



"An Equal Employment/Education Opportunity Institution."

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## INTRODUCTION



Georgia Tech will celebrate its Centennial in 1985. With the celebration of 100 years, the school is growing to meet the challenge of tomorrow. A continuous flow of bright new students, an expanding campus, and growing research lay the foundation for the South's largest technological university.

Chartered by the General Assembly in 1885, the Georgia School of Technology opened its classroom doors on October 7, 1888. The first October Tech was open, 85 students enrolled, with an overall enrollment of 129 for that year. They pursued degrees in the only major offered, mechanical engineering. Even then, Tech courses were difficult to master, and only 28 members of the original October class earned degrees.

The next few years, degrees were offered in electrical engineering, civil engineering, and textiles. Gradually the curriculum broadened, and today Tech students can choose from 30 major fields in engineering, science, business, and architecture at the bachelor's, master's and doctorate degree levels.

On July 1, 1948, the Georgia School of Technology officially became the Georgia Institute of Technology. Tech's first two colleges were also formed at this time, the College of Engineering and the General College. Since then, the General College has become the College of Sciences and Liberal Studies, and the College of Management and the College of Architecture have been added. The College of Architecture is Tech's newest college addition, having been elevated from a school in 1975. The College of Engineering is by far the largest of the four.

From an original two-building, five-acre campus, Tech has grown to 125 buildings on more than 300 acres near downtown Atlanta. Construction is underway on a three-building complex for the College of Management and the School of Industrial and Systems Engineering. Also, construction is underway on a new 560-bed dormitory.

The general growth and diversity of Tech is reflected in its ever-expanding student population. Total enrollment for Fall Quarter 1982 was 11,396--9,285 undergraduate students, and 2,111 graduate students. Although the first woman student did not appear on the main campus as a day student until 1952, there are now enrolled 2,010 women undergraduates and 411 women graduate students. Within the total undergraduate student body there are 7,275 men, 996 minority students, and 315 international students. Of the graduate students enrolled, 1,700 are men, 213 are minorities, and 469 are international students.

Tech is proud of the scholastic abilities of its students. Entering students have an average Scholastic Aptitude Test (SAT) score over 250 points higher than the national average. The school has the largest number of National Merit Scholars and National Achievement Scholars of any publicly-supported institution in the United States. National Achievement Scholars, composed solely of black students, represent an honor equivalent to that of National Merit Scholars.

Students who wish to combine industrial work experience with their classroom studies enroll in Tech's "Cooperative Plan". This five-year program has been at Tech since 1912 and has more than 400 participating companies. In Fall Quarter 1982, 2,237 students enrolled in this program.

Leading the instruction of Tech students are 537 faculty members--517 full-time and 20 part-time. Over eighty-five percent of the faculty hold Ph.D. degrees. In addition, the Engineering Experiment Station employs 523 full-time professional researchers in its five

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electronics and three resources laboratories. Together, Tech's faculty and staff make up approximately 2,900 of the Institute's community.

Students and faculty have access to a catalog collection of 1,569,000 bibliographic units in the Price Gilbert Memorial Library to help them in their studies and research. Microtexts total 1,900,000; patents, 4,250,000; miscellaneous items, 251,000; serial titles, 13,775; and periodical titles, 5,800. Eighty percent of the total collection is in the scientific or technical fields. Literature searches and other reference services are provided from more than 400 bibliographic and factual data bases.

Research is an integral part of the education process at Georgia Tech and has grown to an annual \$60.9 million business including research in the academic colleges and the more applied research in the Engineering Experiment Station. Research activities are diversified and are centered in areas where the nation has a vital interest -- defense, energy, health and environment, and productivity.

Students about to graduate from Tech are encouraged to engage the services of the Placement Center. The office is very successful in helping graduates find jobs that best fit their qualifications. In 1981-82, approximately 91 percent of 919 Tech graduates surveyed had finalized their postgraduation plans prior to graduation. The June 1982 bachelor degree candidates surveyed in mechanical engineering, electrical engineering, aerospace engineering, and nuclear engineering averaged more than four job offers. Bachelor degree engineering graduates received an average salary offer of \$2,131 per month.

Georgia Tech alumni now total over 59,672, many of whom serve in prominent positions. Among these are Jimmy Carter, former U.S. President; Sam Nunn, Georgia Senator; John Portman internationally acclaimed architect; John Young and Richard Truly, astronauts; David D. Garrett, president, Delta Airlines; David S. Lewis, chairman and chief executive officer, General Dynamics; James D. Robinson, chairman, American Express Co.; Malcolm T. Stamper, president, Boeing; and Cecil J. Silas, president and chief operating officer, Phillips Petroleum Co.

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## **STATEMENT OF PURPOSE**

The purpose of the Georgia Institute of Technology in the broadest sense is to contribute to the fulfillment of the educational needs of the State of Georgia. In the pursuit of this objective, the Georgia Institute of Technology is dedicated to the advancement of scientific and technical knowledge and achievement in a socially and culturally relevant framework.

It shall strive for excellence in teaching and scholarship, and for innovation in research and service.

It shall strive to provide an educational environment that will encourage and assist students to develop fully their capabilities both as professionals and as human beings. It shall provide an environment for the physical development and well-being of its students.

It shall press vigorously for the discovery and generation of new knowledge, to investigate ways to apply such knowledge innovatively for the benefit of society and mankind, and to foster the development of creative skills required for the design and development of new tools, objects and ideas.

It shall take as its areas of special competence those of Engineering, the Sciences, Architecture, Management, and those areas in the Humanities and Social Sciences which are indispensable for an understanding of the human condition and purpose.

It shall provide undergraduate, graduate, and continuing education programs and carry out basic and applied research in its areas of special competence.

It shall provide service to the society of which it is a part through its educational and research programs, and, to the extent possible without impairment of these programs, through applications of its research, development, design, and management capabilities.

Source: President (approved by the Board of Regents, April 10, 1973)

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## **BOARD OF REGENTS**

The University System of Georgia, which began operation in 1932, is among the oldest unified statewide systems of public higher education in the United States. It is comprised of Georgia's 33 state-operated institutions--4 universities, 14 senior colleges, 15 junior colleges -and is governed by a constitutional Board of Regents.

The Board of Regents of the University System consists of 15 members. The members--five from the state-at-large, one from each of the ten Congressional districts--are appointed by the Governor and are confirmed by the State Senate. The term of appointment of all members is seven years.

The Board's authority includes the government, control, and management of all aspects of operation and development of the University System.

The Board receives all state appropriations for the University System and allocates these appropriations to the institutions and institution-related agencies. Current membership of the Board of Regents is provided below:

REGENT	DISTRICT	TERM
Rufus B. Coody	State-at-Large	1976-1983
Marie Walters Dodd	State-at-Large	1981-1988
Jesse Hill, Jr.	State-at-Large	1978-1985
O. Torbitt Ivey, Jr., Chairman	State-at-Large	1977-1984
John E. Skandalakis	State-at-Large	1981-1988
Erwin A. Friedman	First	1976-1983
William T. Divine, Jr.	Second	1980-1987
John H. Robinson, III	Third	1979-1986
Scott Candler, Jr.	Fourth	1977-1984
Elridge W. McMillan	Fifth	1982-1989
Lamar R. Plunkett	Sixth	1978-1985
Lloyd L. Summer, Jr., Vice-Chairman	Seventh	1980-1987
Thomas H. Frier, Sr.	Eighth	1978-1985
Sidney O. Smith, Jr.	Ninth	1980-1987
Julius F. Bishop	Tenth	1979-1986

## STAFF OF THE BOARD OF REGENTS

Vernon Crav	vford, Chancellor
H. Dean Propst, Vice Chancellor	Henry G. Neal, Executive Secretary
Shealy E. McCoy, Fiscal Affairs/Treasurer	W.Ray Cleere, Academic Affairs
Frank C. Dunham, Facilities	Robert M. Joiner, Public Relations/Info.Services
Howard Jordan, Jr., Services	Harry B. O'Rear, Health Affairs
Thomas F. McDonald, Student Services	Haskin R. Pounds, Research & Planning

Source: Board of Regents

## INSTITUTIONAL AND PROFESSIONAL ACCREDITATION

## Institutional Accreditation

Georgia Tech is accredited by the Southern Association of Colleges and Schools (eighth year of term). A self-study is planned and reaffirmation is anticipated in 1984.

## **Professional Accreditation**

The Accreditation Board for Engineering and Technology has awarded basic accreditation to the four-year engineering programs leading to the bachelor's degree in the following fields:

aerospace engineering ceramic engineering chemical engineering civil engineering electrical engineering engineering science and mechanics industrial engineering mechanical engineering nuclear engineering textile engineering

Advanced level accreditation has been given to the programs leading to the master's degree in the following fields:

ceramic engineering	mechanical engineering
civil engineering	metallurgy
electrical engineering	nuclear engineering
engineering science and mechanics	sanitary engineering
industrial engineering	textile engineering

In the College of Architecture the program leading to the Bachelor of Science in Industrial Design has been reviewed and recognized by the Industrial Design Society of America.

