Miss Kem Hall
Carol Pfretzschner,
Miss Homecoming
Miss Margaret Crawford
Miss Sharon Sakate
Miss Barbara Lucas
Academic Conflict Initiates Change

Change and conflict characterized academics at the Georgia Institute of Technology this year. Yet, the conflicts resulted in little change, and the changes were subtle; the most noticeable was the change from three digit to four digit course numbers.

Architecture students and faculty protested for better conditions, while Industrial Management found a growing need for expansion.

The Athletic Association went academic in supporting the removal of calculus as a requirement. But, the administration was afraid to touch the legend of calculus and football which together add to the Georgia Tech mystique.

Social science and English, the liberal arts at the Institute, expanded their curricula to give technical students a broader scope of the outside world.

In an attempt to improve faculty teaching effectiveness, the new Student-Faculty Committee worked on tests for teacher evaluation.

Research within the departments was at an all-time high, and more projects were initiated with more dollars funding them than ever before. Biological and energy research was emphasized at the Engineering Experiment Station.

Constant curricular revision and evaluation enables the stability of Georgia Tech academics to endure.
Studying: Common Denominator of All Tech Students
Library Provides Place to Study for Students of All Kinds
Lab Experience Complements Classroom Lectures
It is a privilege to greet you as Tech's president — still a new president but becoming more a part of Tech with each passing month. With two years behind me, I could say I have finished my "sophomore" year!

Actually, of course, I have spent more than thirty years on the staffs of four different academic institutions, so I can say with some confidence that Georgia Tech is a quality institution and one that is improving. You are fortunate to be here now.

The agenda for progress constitutes a long list. I suppose everyone at Tech has his own list. We will not be growing in the near future, but we do need more faculty and staff in certain areas. In other areas we could accommodate more students. We have a spacious campus with many fine modern buildings, but we need to improve its esthetics and to add some major building space for Industrial Management, Industrial and Systems Engineering, and Architecture. We need some major renovating in the older dormitories.

We need to learn how to articulate first class academics with first class athletics. None of these are truly new in universities — but they are new to Tech. We must find our own way forward. We will.

You who are seniors will become Tech alumni at the end of the year. Alumni have been an important factor in Tech's progress — through their counsel, through leadership in state and national affairs, and through their generosity to their alma mater.

I trust that this past year at Tech has been rewarding to you, that you have had some fun along with the hard work, and that you may have developed a taste for learning which will abide in the years ahead.
The Vice Presidents and the Deans of the Colleges

TOP, LEFT TO RIGHT: Dr. Vernon Crawford, Vice President for Academic Affairs; Ewell Barnes, Vice President for Business and Finance; Dr. Clyde Robbins, Vice President for Campus Planning. CENTER: Frank Roper, Registrar. BOTTOM, LEFT TO RIGHT: Dr. Ferdinand Levy, Dean of the College of Industrial Management; Dr. Thomas Stelson, Dean of the Engineering College; Dr. Henry Valk, Dean of the General College.
Deans of Students

TOP LEFT: Miller Templeton, Dean of International Student Affairs. TOP RIGHT: James Dull, Dean of Students. BOTTOM, LEFT TO RIGHT: Judith Priddy, Dean of Women Students; Jerry Gallups, Dean of Fraternity Affairs; Edwin Kohler, Associate Dean of Students.
The Directors of Schools and Departments
A.E. Gives Wide Exposure

AEROSPACE ENGINEERING

Georgia Tech's School of Aerospace Engineering concentrates on all aspects of vehicular flight, at all speeds and at all altitudes. It covers all phases of research, design, and development in this broad area. Aerospace engineers also serve on teams working to solve problems in civil, mechanical, ocean, and other branches of engineering.

AIR FORCE R.O.T.C.

Air Force R.O.T.C. offers a course of study leading to a commission in the Air Force. The General Military Course during the first two years includes a survey of the military organization and its history, while the Professional Officers Course during the third and fourth years includes a study of United States defense policy and principles of management and leadership.

