupying this new facility the school of Electrical Engineering was for the first time freed from space limitations of long standing and is now in a position to augment its theoretical training with extensive work in the laboratory. Now, under the leadership of its director, Dr. B. J. Dasher, the School of Electrical Engineering is utilizing the most recent developments in the fields to become one of the most respected schools among its contemporaries throughout the country.
The course of study in Engineering Mechanics provides the student with an exceptionally strong foundation in the scientific disciplines so necessary in engineering practice. The specialized course work offered by the School of Engineering mechanics covers such areas as vibrations, dynamics, and stress analysis. The overall program is designed to train and equip the student to cope with the many novel problems that arise in this area of specialization in the modern world of technology. Engineering Mechanics has long been recognized as a fundamental of engineering, and all engineering curricula include some courses in mechanics. Recent advances in science and technology tend to create problems which demand the trained hands of an analyst who realizes the fundamental principles of mechanics. An excellent background is also provided for further study at the higher degree level.
Industrial Engineering

Industrial Engineering at this institution is considered to be a body of knowledge, philosophy and technology based on the fundamentals of science, mathematics and humanities. This will provide the student with what the School of Industrial Engineering believes will be the best combination of course work and environment under as many different professors as possible to make a well-rounded engineer capable of developing into any area where engineering is applicable. In other words, it is the school's desire in its present four-year curriculum to produce the maximum possible effectiveness in a student and to provide him with a broad engineering background to develop a good perspective of problems inherent to both engineering and management. As industry has become more and more complex the role of the industrial engineer has played a more important part in the smooth functioning of America's industrial progress. More and more companies are coming to Georgia Tech to seek out the services of the fine graduates of the department of Industrial Engineering. In order to satisfy this need most I.E. curricula has tended to broaden its scope while simultaneously condensing its course content in such a way as to make it of maximum value to both the graduate and industry.
The Industrial Management School at Georgia Tech is one of the largest schools of its kind in the world. Its main objectives and purposes are to prepare students for careers in management of manufacturing and industrial enterprises. The school has a single degree program leading to a Bachelor of Science and another program leading to a Master of Science in Industrial Management. A student does not take specialized majors or options as is typical in business schools. Rather he takes an inter-related core curriculum of management courses. The four key areas of the school's curriculum are organization and administration, economic management, market environment, and non-market environment. Industrial Management students get a solid background in mathematics, laboratory sciences, and at least nine hours of technical electives. Graduates of the school of Industrial Management hold positions in practically every walk of life. Primarily, however, they locate in sales and sales management, general management and administration, production management, accounting and finance, and industrial relations.

Industrial Management
The function of the school of Mathematics is that of providing thorough and careful training in the concepts and techniques of mathematics. Due to the extremely rapid growth of knowledge in scientific and technical areas during the past few years, the mathematics program includes a variety of courses and topics. For the student who is interested primarily in mathematics as a tool, there are offerings in traditional areas of applied mathematics. Of recent vintage are courses in the use of modern computational devices with numerical overtones: linear programming, probability, statistics, elasticity, and hydrodynamics. The honors program, while it is not new, deserves mention because of its continuing challenge and profit to the students who are involved. The School of Mathematics fulfills its function of providing careful training in the fundamental mathematics, necessary for an engineering curriculum.
Exciting technological advances made in recent years, particularly in space systems fields, have created a demand for engineers with broad knowledge capable of system integration. The mechanical engineer, possessing a wide range of understanding in many fields, functions as a systems integrator guiding and monitoring the contributions of engineering and the various sciences to properly integrate the individual components into the overall scheme. The study of mechanical engineering involves an understanding of physical concepts as well as the structure and behavior of materials. Application of the engineering sciences to the creative design of engineering systems and sound decision making are essential aspects of this branch of engineering. Substantial growth in faculty and research laboratory facilities support strong graduate programs in mechanical engineering as well as the program leading to Bachelor of M.E.
Modern Languages

The Department of Modern Languages provides its students with an opportunity to acquire an officially approved language as a tool of research and a medium of cultural enrichment. The methods of instruction employed aim at the development of all skills necessary for practical use of the language. All these skills are developed equally in all of the classes. The impact of language in the modern world of today affects the sources which the engineer must use in order to obtain technical information. The Language Department meets this need by making available to the engineer the language he needs to understand these new sources. Of prime importance to any collegiate student is a knowledge of a language which he does not use in everyday speech.