The program leading to the degree Master of Architecture is accredited as a first professional degree by the National Architecture Accrediting Board.

The curriculum leading to the bachelor's degree in chemistry is accredited by the American Chemical Society.

All of the degree programs of the College of Management subject to the review of the American Assembly of Collegiate Schools of Business have been accredited by that organization. These programs include: Bachelor of Science in Industrial Management; Bachelor of Science in Management Science; Bachelor of Science in Economics; and Master of Science in Industrial Management.

Although no accrediting agency has been established in the field of health systems, the School of Health Systems has been admitted to associate institutional membership in the Association of University Programs in Health Administration for future accreditation review.

Source: Vice President for Academic Affairs

## ADMINISTRATION

### Office of the President

#### Joseph M. Pettit

James R. Stevenson Walter L. Bloom E. Janice Gosdin-Sangster Homer C. Rice John H. Gibson

Jesse H. Poore

## Office of the Vice President for Academic Affairs

Henry C. Bourne, Jr. E. Jo Baker William J. Lnenicka Jesse H. Poore William J. Gamble, Jr. E. G. Roberts Frank E. Roper, Jr.

## Office of the Vice President for Research

Thomas E. Stelson Albert P. Sheppard, Jr. Jerry L. Birchfield J. W. Dees Donald J. Grace Jack M. Spurlock A. Raymond Moore Robert M. Boyd

### **College of Sciences & Liberal Studies**

Les A. Karlovitz Patrick Kelly Thomas G. Tornabene Leon Zalkow C.S. Kiang Raymond E. Miller William F. Ames Edward W. Thomas Edward H. Loveland Daniel S. Papp Colonel Robert W. Bush Lt. Colonel Richard D. Scharf A. D. Van Nostrand Louis J. Zahn Gregory Colson Captain Peter G. Frederick James A. Reedy

### President

Executive Assistant to the President Special Assistant to the President Assistant to the President/Administration Assistant to the President/Athletics Assistant to the President/Employee Relations & Affirmative Action Assistant to the President/Information Technology

Vice President Associate Vice President Associate Vice President/Education Extension Associate Vice President/Information Technology Director, Minority Educational Development Director, Library Registrar

Vice President Associate Vice President Director, Advanced Technology Development Center Director, Contract Administration Director, Engineering Experiment Station Director, Interdisciplinary Programs/Bioengineering Center Director, Office of Research Communications Director, Radiological Safety

#### Dean

Associate Dean Director, School of Biology Director, School of Chemistry Director, School of Geophysical Sciences Director, School of Information & Computer Science Acting Director, School of Mathematics Director, School of Physics Director, School of Psychology Director, School of Social Sciences Head, Department of Air Force ROTC Head, Department of Army ROTC Head, Department of English Head, Department of Modern Languages Head, Department of Music Head, Department of Navy ROTC Head, Department of Physical Education & Recreation

## ADMINISTRATION (continued)

### **College of Engineering**

William M. Sangster W. Denney Freeston, Jr. Carolyn C. Cannon Arnold L. Ducoffe Joseph L. Pentecost Gary W. Poehlein John E. Fitzgerald Demetrius T. Paris Milton E. Raville Harold E. Smalley Michael E. Thomas John A. Brighton Walter O. Carlson

Albin F. Turbak

College of Architecture

William L. Fash John A. Templer

#### **College of Management**

Charles E. Gearing Milton R. Blood Andrew J. Cooper, III Marilu H. McCarty

## **Graduate Studies**

Demetrius T. Paris James J. Bynum, Jr.

## Office of the Registrar

Frank E. Roper, Jr. William F. Leslie Jerry L. Hitt William T. Lee James L. Garner

## **Education Extension**

William J. Lnenicka Clifford R. Bragdon William H. Hitch Robert V. Dean

### Information Technology

Jesse H. Poore S. Payne Lenoir, Jr. Gary G. Watson Dean Associate Dean Director, Special Programs Director, School of Aerospace Engineering Director, School of Ceramic Engineering Director, School of Chemical Engineering Director, School of Civil Engineering Director, School of Electrical Engineering Director, School of Engineering Science & Mechanics Director, School of Health Systems Director, School of Industrial & Systems Engineering Director, School of Mechanical Engineering Acting Director, School of Nuclear Engineering & Health Physics Director, School of Textile Engineering

Dean Assistant Dean/Research

Dean Associate Dean Assistant Dean/Administration Assistant Dean/Undergraduate Programs

Associate Vice President/Graduate Studies & Research Dean of Graduate Studies

Registrar Associate Registrar Director, Admissions Director, Financial Aid Director, Registration & Records

Associate Vice President/Education Extension Director, Continuing Education Director, Cooperative Division Director, Media-Based Instruction

Associate Vice President /Information Technology Acting Director, Computing Services Director, Information Systems Applications

## **Engineering Experiment Station**

#### Donald J.Grace

Gerald J. Carey Howard G. Dean, Jr. James C. Wiltse, Jr. Rudolph L. Yobs David S. Clifton, Jr. R. G. Shackleford Fred L. Cain Hans O. Spauschus Edward K. Reedy Samuel T. Alford Robert P. Zimmer S. I. Firstman

## Interdisciplinary Programs

Jack M. Spurlock A. D. Van Nostrand Frederick A. Rossini Satyanadham Atluri Bernd Kahn John L. Carden Albert A. Liabastre E. A. Starke John E. Husted Rudolph L. Yobs Harold E. Smalley John A. White John W. Hooper John L. Russell

> Melvin W. Carter Richard J. L. Martin

#### Office of Contract Administration

J. W. Dees Dwight L. Allen

## **Business & Finance**

Richard Fuller, Jr. Clyde D. Robbins Haines Hargrett Frank A. Gleason, Jr. Roger E. Wehrle C. Evan Crosby Jack Vickery Kathleen Stanwyck G. Les Petherick H. T. Marshall Howard J. Fretwell, Jr. James L. Priest Rex D. Hardaway Director Associate Director Associate Director Associate Director Associate Director Director, Economic Development Laboratory Director, Electromagnetics Laboratory Director, Electronics & Computer Systems Laboratory Director, Energy & Materials Sciences Laboratory Director, Radar & Instrumentation Laboratory Director, Systems & Techniques Laboratory Director, Systems Engineering Laboratory Director, Technology Applications Laboratory

Director, Interdisciplinary Programs/Bioengineering Center Director, Center for Research in Writing Director, Center for Technology Policy & Assessment **Director, Computational Mechanics Center** Director, Environmental Resources Center Co-Director, Environmental Safety Center Co-Director, Environmental Safety Center Director, Fracture & Fatigue Research Laboratory Director, Georgia Minerals & Mining Research Institute Director, Georgia Productivity Center Director, Health Systems Research Center Director, Materials Handling Research Center Director, Micro-Electronics Research Center Director, Nuclear Research Center/Center for Engineering in Cancer Therapy Director, Radiological Protection Center Director, Rehabilitation Technology Center

Director Deputy Director

Vice President Associate Vice President/Facilities Associate Vice President/Finance Assistant to the Vice President Director, Auxiliary Enterprises Director, Budgets Director, Budgets Director, Business Administrative Services Director, Environmental Safety Director, Internal Auditing Director, Personnel Director, Physical Plant Director, Purchasing & Property Control

## Campus Planning

Clyde D. Robbins

Institute Relations & Development

Warren Heemann

John P. Culver Dell B. Sikes Robert H. Rice Mary S. Stoffregen Mary G. Peeks Kathy Salmond John C. Dunn Paul M. Smith, Jr. James B. Osborne Mary K. Murphy Charles E. Harmon Mary N. Carmichael Robert N. Leitch Thomas L. Vitale Barbara B. Rose

## Dean of Students

James E. Dull Edwin P. Kohler Barry D. Birckhead W. Miller Templeton Carole E. Moore James A. Strickland Gary J. Schwarzmueller M. Jo Benson-Ivey Roger E. Wehrle J. Nicholas Gordon

## Library

E. G. Roberts Helen R. Citron Arthur T. Kittle

## Advanced Technology Development Center

Jerry L. Birchfield H.Wayne Hodges

## Vice President

Vice President Assistant Vice President Assistant Vice President Executive Director, Alumni Association Director, Accounting Director, Alumni Placement Director, Alumni Programs Director, Alumni Publications Director, Annual Giving **Director, Corporate Relations Director, Foundation Relations** Director, News Bureau Director, Placement Director, Planned Giving **Director**, Publications **Director**, Special Gifts

Dean Associate Dean Assistant Dean/Fraternity Affairs Assistant Dean/International Students Assistant Dean/Women's Activities Director, Counseling Director, Housing Director, New Student & Parent Programs Director, Student Center Director, Student Health

Director Associate Director Associate Director

Director Associate Director The Georgia Institute of Technology at present offers curricula leading to the following undergraduate degrees.