Career opportunities for R.O.T.C. graduates in the Air Force contribute to the program's popularity at Tech.

Students and faculty in the School of Architecture worked together this year to combat problems brought about by an extremely increased enrollment. New buildings are planned for construction, but in the meantime labs have had to be relocated to Brown Dormitory and the Old Civil Engineering Building. Plans were also being made to make the Architecture School an autonomous college. The high quality of education that has existed in previous years managed to continue through it all.

Several steps have been taken by Army R.O.T.C. to give a personal approach to its cadets; a color guard gave successful performances this year, and a new drill team was set up. Opportunities for airborne training and a summer Ranger Camp gave valuable out-of-the class-room experience.
Biology Enhanced by Faculty

BIOLOGY

The remarkable rate of growth of the School of Biology in the last year has culminated in a quantum jump in regard to faculty expansion and a major reorganization and expansion of curriculum and educational programs. Drs. Strange, Anderson, Porterfield, and other new faculty members have greatly improved course offerings and research capabilities of the school.

CERAMIC ENGINEERING

Ceramic engineering applies sound scientific and engineering principles to manufacturing problems in the ceramic industry. These problems are challenging because both physical and chemical reactions occur at the high temperatures used in manufacture; measurements are difficult; and cost constraints for economical production are ever present. The School of Ceramic Engineering provides many opportunities to solve these problems by offering specialization within the field.

CHEMICAL ENGINEERING

Curriculum revision within the School of Chemical Engineering has resulted in additional electives and computer applications. There are now a large number of areas of specialization being developed, such as plastics and pulp and paper technology. Graduates of chemical engineering are in demand and continue to find high-paying jobs, despite fluctuations in other engineering fields.

CHEMISTRY

Development in the School of Chemistry has continued for the past few years. One area into which it has expanded is the field of biochemistry. Both older and newly acquired faculty have become interested in applying chemical research to biological systems and processes; x-ray diffraction, electrochemistry, and spectroscopy are some of the methods used in these studies.

ABOVE RIGHT: Biology. ABOVE, FAR RIGHT: Ceramic Engineering. RIGHT: Chemistry. FAR RIGHT: Chemical Engineering.
Civil Engineering Studies Traffic Problems

CIVIL ENGINEERING

The School of Civil Engineering encompasses a large number of specializations, ranging from surveying to sanitation. Among them is traffic engineering; the school conducts yearly workshops on the subject of traffic signals. Participants come from all over Georgia and apply the techniques learned at Tech to the problems in their own towns.

Engineering Graphics became a part of the school last year. It continues to develop the drawing skills students might need in a future career.

ELECTRICAL ENGINEERING

The largest undergraduate school at Georgia Tech, Electrical Engineering, constantly updates its programs to keep pace with changes in the profession. Innovations in teaching methods such as computer teaching, video-taped presentations, and credit by exam are being tried. Twenty new young professors have been added and have done much to improve student-faculty relationships.
To balance out their technical education, many Tech students turn to the English Department. Lower-level core curriculum courses examine stories, plays, poetry, famous authors, and famous pieces of literature; students are evaluated primarily through themes. Upper-level courses, although they are not required, have been popular with students. The content and format of these courses are varied, with panel discussions, compositions, and out-of-class projects making up the required work. The English Department continues to add a necessary liberal arts dimension to one’s Georgia Tech education.

The primary objective of the undergraduate curriculum in Engineering Science and Mechanics is to prepare students for careers in engineering and related fields. In addition, programs in E.S.M. provide an excellent educational base for the engineering student who decides to enter such non-engineering fields as medicine, law, or business. While the program emphasizes fundamental principles and techniques of mathematics and engineering science, eighty hours of elective credit allow the student to pursue in some depth technically-related areas of particular interest to him.
Man's Physical Environment Draws Attention

GEOPHYSICAL SCIENCE

The School of Geophysical Sciences offers a graduate study program for those interested in understanding the earth's and man's physical environment at the surface of the earth. The term "Geophysical Sciences" is used in the broadest sense to include both the physics and chemistry of the earth, its waters, and its atmosphere. Special emphasis is given to studies of man's modification of his physical environment. Joint research with engineers is encouraged so that students can relate their basic scientific studies to the solution of environmental problems.