J. D. Wright, Director


English

The Department of English strives to make meaningful contributions to the education of the Tech student in two areas. First, it seeks to teach the art of speaking and writing well. In its freshman and advanced courses it demands analytical thinking, logical organization of ideas, and the expression of these ideas in clear, precise language. Second, the Department seeks to help the student know and realize the present world around him and the world of the past. It hopes that through the study of these literary works the Tech student will grow in an awareness of the human values that enrich life and the mind. The English Department gives scope and view of man to professionally-minded students courses that broaden his scope.

Andrew J. Walker, Director

The School of Physics serves three functions: it provides instruction in the basic principles of physics for students from every discipline on the campus; it offers a major program leading to the bachelors degree; and it provides an opportunity for graduate students to pursue the M.S. and Ph.D. degrees in physics. Individual physics courses as well as the physics curriculum are kept up to date by frequent revisions so that students may be aware of recent developments in physics and of the more traditional material. In the instructional laboratories students perform several of the classic experiments in physics, and several dealing with recently discovered phenomena. The character of the graduate program is largely determined by the research interests of the faculty. These include nuclear physics, solid state physics, atomic collisions, microwave spectroscopy, and the fields of statistical and quantum mechanics. The importance of a broad education at the undergraduate level is recognized, and provided for in the large number of elective hours given to the student who wishes to make his career in physics.
**Physical Training**

A. M. Coleman, Director

The primary objective of the physical training department is to insure that students remain physically active while attending Georgia Tech—that is, to teach certain fundamentals and skills and to maintain the degree of fitness which these skills impart. Naturally, then, the department aims at instilling a motivation for the student to utilize those physical activities which will be of great help in staying healthy after their work at the institution has been completed.

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**Social Science**

George Hendrix, Director

The Department of Social Sciences serves the institute as an integral part of the program of general education. Without pre-professional training, the engineering candidate needs a liberal arts curriculum which complements his four years of professional preparation. From study in the fields of history, government, sociology, and philosophy, the student acquires the fundamental knowledge which is the basis for universal understanding between all educated peoples. The courses are presented in the realization that a graduate of the institute is not only an engineer but also the framer of the political, economic, and social policies of the state and nation.
Textile Engineering

Since the many new fibers and processes developed within the past decade have contributed in large measure to a period of unprecedented growth of the textile industry, opportunities for trained people in this field are now unusually great. The A. French School of Textile Engineering on the Tech campus is aiding this expansion in two important ways: First, the School supplies well-trained engineers vital to the continued prosperity of the industry; secondly, the program of research and development at Tech has aided implementing of new processes to an extensive degree. The School, housed in the modern Hightower Building, offers Bachelor’s Degrees of three different specializations: Textile Engineering, Textile Chemistry, and Textiles. In each of these fields, the school emphasizes both the theoretical and practical aspects of study.
Membership in the National Society of Scabbard and Blade is the ultimate award for student leadership in military programs that can be given an advanced military cadet at Georgia Tech. The objectives of Scabbard and Blade include the raising of military standards at universities across the United States, as well as fostering qualities essential to efficient and capable officers. Since its members are representative of the ROTC of all three major services, this honorary also promotes a mutual understanding and a closer relationship among the leading students of the three military departments.

Scabbard and Blade exerts an active influence in its area by holding bi-weekly meetings at which the members discuss problems pertinent to the military. Its best-known project, though, is the annual Scabbard and Blade Military Ball.
The foundation of the Military structure of this nation is based largely on the reserve officer and his contribution toward the preservation of peace. Georgia Tech graduates commissioned through the Army Reserve Officer Training Corps make a major contribution to the security of our nation and the free world while serving their country at home and abroad.

The outstanding achievements of the Georgia Tech Cadets at the 1962 Summer Camps is indicative of the physical, mental, and leadership abilities of the “Tech Man.” The Engineer cadets attending camp ranked 1st among 11 schools, and won the Chief of Engineers Award, while the Ordnance Corps placed 1st among 4 schools and won the Chief of Ordnance Award. Moreover, Bruce G. Nowlin, a Tech student, was selected as the outstanding cadet at the Chemical Corps camp. The cadets in the Signal Corps, the Infantry, the Chemical Corps, and the Artillery also placed very well in their respective summer camps.