Bachelor of Aerospace Engineering Bachelor of Ceramic Engineering Bachelor of Chemical Engineering Bachelor of Civil Engineering Bachelor of Electrical Engineering **Bachelor of Engineering Science and Mechanics** Bachelor of Industrial Engineering Bachelor of Mechanical Engineering Bachelor of Nuclear Engineering Bachelor of Textile Engineering Bachelor of Science Bachelor of Science in Applied Biology Bachelor of Science in Applied Mathematics Bachelor of Science in Applied Physics Bachelor of Science in Applied Psychology Bachelor of Science in Building Construction Bachelor of Science in Chemistry Bachelor of Science in Economics Bachelor of Science in Health Physics Bachelor of Science in Health Systems Bachelor of Science in Information and Computer Science Bachelor of Science in Industrial Design Bachelor of Science in Industrial Management Bachelor of Science in Management Science Bachelor of Science in Physics Bachelor of Science in Textile Chemistry Bachelor of Science in Textiles

## **DEGREES OFFERED** (continued)

Programs of study and research leading to the Master of Science degree are offered in the following disciplines:

Aerospace Engineering Architecture Atmospheric Sciences Biology Ceramic Engineering Chemical Engineering Chemistry City Planning Civil Engineering Electrical Engineering Engineering Science & Mechanics Environmental Engineering Geophysical Sciences Health Physics Health Systems Industrial & Systems Engineering Information & Computer Science Industrial Management Mathematics Mechanical Engineering Metallurgy Nuclear Engineering Operations Research Physics Psychology Technology & Science Policy Textile Chemistry Textile Engineering Textiles

Programs of study and research leading to the Ph.D. degree are offered in the following disciplines and areas:

Aerospace Engineering Applied Biology Ceramic Engineering Chemical Engineering Metallurgy Chemistry Civil Engineering & Environmental Engineering Economics Electrical Engineering Engineering Science & Mechanics Geophysical Sciences Atmospheric Sciences Industrial & Systems Engineering Operations Research Information & Computer Science Industrial Management Mathematics Mechanical Engineering Nuclear Engineering Physics Psychology Textile Engineering





Georgia Tech seeks to provide services and activities to encourage and assist students in their physical development and to develop their capabilities both as professionals and as human beings. Specific programs include:

<u>Housing</u>. Twenty-three on-campus residence halls house 2,857 males and 944 females. Apartments are provided for 300 married students. The Residence Hall Association (RHA) provides numerous social, academic, and recreational activities. The Off-Campus Housing Office provides information to approximately 1,000 students per year.

<u>Health Services</u>. The Student Health Center is a modern Ambulatory Care Center with facilities for out-patient treatment, X-ray examinations, physical therapy, a medical laboratory, and beds for thirty patients.

The staff consists of six full-time physicians, visiting consultants in psychiatry and radiology, registered nurses, physician assistants, and medical technicians. Physicians and dentists on the consulting staff represent all medical and dental specialities; their services are available on a fee-for-service basis.

Student Health Fees cover regular on-campus services during school terms. A supplemental insurance plan covering consultations, referrals to other physicians or hospitals, co-op quarters, and off-campus medical problems is available to all students.

<u>Food Services</u>. Several dining hall facilities and meal plans ranging from 10 to 20 meals per week are available to all students.

<u>Safety</u>. A 35-member professionally trained police force insures the safety and welfare of the Georgia Tech community. Officers are on duty 24 hours a day, seven days a week. First aid and around-the-clock ambulance service are provided.

<u>Counseling Services</u>. Professional counselors are available to help students who have personal problems, motivational problems, study problems or concerns about choosing a career, a major,or another college. The career information service includes a computerized interactive guidance and information system, study skills instruction, and a library of film strips, videotapes and cassettes containing information about careers.

<u>Recreation</u>. Intramural activities are based in the Callaway Athletic Complex which features equipment, a multi-purpose gymnasium, weight training, table tennis, driving ranges, gymnastics area, racquetball/handball/squash courts, and a 25-meter swimming pool with connecting diving well. The intramural program includes 45 sports.

<u>Student Center</u>. The Student Center contains facilities and staff services for all types of outof-classroom social and special interest programs. A professional program staff and more than 20 student committees provide a complete range of social, artistic, cultural, and recreational programs for the Tech community.

<u>Fraternities and Sororities</u>. Located on the campus are thirty-two social fraternities, with total membership of 1,800 and six national "Greek" sororities, with a membership of 350 women,

<u>Student Organizations</u>. Opportunities are provided for student participation in a variety of officially recognized groups. Besides the traditional student newspaper, yearbook, and radio station, there are approximately 23 sports/recreation organizations; 39 special interest groups; 15 religious organizations; 40 departmental, professional and honor societies, and 8 national honor societies. Over 5,000 students are involved in one or more student organizations.



Source: Dean of Students

The Georgia Tech Athletic Association is a non-profit organization that is responsible for maintaining the intercollegiate athletic program at Georgia Tech.

The Athletic Association is overseen by the Georgia Tech Athletic Board which is composed of seven faculty members, three alumni members, and three student members. The Board is chaired by the President of the Institute. The on-going operations of the Athletic Association are managed by the Director of Athletics, Homer Rice, and his staff.

The Athletic Association is made up of the following departments: Sports Medicine, Facilities, Football, Basketball, Non-Revenue Sports, Business Office, Ticket Office, Academic Advisor, and Development and Athletic Relations, which includes the Alexander-Tharpe Fund (fund raising), Sports Promotion and Sports Information offices.

The Georgia Tech Athletic Association is a service organization for several constituent groups: the Tech student-athletes, student body, faculty and staff, alumni and friends, sports media and general community. The primary purpose of the Athletic Association is to direct each student-athlete towards growing as a total person, earning a meaningful degree, becoming a good citizen, and developing as an athlete. The basic obligation to all of these groups is two-fold: I) to develop and maintain a competitive athletic program that can be a source of pride, and 2) to allow members of these groups the opportunity to become involved in the program, whether as participants, contributors, or spectators.

The Georgia Tech athletic tradition is almost as old as the school itself and continues to be an important part of the Tech heritage.

The first football team was formed in 1892 and from that initial season until 1903 was coached by an assortment of volunteers, most notably Lt. Leonard Wood (who later became famous as the colonel in command of Roosevelt's Rough Riders and the man who captured Geronimo). In 1892 Tech hired its first full-time football coach, John Heisman, for whom the Heisman Trophy was named. Over the last 78 years Tech has had only seven full-time head football coaches: John Heisman, Bill Alexander, Bobby Dodd, Bud Carson, Bill Fulcher, Pepper Rogers, and Bill Curry.

The Tech football history is indeed rich and includes such notable events as three national championships (1917, 1928, and 1952), 22 bowl game appearances (14 wins, 8 losses) and 41 All-Americans. The Tech legend includes more than football, however, and many other great names have made sports history at Georgia Tech--Bobby Jones (golf), Roger Kaiser and Rich Yunkus (basketball), and Ed Hamm (track-world record holder and Olympic performer).

# ATHLETIC ASSOCIATION (continued)

The Georgia Tech Athletic program includes 15 intercollegiate athletic teams (11 men's and 4 women's). During the 1981-82 school year 340 student-athletes competed in these sports.

Team	Number of Participants			
Baseball	36			
Basketball (men)	12			
Basketball (women)	13			
Cross Country	7			
Football	110			
Golf	15			
Gymnastics	15			
Softball (women)	15			
Swimming	19			
Tennis (men)	9			
Tennis (women)	10			
Indoor Track	20			
Outdoor Track	30			
Volleyball (women)	10			
Wrestling	19			

The Athletic Association also sponsors the Georgia Tech Band, Pep Band, Reckettes (drill team), cheerleaders, and Solid Gold (recruiting assistants), as well as student trainers and managers.

Group	Number of Participants
Band	175
Pep Band	35
Reckettes	20
Cheerleaders	15
Solid Gold	25
Student Trainers	8
Student Managers	11

Source: Director, Athletic Association

# **FRESHMAN PROFILE**

Percentile	High School Average	SAT Verbal	SAT Mathematics	SAT Total
		FALL 1982		
90	4.0	640	733	1,373
80	3.9	601	700	1,301
70	3.8	577	677	1,254
60	3.7	552	656	1,208
50	3.6	532	635	1,167
40	3.5	514	617	1,131
30	3.3	494	595	1,089
20	3.2	469	570	1,039
10	3.1	439	546	985
AVERAGE	3.5	530	630	1,160
		FALL 1978		
90	4.0	648	730	1,378
80	3.9	606	690	1,296
70	3.8	575	663	1,238
60	3.7	552	646	1,198
50	3.5	529	625	1,154
40	3.4	508	606	1,114
30	3.3	483	586	1,069
20	3.1	460	558	1,018
10	3.0	423	530	953
AVERAGE	3.4	526	620	1,146

# FINANCIAL AID AND SCHOLARSHIPS

In addition to state and federal student assistance funds, Georgia Tech receives support from private industry, business, foundations, and individual sources which created a wide range of scholarship and loan awards to deserving students. In 1981-82 institutionally controlled scholarships, including Georgia Tech sponsored National Merit and National Achievement awards, grew to \$1,145,000. Total financial aid to our students decreased from approximately \$11,000,000 for 1981-82 to \$9,500,000 for 1982-83. The reduction was primarily in federal programs and private loans guaranteed by the federal government.