HEALTH SYSTEMS

Health Systems, the newest department at Georgia Tech, has a very flexible program and promises successful careers for its graduates. In addition to term projects and hospital tours, the curriculum also includes on-the-job training and forms an excellent Pre-Med or Pre-Dental program.

ABOVE RIGHT: Geophysical Sciences; ABOVE, FAR RIGHT: Industrial Management; RIGHT: Health Systems; FAR RIGHT: Information and Computer Science.
Industrial Management Proves to Be Unique and Effective

INFORMATION AND COMPUTER SCIENCE

Established in 1963 as the world’s first academic program in information science, Georgia Tech’s School of Information and Computer Science is today among the largest computer science schools in the United States. This achievement mirrors the fantastic growth and potential of the computer industry. The school offers degrees for both professional and research oriented careers and in many areas of specialization. I.C.S. students have free access to the school’s extensive computer laboratory which includes three computer systems and a wide array of special information processing devices.

INDUSTRIAL MANAGEMENT

The College of Industrial Management is the largest single instructional unit on the Georgia Tech campus. Differing in philosophy with most undergraduate schools of management, I.M.’s program is based on a science and engineering background. Students take two full years of science, engineering, and mathematics in addition to social science and humanities prior to beginning their management courses.

Management schools throughout the United States stress a liberal arts background, as opposed to one of science. Due to this philosophic difference, the industrial management graduate of Tech is more readily able to assume a position of moderate responsibility with an engineering firm upon graduation.
I.S.Y.E. Becomes Less Technical

INDUSTRIAL AND SYSTEMS ENGINEERING

Georgia Tech's School of Industrial and Systems Engineering is the largest industrial engineering school in the United States. As the need for industrial engineering increases in service industries and in the area of socio-economic activities, further programs have been developed to stress the industrial engineer's impact on society. It is not unusual to find today's graduate working in governmental systems, transportation systems, and even churches, in addition to their traditional work for manufacturing industries.

MATHEMATICS

The School of Mathematics has recently revised its requirements and offerings at all levels both to prepare the professional mathematician and to assist in the preparation of students entering into other fields. They hope to make these conceptual tools of mathematics more interesting, more useful and even more available to all students and to the professional community.
The School of Mechanical Engineering has a curriculum that allows students the opportunity to develop their individual interests in such areas as design, dynamics and fluid mechanics. Heat transfer, kinematics, and philosophy of design, also offered as fields of interest, further show the versatility of the M.E. program. Graduate students also have a broad range of fields open to them for specialization, a few of which are bioengineering, combustion, and fluidics and fluid power.

MODERN LANGUAGES

The continuing development of the Department of Modern Languages has already shifted the emphasis of the instructional program from the exclusively lower-divisional to the increasingly upper-divisional. Reflecting, as it does, more advanced preparation on the part of the staff, that specifically instructional development has not occurred in isolation; it has been accompanied by an increase in the capacity of the department for research. In consequence of these two aspects of its progress, the department is becoming qualified for serving Georgia Tech more fully than ever before.
N.E. Challenged by Energy Crisis

NAVY R.O.T.C.

The N.R.O.T.C. unit at Georgia Tech, established in 1926 as one of the first in the country, is among the largest of over fifty Navy units currently in commission. The Naval Reserve Officers Training Corps provides a source of qualified officers for the Navy, Marine Corps, Naval Reserve, and Marine Corps Reserve. Every year, newly commissioned officers are sent from the N.R.O.T.C. unit at Tech to the fleet for duty on surface ships, submarines, aviation units, and staff billets throughout the world.