As evidenced by the largest Army ROTC enrollment in Tech history, “Tech Men” are availing themselves of a good opportunity to receive commissions as junior officers in the United States Army. These men can justly be proud to be a part of the team.
The Pershing Rifles is a national honorary military fraternity founded by General John A. Pershing in 1894. The chapters are located throughout the nation in the ROTC units of various colleges and universities. Since 1945 the Georgia Tech unit has represented the Army ROTC as a crack drill team in drill competition, parades, and exhibitions. The Pershing Rifle Color Guard often represents the Army ROTC in the parades and ceremonies held in the Atlanta area. During the winter quarter the company participates in the military ball and in the Fourth Regimental Drill Meet. Membership in the Pershing Rifles offers extra-curricular military instruction through lectures, films, and drill, to students interested in military subjects beyond their ROTC requirements. Membership is open to all Georgia Tech Basic ROTC Cadets upon completion of a pledge training program. Participation in the P.R.'s brings to the student pride in the ROTC.

Pershing Rifles

The Pershing Rifles drill team exhibits its skill and precision in drill maneuvers.
Army Cadet Staff


Engineers Battalion Staff: H. M. King, Battalion Commander, L to R: J. L. Budreau, K. H. Brown, H. M. Gregory, D. C. Floyd.


The Georgia Tech Army ROTC Band plays at drill.
The purpose of the Naval Reserve Officer's Training Corps is to provide both regular and reserve officers for the United States Navy and Marine Corps. The NROTC student at Tech takes courses in Naval Science, specializing his final two years in one of three options: line, supply, or marine corps. Although specialization is important in the program, the NROTC student is also encouraged to broaden his background by including such courses as psychology in his Navy curriculum. Since its commissioning in 1926, the Naval Reserve Officer's Training Corps unit at Georgia Tech has commissioned almost twenty-five hundred officers in the U. S. Navy and Marine Corps.
The Naval ROTC Drill Team performs at drill.

Navy Drill Team

Inspection being conducted by a cadet officer.

The Georgia Tech NROTC Marching Band plays at drill.
Fall Staff


Winter Staff Naval

Left, T. D. Strickland
Right, W. P. Carter, Jr.

Left, W. J. Vereen
Right, D. B. Howard, Jr.

Left, R. W. Sturgeon
Right, C. L. Windham

Left, W. O. Wheeler
Right, D. R. James

Left, M. S. Irby
Right, R. A. Dykes
The demands of progress have made the AFROTC what it is today. While it may be largely true that both military flying and military discipline were primary goals of a decade or so ago, the current program has been so carefully upgraded and updated that it embodies major phases of the constituents which go into the making of a man self-sufficient in the Air Force, and in civilian endeavor.

The Department of Air Science takes pride in steering its participants through rudiments of self expression, hinged on verbal and written communication, essential concepts of creativity, U. S. and World problems, and history allied with military operations.

In support of this rather generalized classroom work, there are potent leadership drill laboratory, a local flying club having close ties with the ROTC unit, an AFROTC honorary society, as well as a multitude of other character and skill developing activities.
The Arnold Air Society is a professional honorary service organization of Air Force ROTC cadets from one hundred and seventy of the nation's colleges and universities. The organization at Tech is composed of outstanding Air Force ROTC cadets. Membership in the society is offered to Freshmen and Sophomores as well as to advanced Air Force ROTC students. An important objective of the Arnold Air Society is to improve its association with other ROTC units at Georgia Tech and to promote better student-faculty relations. Another of the society's functions is a broad program of public relations by which the layman may better know and understand the Air Force. Members of the society are selected on the basis of their academic record, their interest shown in the Air Force, their leadership qualifications, and the attitude of the students toward the society.
Air Force Cadet Staff


W. L. Duke, Group Commander; L to R: W. H. Watts, R. P. Collins.


The Air Force ROTC Drill Team during parade. Commander J. L. Hanchey in charge of Drill Team.


The Georgia Tech Air Force Band at drill.