Approximately 70% of student financial assistance is received through federal allocations or through private loans controlled by federal regulations. Awards from these sources have the concept of student need associated with the award.

Scholarship assistance is funded through non-government sources and is based, for the most part, on the student's strong academic record and financial need.

National Merit and National Achievement Scholars are selected without regard to financial need; however, the values of these awards are determined by the financial circumstances of the families. In 1981-82, Georgia Tech enrolled over 400 Merit Scholars and approximately 80 Achievement Scholars. These enrollments placed the Institute sixth in the nation in National Merit enrollment ranking and third in National Achievement standing. Among public institutions, Tech held the number one position for both programs.

In 1981, Georgia Tech awarded President's Scholarships for the first time, honoring exceptional young people with proven intellectual talents, outstanding leadership ability, and a desire to meet the challenge of the future. The concept behind the President's Scholarship Program is to retain Georgia's brightest students and to attract them to Georgia Tech and to induce outstanding non-Georgians to attend Tech. The awards are the most prestigious scholarships available to entering freshmen and some of them provide total costs for Georgia residents. The program fosters and rewards academic excellence and enriches the classroom environment while enhancing the academic image of the Institute.

## Source: Director, Financial Aid

# SUMMARY OF MAJOR PROGRAMS OF STUDENT FINANCIAL ASSISTANCE

	1980-81		198	1981-82	
	NUMBER OF AWARDS	AMOUNT OF AWARDS	NUMBER OF AWARDS	AMOUNT OF AWARDS	
GEORGIA TECH AWARDS					
National Direct Student Loans	1,061	\$595,668	1,067	\$520,673	
Supplementary Ed. Op. Grants	511	248,971	486	243,267	
College Work-Study Program	322	409,876	302	298,530	
Basic Ed. Opportunity Grants	1,764	1,476,475	1,586	1,276,693	
SUBTOTAL Federal Funds	3,658	\$2,730,990	3,441	\$2,339,163	
Georgia Tech National Merit	306	109,531	332	156,124	
Georgia Tech National Achievement	63	44,583	55	30,649	
SUBTOTAL Merit/Achievement	369	\$154,114	387	\$186,773	
Institutional Scholarships	1,167	952,700	1,200	958,584	
Short Term Loans	2,165	1,027,021	. 1,488	722,775	
Emergency Loans	58	4,605	38	2,791	
SUBTOTAL Georgia Tech Aid	7,417	\$4,869,430	6,554	4,210,086	
Georgia Incentive Scholarships	393	\$109,275	518	\$137,075	
Miscellaneous Scholarships	583	538,466	626	575,727	
Miscellaneous Grants	74	44,725	73	40,080	
Georgia Guaranteed Loans	1,191	2,534,455	1,369	1,035,594	
Other Guaranteed Loans	1,229	2,824,406	1,857	3,418,729	
Miscellaneous Loans <sup>1</sup>	39	57,357	28	43,410	
SUBTOTAL Outside Aid	3,509	\$6,108,684	4,471	\$5,250,615	
TOTAL	10,926	\$10,978,114	11,025	\$9,460,701	

<sup>1</sup> Includes other state programs

Source: Director, Financial Aid

# NATIONAL MERIT AND ACHIEVEMENT SCHOLARS

# **National Merit Scholars**

Numer	ical							
Rank								
1981-8	2	Institute	Туре	1977	1978	1979	1980	1981
	1	Harvard/Radcliffe College	Private	733	767	810	843	905
	2	Washington University	Private	298	410	504	553	535
	3	Rice University	Private	492	497	498	492	505
	4	Princeton University	Private	389	375	406	435	484
	5	Yale University	Private	380	411	430	448	479
	6	Georgia Tech	Public	320	371	398	393	404
	7	M.I.T.	Private	321	327	349	375	376
	8	Michigan State University	Public	462	429	417	397	373
	9	University of Texas	Public	72	121	190	280	361
1	0	Northwestern University	Private	295	340	380	361	346
1	1	Stanford University	Private	297	316	312	315	337
1	2	Texas A & M University	Public	154	171	194	235	336
1	3	Ohio State University	Public	183	241	253	270	281
1	4	Carleton College	Private	182	202	221	220	257
1	5	Iowa State University	Public	37	88	155	192	245
1	6	University of Chicago	Private	190	219	200	206	240
1	7	University of Florida	Public	164	150	159	191	232
1	8	University of Michigan	Public	171	161	174	196	218
1	9	Duke University	Private	158	174	188	186	185
2	0	Baylor University	Private	71	103	141	137	182

# **National Achievement Scholars**

Numerical		
Rank		
1981-82	Institute	Total Scholars
1	Harvard/Radcliffe College	253
2	M.I.T.	114
3	Georgia Tech	107
4	Princeton University	92
5	Stanford University	80
6	Northwestern University	75
7	Yale University	61
8	Brown University	56
9-10	Duke University University of Michigan	46 46
11	University of Georgia	42

Source: Director, Financial Aid

# PRESIDENT'S SCHOLARSHIP PROGRAM

1	98	12-	83	Scł	10	lars
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Home Town	Sex	Major	HSA	SAT-V	SAT-M
Lithonia, Ga.	Female	ChE	3.9	650	750
Tucker, Ga.	Male	UGC	4.0	650	790
Fayetteville, N.C.	Male	UEC	3.9	670	740
Charlotte, N. C.	Male	UEC	4.0	650	750
Kings Mtn, N. C.	Female	ChE	4.0	690	770
Albany, Ga.	Female	UEC	4.0	720	720
Atlanta, Ga.	Male	AE	3.4	700	740
Macon, Ga.	Male	ICS	4.0	710	780
Macon, Ga.	Male	ChE	4.0	640	730
Snellville, Ga.	Male	EE	4.0	680	670
Tucker, Ga.	Female	ChE	4.0	690	720
Marietta, Ga.	Male	EE	3.6	720	670
Tucker, Ga.	Male	EE	4.0	760	770
Lawrenceville, Ga.	Male	UGC	3.9	600	770

# 1981-82 Scholars

Home Town	Sex	Major	HSA	SAT-V	SAT-M
Roswell, Ga.	Male	CE	3.9	670	800
Dunwoody, Ga.	Male	<b>C</b> hE	4.0	670	720
Savannah, Ga.	Male	ChE	4.0	770	790
Grovetown, Ga.	Male	EE	4.0	700	770
Monroe, Ga.	Female	ICS	4.0	740	710
St. Simons Island, Ga.	Male	ME	4.0	720	730

Source: President's Scholarship Committee

## **ARMY ROTC**

The program for Army ROTC was established at Georgia Tech in June, 1916. Today nearly 80 students representing each of Tech's major schools and disciplines participate in a military science curriculum that integrates the classroom with adventure training experiences. In addition to its regular four-year scholarship program, Army ROTC provides two-and three-year competitive scholarships to Tech students, whether previously enrolled in ROTC or not. These scholarships pay tuition and all academic related fees plus \$100 per month while the student is enrolled in military science. Forty-six of today's participants are under full tuition Army scholarships.

Army ROTC is available for both men and women. The program of instruction consists of two phases: Basic and Advanced. The Basic Military Course, which normally occurs during freshman and sophomore years, explores the contemporary Army in today's society as well as provides an introduction to principles of management and leadership. The Advanced curriculum focuses on leadership in a particular environment, ethics, and American defense policies.

Upon successful completion of ROTC, Tech graduates advance to a wide range of officer specialities that maximize individual talents and academic backgrounds. Commissions as Lieutenant are awarded to branches of service designated, and commissioned service is executed as a member of either the Regular (Active) Army, the U.S. Army Reserve, or the U.S. Army National Guard.

## NAVY ROTC

In 1926, the Navy Department authorized the establishment of six Reserve Officer Training Corps Units, one of which was at the Georgia School of Technology. Approximately 90% of the students in Navy ROTC are on a scholarship which includes tuition, fees, books and a \$100 per month stipend. The Tech Unit consistently ranks in the top five of fifty-six units nationwide in providing officers for the Navy's nuclear propulsion program. It is one of the larger units, presently having 305 members. Fifty-five of those are enrolled at the Atlanta University Center, where eventually a separate unit may be established. Twenty-five of the 305 are women.

## AIR FORCE ROTC

An Army Air Force ROTC unit was established at Georgia Tech in September, 1946. After the Air Force gained its separate and independent status under the National Security Act of 1947, the unit was absorbed into the United States Air Force in 1948. The present Department of Air Force Aerospace Studies was established in 1950.

All phases of Air Force ROTC are open to men and women. Students enrolled in the fouryear program may apply for four-, three-, or two-year scholarships. The Air Force ROTC program at Georgia Tech consists of the General Military and Professional Officer courses. The General Military Course covers a two-year period normally taken during the freshmen and sophomore years. The course covers two main themes: the development of air power and the contemporary Air Force in the context of U. S. military organization. The Professional Officer Course also is taken over a two-year period, normally during the student's junior and senior years. The curriculum covers Air Force management, leadership, and American defense policy.