NUCLEAR ENGINEERING

Nuclear engineering plays an important role in the development of educational programs and research to meet the challenge of the energy crisis and its environmental impact. Research in the area of advanced energy conversion concepts, nuclear power plant safety, and the transportation of nuclear waste have been initiated.

During the past year the School of Nuclear Engineering has undergone an extensive revision of its instructional program reflecting the demands of industry and government for nuclear engineers. A Bachelor Degree program resulted in response to these demands.

PHYSICAL EDUCATION

The past year has been one of considerable change and progress for the Physical Education and Recreation Department. The Board of Regents authorized a change in the name of the department from Physical Training to the present title, and also broadened its responsibilities. In addition to the academic and intramural athletic programs, the department will also be responsible for recreational and some non-varsity athletics. Particular emphasis has been placed on providing instruction and recreation for the increasing coed population at Georgia Tech.

ABOVE, FAR LEFT: Physical Education. ABOVE LEFT: Navy R.O.T.C. FAR LEFT: Nuclear Engineering. LEFT: Physical Education.
Physics Offers Elective Freedom

PHYSICS

Basic service courses for freshmen and sophomores are offered by the School of Physics. Advanced service courses for students of engineering, science, or mathematics, and advanced work leading to the Bachelors, Masters, and Doctoral Degrees are also offered.

Great elective freedom in the undergraduate and graduate programs enable students to enjoy a wide variety of interests and to work out suitable programs of study.

PSYCHOLOGY

The psychology curriculum, planned to provide breadth, depth, and flexibility, allows students to plan sixty-three hours of elective credits and features an effective advisory system. Close student-faculty interaction and the input of student suggestions into the curriculum increase the extent to which the program meets the students' needs.

Social Science

History, philosophy and history of science, political science, and sociology are the four disciplines from which coursework is drawn for the Department of Social Sciences. Each teaches the student how to temper a technical education with considerations of ethical, philosophical, and historical issues; to cultivate a critical awareness and perspective on problems that arise between society and its developing technology. Social science electives are popular, both as a liberal arts outlet and as a complement to technical courses.

Textile Engineering

The School of Textile Engineering prepares students for challenging and rewarding careers in the textile industry, the country’s largest manufacturing complex. Three study programs are available, encompassing polymer, fiber, textile engineering, science, and management. During the past year a student-operated and managed business venture was initiated to replace conventional laboratory sessions. Student projects were also carried out interfacing mini-computers with various types of manufacturing equipment to achieve process control not previously possible.
EES Dominates Research Activities at Georgia Tech

The Engineering Experiment Station at Georgia Tech is a major center for advanced technology in Georgia and the Southeast. With a large, full-time staff of scientists and engineers, it conducts research of national significance, provides services and facilities to the faculty and students of Georgia Tech, and supports the economic and technological growth of the State.

Through its various departments and divisions, the Engineering Experiment Station operates an extensive complex of modern research facilities. These facilities are housed in five major buildings on, and near, the Tech campus and in numerous smaller specialized laboratories.

The major proportion of research work at the Station is supported by contracts with industry and the Federal Government. The Georgia Tech Research Institute, a private non-profit corporation closely associated with the Engineering Experiment Station, is organized to handle the contractual relations with external agencies.

There is appreciable involvement in research and instruction between the staff of the Station and the academic schools and departments of Georgia Tech.
Applied Sciences Does Research for NASA

The Applied Sciences Department of the Engineering Experiment Station is made up of five divisions: the High Temperature Materials Division, Nuclear and Biological Sciences Division, Physical Sciences Division, the Analytical Instrumentation Laboratories, and the Office of Radiological Safety.

The High Temperature Materials Division does extensive testing on how substances and structures react to extreme temperatures. Principal areas of investigation include radomes for various craft and window materials for NASA’s Space Shuttle.