Students from Agnes Scott, Southern Tech, Georgia State, Morehouse, Clark, Morris Brown, and Spelman may take Air Force ROTC at Georgia Tech.

In September, 1982, Georgia Tech enrollment in Air Force ROTC was 310 students, of which 196 had full scholarships. In fiscal year 1982, 41 students were commissioned as 2nd Lieutenants in the United States Air Force.

Sources: Commanding Officer, Army ROTC Commanding Officer, Navy ROTC Commanding Officer, Air Force ROTC

# FALL QUARTER UNDERGRADUATE ENROLLMENT: 1978-1982

Re



	19	978	19	979	19	080	19	81	19	982
	Male	Female								
Architecture	571	147	538	150	454	141	429	136	366	129
COSALS	795	341	761	331	750	303	762	310	804	369
Engineering	5,205	877	5,483	1,073	5,506	1,114	5,431	1,149	5,413	1,190
Management	832	258	787	306	718	303	657	288	692	322
Subtotal	7,403	1,623	7,569	1,860	7,428	1,861	7,279	1,883	7,275	2,010
Total	S	0,026	9,4	429	9,2	289	9,16	2	9,2	285

# FALL QUARTER GRADUATE ENROLLMENT: 1978-1982



	19	78	19	79	19	80	19	81	19	82
	Male F	emale								
Architecture	143	37	168	50	172	53	162	64	164	56
COSALS	369	91	392	98	405	111	396	128	389	126
Engineering	816	63	883	105	984	120	1,010	115	1,031	182
Management	114	29	94	27	93	34	91	31	116	47
Subtotal	1,442	220	1,537	280	1,654	318	1,659	338	1,700	411
Total	1	,662	1,8	17	1,9	72	1,993	7	2,1	11

# **ENROLLMENT BY STATES: FALL QUARTER 1982**



#### LEGEND:



1–19 (Incl. Alaska, Hawaii, and District of Columbia) 20–49 50–99

100-500

over 500

	Undergrad	Grad	Total		Undergrad	Grad	Total
Alabama	173	52	225	Nebraska	3	5	8
Alaska	4	4	8	Nevada	4	1	5
Arizona	5	2	7	New Hampshire	15	0	15
Arkansas	17	9	26	New Jersey	198	30	228
California	42	22	64	New Mexico	3	3	6
Colorado	11	7	18	New York	282	49	331
Connecticut	71	10	81	North Carolina	160	44	204
Delaware	15	10	25	North Dakota	2	1	3
District of Columbia	9	4	13	Ohio	117	14	131
Florida	859	108	967	Oklahoma	11	3	14
Georgia	5,557	891	6,448	Oregon	4	2	6
Hawaii	5	1	6	Pennsylvania	137	31	168
Idaho	0	1	1	Rhode Island	23	2	25
Illinois	47	25	72	South Carolina	181	45	226
Indiana	16	15	31	South Dakota	1	0	1
Iowa	5	3	8	Tennessee	192	55	247
Kansas	5	5	10	Texas	36	18	54
Kentucky	75	10	85	Utah	0	1	1
Louisiana	38	13	51	Vermont	10	1	11
Maine	13	0	13	Virginia	151	27	178
Maryland	192	21	213	Washington	13	7	20
Massachusetts	75	23	98	West Virginia	17	3	20
Michigan	33	13	46	Wisconsin	16	4	20
Minnesota	9	4	13	Wyoming	1	1	2
Mississippi	28	5	33	Other U.S. Territorie	s		
Missouri	28	10	38	& Possessions	58	27	85
Montana	3	0	3	TOTAL	8,970	1,642	10,612

# **ENROLLMENT BY GEORGIA COUNTIES: FALL QUARTER 1982**



# ENROLLMENT BY GEORGIA COUNTIES: FALL QUARTER 1982

Undergrad Grad Total	
Appling 3 2 5	
Bacon 5 0 5	
Baldwin 31 3 34	
Banks 3 0 3	
Barrow 6 2 8	
Bartow 21 2 23	
Ben Hill 5 0 5	
Berrien 6 0 6	
Bibb 131 13 144	
Bleckley 8 0 8	
Brantley 1 0 1	
Brooks 3 0 3	
Bryan 1 0 1	
Bullock 21 0 21	
Burke 9 1 10	
Butts 8 1 9	
Calhoun 4 0 4	
Camden 5 0 5	
Candler 3 0 3	
Carroll 41 8 49	
Catoosa 10 0 10	
Charlton 2 0 2	
Chatham 150 21 171	
Chattahoochee I 0 I	
Chattooga 9 0 9	
Cherokee 31 2 33	
Clarke 66 15 81	
Clayton 177 15 192	
Cobb 563 116 679	
Corree 5 1 0	
$\begin{array}{ccc} \text{Colquit} & 19 & 0 & 19 \\ \text{Columbia} & 27 & 2 & 40 \end{array}$	
Columbia 37 5 40	
Coweta 30 5 59	
Criam 13 1 14	
Crisp 13 1 14	
Dade 2 1 3	
Detail 1351 230 1581	
Dedan 3 0 3	
Dooly 4 0 4	
Dougharty 90 13 103	
Douglas 46 4 50	
Early 2 0 2	
Effingham 3 0 3	
Elbort 9 U 9	

Under	grad	Grad	Total
Evans	2	0	2
Fannin	3	0	3
Fayette	47	3	50
Floyd	77	10	87
Forsyth	28	5	33
Franklin	1	2	3
Fulton	920	247	1,167
Gilmer	5	0	5
Glynn	54	6	60
Gordon	21	2	23
Grady	7	0	7
Greene	2	1	3
Gwinnett	278	45	323
Habersham	15	0	15
Hall	62	2	64
Hancock	3	0	3
Haralson	14	0	14
Harris	3	0	3
Hart	14	0	14
Heard	2	0	2
Henry	28	2	30
Houston	116	7	123
Irwin	3	0	3
Jackson	8	1	9
Jasper	4	1	5
Jeff Davis	4	0	4
Jefferson	8	0	8
Jenkins	2	0	2
Johnson	2	0	2
Jones	10	1	11
Lamar	3	1	4
Laurens	18	2	20
Lee	4	0	4
Liberty	14	2	16
Lincoln	3	0	3
Lowndes	30	3	33
Lumpkin	0	1	1
Macon	2	1	3
Madison	2	0	2
Marion	1	1	2
McDuffie	4	1	5
McIntosh	0	1	1
Meriwether	4	0	4
Mitchell	6	0	6
Monroe	8	0	8
Montgomery	2	0	2

# ENROLLMENT BY GEORGIA COUNTIES: FALL QUARTER 1982 (continued)

	Undergrad	Grad	Total
Morgan	2	1	3
Murray	1	0	1
Muscogee	114	12	126
Newton	20	2	22
Oconee	6	1	7
Oglethorpe	2	0	2
Paulding	10	1	11
Peach	15	1	16
Pickens	2	0	2
Pierce	1	0	1
Pike	7	2	9
Polk	20	1	21
Pulaski	6	0	6
Putnam	11	0	11
Rabun	5	0	5
Randolph	2	0	2
Richmond	134	22	156
Rockdale	61	6	67
Screven	4	1	5
Seminole	6	0	6
Spalding	35	3	38
Stephens	16	3	19
Sumter	13	3	16
Talbot	6	1	7
Tattnall	2	0	2
Taylor	1	0	1

Und	ergrad	Grad	lotal
Telfair	8	0	8
Terrell	3	0	3
Thomas	10	1	11
Tift	21	1	22
Toombs	13	1	14
Towns	4	1	5
Treutlen	1	0	1
Troup	17	7	24
Turner	4	0	4
Twiggs	2	0	2
Union	3	1	4
Upson	12	1	13
Walker	23	1	24
Walton	17	3	20
Ware	23	0	23
Warren	1	0	1
Washington	11	0	11
Wayne	7	1	8
White	3	0	3
Whitfield	53	1	54
Wilcox	2	1	3
Wilkes	3	1	4
Wilkinson	10	1	11
Worth	5	0	5
TOTAL	5,558	890	6,448

# ENROLLMENT BY FOREIGN COUNTRIES: FALL QUARTER 1982

Undegrad Grad Total

Undergrad Grad Total

Algeria	0	13	13	Ireland	0	5	5
Argentina	1	0	1	Israel	2	3	5
Australia	1	1	2	Italy	2	2	4
Bahamas	2	0	2	Jamaica	6	1	7
Bangladesh	3	1	4	Japan	4	7	11
Belgium	1	3	4	Jordan	2	2	4
Bermuda	2	0	2	Korea	11	34	45
Bolivia	0	1	1	Lebanon	27	21	48
Brazil	0	6	6	Liberia	0	1	1
Canada	6	1	7	Malaya	2	2	4
Ceylon (Sri Lanka)	0	1	1	Mexico	1	24	25
Chile	2	2	4	Morocco	1	0	1
China (Taiwan)	6	71	77	Netherlands	3	3	6
China (People's Republic)	0	10	10	Nicaragua	7	0	7
Colombia	26	10	36	Nigeria	3	11	14
Costa Rica	6	2	8	Oman	0	1	1
Cuba	5	2	7	Pakistan	2	5	7
Cyprus	4	1	5	Panama	13	2	15
Dominican Republic	4	0	4	Peru	6	6	12
Ecuador	16	4	20	Philippines	1	4	5
Egypt (United Arab Republic)	1	12	13	Portugal	1	1	2
El Salvador	6	1	7	Saudia Arabia	2	2	4
England	5	3	8	Sierra Leone	0	1	1
Finland	1	0	1	Singapore	4	0	4
France	5	3	8	South Africa	1	3	4
Gambia	1	0	1	Soviet Union	2	0	2
Germany	5	18	23	Spain	1	0	1
Ghana	0	3	3	Sweden	0	2	2
Greece	10	25	35	Switzerland	2	2	4
Guatemala	2	0	2	Syria	2	1	3
Haiti	1	0	1	Thailand	3	9	12
Honduras	9	0	9	Trinidad	3	0	3
Hong Kong	2	12	14	Turkey	2	6	8
Iceland	0	3	3	Venezuela	24	17	41
India	5	47	52	Vietnam	7	2	9
Indonesia	2	2	4	Yugoslavia	0	1	1
Iran	28	26	54				
Iraq	0	4	4				
and the state of t				TOTAL	315	469	784
## FALL QUARTER GRADUATE ENROLLMENT BY DEGREE PROGRAM: 1971-1981

	Arch	itecture	CC	OSALS	Engine	ering	Manag	gement	Tot	al
	M.S.	Ph.D	M.S.	Ph.D	M.S.	Ph.D	M.S.	Ph.D	M.S.	Ph.D
1971	10	0	266	176	677	218	96	2	1049	396
1972	13	0	283	161	673	217	99	7	1068	385
1973	15	0	274	156	692	208	92	3	1073	367
1974	24	0	220	161	679	197	100	5	1023	363
1975	134	0	255	166	665	186	241	7	1295	359
1976	136	0	261	154	615	184	185	3	1197	341
1977	160	2	255	160	608	164	178	1	1201	327
1978	174	0	284	155	657	181	135	1	1250	337
1979	215	0	312	160	765	190	118	1	1410	351
1980	220	0	335	163	867	205	124	2	1546	370
1981	221	1	342	162	856	236	111	8	1530	407

Since 1912, Georgia Tech has offered a five-year cooperative program to those students who wish to combine industrial work experience with their classroom studies. Students who enroll in this program alternate between industrial assignments and classroom studies on a quarterly basis, completing the same course work on the campus which is completed by regular four-year students. Graduates of the program are awarded a degree in their particular field of specialization with the designation "Cooperative Plan."

Industrial work gives cooperative students an opportunity to develop their career interests and to become more confident in their career choices. Students also are given an opportunity to develop skills in human relations through their work experiences. They are paid for their work in industry and are able to save a portion of their salaries which can be applied toward educational expenses.

One of the oldest employers of cooperative plan students is the Georgia Power Company Among the more than 400 participating companies are the Georgia Tech Engineering Experiment Station, E.I. DuPont de Nemours & Co., Inc., Lockheed-Georgia Company, the Tennessee Valley Authority, the State of Georgia, General Electric Company, Westinghouse Electric Company, ITT Rayonier, Inc., Combustion Engineering, Inc., Tennessee Eastman Company, Hughes Aircraft Company, Philip Morris U.S.A., NASA, Columbia Nitrogen Company, and General Motors Corporation.

#### **Cooperative Division Five-Year Comparison**

	1977-1978	1981-1982	Percent Increase
Cumulative Enrollment	1,635	2,249	38%
Student Graduates	182	315	73%

#### Number of Students by Major: Fall Quarter 1982

Aerospace Engineering	112	Industrial Engineering	179
Ceramic Engineering	17	Information & Computer Science	145
Chemical Engineering	278	Management	81
Chemistry	10	Mathematics	4
Civil Engineering	110	Mechanical Engineering	448
Electrical Engineering	749	Nuclear Engineering	43
Engineering Science & Mechanics	24	Physics	25
		Textile Engineering	12
		Total	2,237

Source: Director, Cooperative Division

# WEIGHTED STUDENT CREDIT HOURS PRODUCED

LOWER DIVISION		UPPER DIVISION	GRADUATE DIVISION	TOTAL	
Architecture					
<b>Total of Previous Four Quarters</b>	6,934	12,401	7,848	27,183	
Fall Quarter, 1982	2,455	3,943	2,299	8,697	
Engineering					
<b>Total of Previous Four Quarters</b>	26,333	147,402	37,406	211,141	
Fall Quarter, 1982	9,107	41,571	10,873	61,551	
COSALS					
<b>Total of Previous Four Quarters</b>	209,508	58,143	14,584	282,235	
Fall Quarter, 1982	74,964	16,112	4,548	95,624	
Management					
Total of Previous Four Quarters	14,504	25,165	4,913	44,582	
Fall Quarter, 1982	4,278	7,114	2,008	13,400	
Institution					
Total of Previous Four Quarters	257,279	243,111	64,751	565,141	
Fall Quarter , 1982	90,804	68,740	19,728	179,272	

# AVERAGE FALL QUARTER GRADE POINT AVERAGES: 1977-1981

	1977	1978	1979	1980	1981
		UNDERGRA	DUATE		
Freshman					
Architecture	2.3	2.4	2.4	2.5	2.3
COSALS	2.3	2.3	2.3	2.5	2.4
Engineering	2.4	2.5	2.4	2.6	2.6
Management	2.0	2.1	2.1	2.1	2.2
Total	2.3	2.3	2.4	2.4	2.5
Sophomore					
Architecture	2.2	2.4	2.3	2.4	2.4
COSALS	2.6	2.6	2.5	2.5	2.6
Engineering	2.5	2.5	2.5	2.6	2.6
Management	2.3	2.2	2.2	2.3	2.3
Total	2.4	2.5	2.4	2.5	2.6
Junior					
Architecture	2.4	2.4	2.4	2.5	2.6
COSALS	2.8	2.6	2.7	2.8	2.7
Engineering	2.5	2.6	2.5	2.6	2.6
Management	2.4	2.4	2.3	2.5	2.6
Total	2.5	2.5	2.5	2.6	2.6
Senior				1700 (142) - 1	
Architecture	2.4	2.5	2.5	2.6	2.6
COSALS	2.8	2.9	2.7	2.8	2.8
Engineering	2.6	2.6	2.6	2.7	2.5
Management	2.4	2.5	2.4	2.5	2.5
Total	2.6	2.6	2.6	2.7	2.7
Total Undergraduate					
Architecture	2.3	2.4	2.4	2.5	2.5
COSALS	2.4	2.5	2.5	2.6	2.6
Engineering	2.5	2.5	2.5	2.6	2.6
Management	2.3	2.3	2.3	2.4	2.4
Total	2.6	2.5	2.4	2.6	2.6
		GRADU	ATE		
All Graduate Students					
Architecture	3.3	3.3	3.3	3.3	3.3
COSALS	3.3	3.3	3.4	3.4	3.4
Engineering	3.5	3.4	3.4	3.4	3.4
Management	3.2	3.3	3.2	3.2	3.4
Total	3.3	3.4	3.3	3.4	3.4

Source: Registrar

# DEGREES AWARDED: 1978-1982 (Summer-Spring)

College	<u>1977-78</u>	1978-79	1979-80	1980-81	<u>1981-82</u>
Architecture					
Bachelors	114	162	130	119	111
Masters	64	85	78	70	116
Total	178	247	208	189	227
Engineering					
Bachelors	818	1.066	1,029	1,242	1,352
Masters	281	397	309	366	410
Doctorates	42	35	48	29	55
Total	1,141	1,498	1,386	1,637	1,817
Management					
Bachelors	266	289	287	277	301
Masters	98	100	51	58	43
Doctorates	0	0	1	0	0
Total	364	389	339	335	344
COSALS					
Bachelors	138	168	135	153	171
Masters	101	129	113	137	119
Doctorates	15	27	9	9	4
Total	254	324	257	299	294
Institute Total	1,937	2,458	2,190	2,460	2,682

Source: Registrar

### PLACEMENT CENTER

The Fred W. Ajax Placement Center is a centralized placement operation serving all students for full-time employment as well as part-time, temporary, and summer employment. The primary objectives of the center are to assist students in determining career objectives and in attaining career and employment goals.

The Placement Center maintains a library which includes information on specific employers, governmental services and some special publications relative to employment. In addition, the Placement Center keeps local and national salary data, employment patterns of Georgia Tech graduates (employers, types of positions, and work locations), and graduate and professional school information.

Other services of the center include seminars on the employment process, resume' preparation, effective interviewing techniques, and letter writing campaigns. An open resume' file is available for employer review. This file consists of resume's submitted by students who are interested in full-time and/or summer employment.