The Nuclear and Biological Sciences Division is primarily concerned with applying technology to the life sciences. To this end, the Georgia Tech Research Reactor has been used to evaluate nuclear energy and its effects on biological systems.

Research in the Physical Sciences Division covers a broad spectrum from crystal physics to solid state materials, devices, and circuits. More than 100 projects were active last year in the Analytical Instrumentation Laboratories, including such long term ventures as participation in the Skylab program.

The Office of Radiological Safety directs health physics and safety programs on the Tech campus. All aspects of on-campus radioactivity are controlled by this office.

The Office of Program Development is responsible for assessing the technological needs of the state and for directing internally sponsored research accordingly. Three assessment projects have been initiated recently. The first one was a pilot project aimed at developing useful methods and procedures for evaluating the technological needs of Georgia industries. A second project was established to assess the needs of the poultry segment of the food processing industry. The third study is aimed at the public sector. Its purpose is to identify the technological needs of various levels of government within the state.
Most of the activity in the Systems and Techniques Department is directed toward electronics research and related areas. Mechanical research and development is also conducted by this department.

The Federal Government (primarily the Defense Department and NASA) sponsors most of the projects, but funding also comes from other sources. Current research includes radar antennas and systems, electromagnetic compatibility, radar reflectivity measurements and analysis, electromagnetic properties of materials, communications/télémetry, radio-location/direction-finding, coherent optics, guidance/control/power distribution, and biomedical electronics. Some specific areas of investigation are:

- the susceptibility of heart pacemakers to a variety of radiated signals, including automobile ignition sources and typical communications signals.
- a Public Safety Communications System for the City of Savannah.
- an infrared sensor to detect forest fires.
- the use of microwave radiation to warm cancer tumors in order to enhance the effectiveness of anti-cancer drugs.
- the use of electromagnetic radiation to kill insects and weed seeds.
- the solving of several mechanical problems related to the manufacture of prefabricated housing modules constructed of urethane foam.
The basic aims of the Industrial Development Division are to effect increased employment and greater capacity in industry. Under a grant from the National Science Foundation, and in cooperation with the Governor's Science Advisor, studies are being made to suggest mechanisms and agencies capable of focusing research in Georgia on the most critical problems as they arise.

The Special Projects Branch conducted sponsored projects in a number of special fields: an unemployment registration and employment generation program in southwest Georgia, a study of the effectiveness of vocational-technical schools in Georgia, a program designed to increase housing starts for low-income families in the coastal plain of Georgia, a series of workshops throughout the state to assist community leaders in evaluating manpower resources information, a review of vocational-technical training programs in eight southeastern states, and a manpower registration in Bainbridge for an industrial prospect. As a result of this last study, a manufacturer purchased a 67-acre tract in Bainbridge and broke ground for a 500,000-square-foot plant to eventually employ over 1,000. At full operation, the plant will increase the manufacturing payroll of the area approximately $5 million annually — more than 1,000 times the cost of the IDD study that was instrumental in the plant's location in Bainbridge.
Anak
HIGHEST SENIOR HONORARY

Stephen T. Harris
Wayne J. Parker

Thomas R. Respess
Gregory B. Williams
Koseme

HIGHEST JUNIOR HONORARY

N. Ray Campbell
Mark E. Percich
Scott A. Rutherford
Dennis K. White
Omicron Delta Kappa
SENIOR LEADERSHIP HONO
Kim Carter  James Dullum  Stephen Harris  James Montgomery  Thomas Respess  Gregory Williams

Scabbard and Blade
MILITARY HONORARY
Order of Omega

FRATERNITY HONORARY

LEFT TO RIGHT: Randy Williams, Ed Kohler, Jim Dullum, Bruce Byington (top), Chris Abbott, Pat McKenna, President; Andy Sensing, Scott Rutherford (top), Scotty Howell.
Phi Eta Sigma
FRESHMAN SCHOLASTIC HONORARY
Section I

Briarean Society
CO-OP SCHOLASTIC HONORARY
Section II