About 700 employers annually interact directly with the Placement Center, usually through on-campus interviews. These employers represent a substantial number of the Fortune 500 as well as many regional organizations. Over 1,600 summer, part-time, and temporary positions are posted annually, and approximately 50 percent of these positions are filled by Tech students.

Source: Director, Fred W. Ajax Placement Center

The average starting salary offers shown were computed from employer correspondence only and reflect only those students who were placed through the Fred W. Ajax Placement Center. The average accepted salaries shown were computed from data supplied by JUNE GRADUATES.

		HIGH	LOW	AVERAGE	AVERAGE JUNE
CURRICULUM	DEGREE	OFFER	OFFER	OFFER/NO.	ACCEPTED/NO.
Aerospace Engineering	Bachelors	\$2250	\$1646	\$1941/31	\$1955/15
	Doctorate	2990	2990	2990/1	NR
Applied Mathematics	Bachelors	\$2001	\$1917	\$1959/2	\$2145/1
Architecture	Bachelors	\$1842	\$1842	\$1842/1	NR
	Masters	NR	NR	NR	\$1400/2
Building Construction	Bachelors	\$1841	\$1600	\$1706/5	\$1800/1
Ceramic Engineering	Bachelors	\$2215	\$2215	\$2215/1	\$2266/1
	Masters	2300	2300	2300/1	NR
Chemical Engineering	Bachelors	\$2490	\$1392	\$2220/160	\$2262/24
	Masters	2675	2260	2367/8	NR
Chemistry	Bachelors	\$1833	\$1625	\$1694/3	\$2000/1
	Doctorate	2792	1625	2404/4	2500/1
Civil Engineering	Bachelors	\$2375	\$1392	\$1852/60	\$1912/12
	Masters	2208	1702	2011/6	NR
	Doctorate	2700	2700	2700/1	NR
Electrical Engineering	Bachelors	\$2570	\$1356	\$2049/263	\$2094/40
	Masters	2780	1076	2263/74	2473/11
	Doctorate	2500	2500	2500/1	NR
Engineering Science and Mechanics	Bachelors	\$2300	\$1983	\$2133/3	\$2070/2
	Masters	2083	2083	2083/1	NR
Geophysical Sciences	Masters	\$2708	\$2210	\$2488/6	\$2308/3
Health Systems	Bachelors	NR	NR	NR	\$1625/1
Industrial and Systems Engineering	Bachelors	\$2291	\$1392	\$1939/130	\$2097/36
	Masters	2475	2001	2233/5	NR
	Doctorate	2567	2567	2567/1	NR

# STARTING SALARIES FOR GRADUATES (continued)

Industrial Management	Bachelors	\$2142	\$1362	\$1675/36	\$1626/13
	Masters	2333	1833	2060/8	1745/2
Information & Computer Science	Bachelors	\$2275	\$1500	\$1937/19	\$1951/11
	Masters	2475	1623	2197/10	2305/2
Management Science	Bachelors	\$1375	\$1375/1	\$1375/	NR
Mechanical Engineering	Bachelors	\$2558	\$1392	\$2035/283	\$2171/47
	Masters	2600	2000	2360/29	2525/1
	Doctorate	2915	2915	2915/1	NR
Metallurgy	Masters	\$2340	\$2340	\$2340/1	NR
Nuclear Engineering	Bachelors	\$2235	\$1402	\$1963/9	\$2154/2
	Masters	2500	2000	2047/9	2580/1
	Doctorate	2490	2490	2490/2	2490/1
Operations Research	Masters	NR	NR	NR	\$2200/1
Physics	Bachelors	\$2264	\$1266	\$1845/5	\$ <mark>1675/1</mark>
	Masters	2471	2471	2471/1	2200/1
	Doctorate	2275	1601	1978/2	NR
Sanitary Engineering	Masters	\$2525	\$2350	\$2430/3	NR
Textile Chemistry	Bachelors	\$1833	\$1833	\$1833/2	\$1900/2
Textile Engineering	Bachelors	\$2125	\$2000	\$2093/4	\$2200/1
Textile Management	Bachelors	\$1542	\$1542	\$1542/1	NR
Textiles	Bachelors	\$1500	\$1500	\$1500/1	\$1925/1
	Masters	2166	2166	2166/1	NR
TOTAL NUMBER OF OFFERS REPOR	TED:				1,196

Note: NR means No Response (No Feedback; No Information; No Data Available). Only curricula with some available data are listed.

Source: Director, Fred W. Ajax Placement Center

# STARTING SALARIES (continued)

### **AVERAGE OFFERS**

DEGREE	1980-81	1981-82	PERCENT CHANGE
	Offer/No.	Offer/No.	
All B.S. Excluding Engineering	\$1700/54	\$1745/72	+ 2.6
All B./B.S. Degrees	\$1891/999	\$2029/1020	+7.3
B in Engineering	\$1902/945	\$2131/911	+ 12.0
B.S./Industrial Management	\$1618/27	\$1666/37	+ 3.0
All M.S. Degrees	\$2070/113	\$2250/163	+ 8.7
M.S. in Engineering	\$2077/97	\$2253/138	+ 8.5
All Ph.D Degrees	\$2673/6	\$2478/13	-7.3



Source: Director, Fred W. Ajax Placement Center

## **POST-GRADUATION PLANS**

## Summary of 1981-82 Georgia Tech Graduates Post-Graduation Plans

#### September 1981 Graduates

College	Number	Accepted	Graduate	Entering		No Offers/
	Reporting	Employment	School	Military	Other	Plans
Architecture	7	3 (42.9%)	3 (42.9%)	0 (0.0%)	0 (0.0%)	1(14.2%)
Engineering	209	142 (67.9%)	32 (15.4%)	13 (6.2%)	9 (4.3%)	13 (6.2%)
Management	25	16 (64.0%)	3 (12.0%)	3 (12.0%)	1 (4.0%)	2 (8.0%)
COSALS	34	21 (61.8%)	7 (20.6%)	3 (8.9%)	2 (5.8%)	1(2.9%)
Total	275	182 (66.1%)	45 (16.4%)	19 (6.9%)	12 (4.4%)	17 (6.2%)
		December	1981 Graduat	es		
Architecture	5	1(20.0%)	4 (80.0%)	0(0.0%)	0(0.0%)	0 (0.0%)
Engineering	110	80 (72.7%)	9(8.2%)	8(7.3%)	3(2.7%)	10(9.1%)
Management	16	11 (68.8%)	0(0.0%)	2(12.5%)	0 (0.0%)	3(18.8%)
COSALS	21	11 (52.4%)	6 (28.6%)	1(4.8%)	1 (4.8%)	2 (9.5%)
Total	152	103 (67.8%)	19 (12.5%)	11(7.2%)	4 (2.6%)	15 (9.9%)
		March 19	82 Graduates			
Architecture	4	2 (50.0%)	0 (0.0%)	0 (0.0%)	1 (25.0%)	1 (25.0%)
Engineering	64	48 (75.0%)	6 (9.4%)	1(1.6%)	2 (3.1%)	7(10.9%)
Management	8	4 (50.0%)	1 (12.5%)	1 (12.5%)	1 (12.5%)	1(12.5%)
COSALS	14	7 (50.0%)	6 (42.9%)	0 (0.0%)	0 (0.0%)	1 (7.1%)
Total	90	61 (67.8%)	13 (14.5%)	2 (2.2%)	4 (4.4%)	10 (11.1%)
		June 198	2 Graduates			
Architecture	8	4(50.0%)	0 (0.0%)	0(0.0%)	1(12.5%)	3 (37.5%)
Engineering	309	215 (69.5%)	54 (17.5%)	21(6.8%)	3(1.0%)	16(5.2%)
Management	40	18 (45.0%)	11 (27.5%)	1(2.5%)	0(0.0%)	10(25.0%)
COSALS	45	22 (48,9%)	11 (24.4%)	8(17.8%)	1 (2.2%)	3(6.7%)
Total	402	259 (64.4%)	76 (18.9%)	30 (7.5%)	5(1.2%)	32 (8.0%)
		Total 1981-	1982 Graduat	es		
Architecture	24	10 (41.7%)	7 (29.2%)	0 (0.0%)	2 (8.3%)	5(20.8%)
Engineering	692	485 (70.1%)	101 (14.6%)	43 (6.2%)	17 (2.5%)	46 (6.6%)
Management	89	49 (55.0%)	15 (16.9%)	7(7.9%)	2(2.2%)	16(18.0%)
COSALS	114	61 (53.6%)	30 (26.3%)	12 (10.5%)	4 (3.5%)	7 (6.1%)
Grand Total	919	605 (65.8%)	153 (16.7%)	62 (6.7%)	25 (2.7%)	74 (8.1%)

Source: Director, Fred. W. Ajax Placement Center

### **ALUMNI PLACEMENT**

The Georgia Tech Alumni Placement Office serves both alumni and graduating seniors. Funded through the Georgia Tech Alumni Association's Roll Call contributions, the Placement Office publishes a weekly bulletin of job opportunities.

Other available services include counseling in all facets of the employment process, such as assistance with resume' preparation, the conduct of an interview, as well as personal problems as they relate to a job search. These services comprise a major phase of the office's functions as many alumni who begin their job searches have not been in the job market for a number of years. Many alumni leave their first job in the first five years. The most common reasons given for leaving are geographic location, unmet job expectations, and dissatisfaction with the chosen field.

According to the College Placement Council, there are only six colleges in the country that have an alumni placement service completely separate from student placement. Of these six, Georgia Tech's Alumni Placement is the only one publishing a weekly bulletin. In 1981-82, there were 50,732 bulletins mailed to over 3,000 alumni. Of the 1,533 companies listed in the bulletin during the course of the year, 408 listed two or more jobs.

Source: Director, Alumni Placement Office

# **GEOGRAPHICAL DISTRIBUTION OF ALUMNI**



#### LEGEND:



101-500 (Incl. District of Columbia and Puerto Rico) 501–1000

1001-3000

over 3000

Source: Director, Alumni Association

# GEOGRAPHICAL DISTRIBUTION OF ALUMNI (continued)

STATE	NUMBER	STATE	NUMBER
Alabama	1,702	Nebraska	43
Alaska	28	Nevada	36
Arizona	186	New Hampshire	50
Arkansas	172	New Jersey	728
California	1,829	New Mexico	91
Colorado	333	New York	1,020
Connecticut	393	North Carolina	1,708
Delaware	212	North Dakota	8
District of Columbia	135	Ohio	707
Florida	4,231	Oklahoma	176
Georgia	19,784	Oregon	71
Hawaii	51	Pennsylvania	715
Idaho	33	Puerto Rico	215
Illinois	511	Rhode Island	40
Indiana	225	South Carolina	1,530
lowa	59	South Dakota	4
Kansas	113	Tennessee	1,941
Kentucky	343	Texas	2,192
Louisiana	770	Utah	32
Maine	27	Vermont	17
Maryland	814	Virginia	1,638
Massachusetts	377	Washington	219
Michigan	270	West Virginia	131
Minnesota	87	Wisconsin	95
Mississippi	387	Wyoming	17
Missouri	333	Foreign	896
Montana	13	Unknown	12

47,750

#### TOTAL COUNTED\*

(As of July 1, 1982)

\*This figure does not include persons who are deceased or cannot be located.

Source: Director, Alumni Association



The consolidated expenditures in the Original Budget for 1982-83 were \$164,225,706, including an increase of \$12,470,657 - 8.0 percent over total expenditures in the 1981-82 fiscal year of \$151,755,049

The breakdown of expenditures by percentage of the total amount expended on the various items for a five year period is:

					ORIGINAL
			ACTUAL		BUDGET
Expenditures	78-79	79-80	80-81	81-82	82-83
Instruction	18.1	17.3	16.0	16.6	15.6
Research	15.3	15.6	12.9	13.3	12.7
Public Services			.1	.2	.2
Academic Support	4.7	4.5	4.4	4.8	5.1
Student Services	1.3	1.3	1.2	1.3	1.2
Institutional Support	7.0	7.0	7.9	8.6	8.1
Operation of Plant	7.7	7.6	6.6	6.4	6.3
Sponsored Operations	28.4	27.8	27.0	26.7	34.1
Scholarships & Fellowships	1.4	1.6	1.5	1.3	1.3
Auxiliary Enterprises	8.6	8.1	7.8	7.6	8.0
Georgia Tech Athletic Association, Inc.	2.3	2.8	2.6	2.7	2.8
Student Activities	.9	.8	.7	.7	.6
Georgia Tech Foundation, Inc.	.8	.6	.6	.6	1.1
Georgia Tech Research Institute, Inc.	.5	2.0	1.8	1.9	2.3
Unexpended Plant Fund	3.0	3.0	8.9	7.3	.6
TOTAL	100%	100%	100%	100%	100%

Georgia Institute of Technology total revenue from all sources in the 1982-83 fiscal year is \$164,372,383, including an increase of \$10,832,179, - 7.1 percent over total revenue in the 1981-82 fiscal year of \$153,540,204.

The breakdown of revenue by percentages of the total original budgeted amount in 1982-83, compared with prior four years is:

					ORIGINAL
			ACTUAL		BUDGET
Revenue	78-79	<u>79-80</u>	80-81	81-82	82-83
State Appropriation	32.0	30.1	32.7	32.1	27.9
Student Tuition & Fees	11.9	11.4	11.7	11.3	11.9
Endowment	.2	.9	1.5	2.0	.6
Gifts & Grants	1.0	1.0	.2	.9	.1
Indirect Cost Recoveries	9.5	9.6	8.8	8.7	8.3
Sponsored Operations	28.0	27.4	26.6	26.4	34.0
Scholarships & Fellowships	1.3	1.5	1.5	1.3	1.3
Auxiliary Enterprises	9.3	9.3	8.9	8.8	8.1
Georgia Tech Athletic Association, Inc.	2.3	2.7	2.6	2.6	2.8
Student Activites	1.0	.9	.7	.7	.6
Georgia Tech Foundation, Inc.	.8	.6	.6	.6	1.1
Georgia Tech Research Institute, Inc.	.5	2.1	1.8	1.9	2.4
Other Sources	2.2	2.5	2.4	2.7	.9
TOTAL	100%	100%	100%	100%	100%

# **FINANCIAL DATA - REVENUES**



Source: Vice President for Business and Finance

## **REVENUES** (continued)

	<u>Actual</u> <u>FY</u> 1978-79	Actual FY 1979-80	Actual FY 1980-81	Actual FY 1981-82	Original Budget 1982-83
STUDENT TUITION & FEES Resident Inst. Eng. Ext. Div. Total	\$10,773,597 594,278 \$11,367,875	\$12,273,519 732,353 \$13,005,872	\$15,349,677 935,197 \$16,284,874	\$16,233,829 1,161,380 \$17,395,209	\$18,414,000 1,129,391 \$19,543,391
ENDOWMENT INCOME Resident Inst. Eng. Exp. Station Unex. Plant Funds Total	\$ 18,000 114,620 <u>\$ 48,978</u> <u>\$ 181,598</u>	\$ 141,628 2,354 <u>\$ 897,000</u> <u>\$ 1,040,982</u>	\$ 184,005 3,122 <u>1,880,016</u> <u>\$ 2,067,143</u>	\$ 957,985 6,126 2,130,117 \$ 3,094,228	\$ 18,000 3,000 <u>1,000,000</u> <u>\$ 1,021,000</u>
GIFTS & GRANTS Resident Inst. Eng. Ext. Div.	\$ 167,031 64,273 500	\$ 199,632 65,179	\$ 214,452 75,640	\$ 272,928 90,458	\$ 85,000 80,000
Eng. Exp. Station Adv. Tech. Dev. Ctr. Unexp. Plant Funds Total	735,792 \$ 967,596	900,656 \$ 1,165,467	27,202 \$ 317,294	398 1,028,000 \$ 1,391,784	165,000
INDIRECT COST RECOVERIES Resident Inst. Eng. Ext. Div. Eng. Exp. Sta.	\$ 3,429,136 1,429 5,607,553	\$ 3,993,230 2,455 7,005,351	\$ 4,144,608 8,049,709	\$ 4,451,801 2,286 8,939,356 17,461	3,880,000 9,727,624
Adv. Tech. Dev. Ctr. Total	\$ 9,038,118	\$11,001,036	\$12,194,317	\$13,410,904	\$13,607,624
OTHER SOURCES Resident Inst. Eng. Ext. Div.	\$ 489,017 300 777,085	\$ 644,765 1,386,257	\$ 684,276 1,349,899	\$ 418,583 1,925,332	\$ 35,000 1,390,000
Adv. Tech. Dev. Ctr. Unexp. Plant Funds Total	809,026 \$ 2,075,428	852,997 \$ 2,884,019	(691) 1,346,566 \$ 3,380,050	1,730,254 \$ 4,074,169	\$ 1,425,000
STATE APPROPRIATION Resident Inst. Eng. Ext. Div. Eng. Exp. Sta. Agricultural Res. Adv. Tech. Dev. Ctr. Unex. Plant Funds	\$25,827,515 377,500 3,183,505 60,000 1,225,000	\$29,266,000 457,075 3,803,220 60,000 766,000	\$31,440,600 501,380 4,239,048 60,000 185,000 9,010,389	\$37,077,100 552,045 4,649,904 396,801 358,555 6,225,713 649,260,118	\$39,295,100 587,829 5,066,895 431,887 420,557
Total <u>SPONSORED OPERATIONS</u> <u>Resident Inst.</u> Eng. Ext. Div. Eng. Exp. Sta. Adv. Tech. Dev. Ctr.	\$ 9,822,695 14,792 17,095,432	\$11,218,744 4,240 20,119,552	\$13,698,110 8,977 23,257,359 \$36,964,446	\$14,655,904 5,316 25,778,700 33,006 \$40,472,926	\$16,424,000 50,000 39,491,438
SCHOLARSHIPS &	\$ 1, 280, 555	\$ 1,752,779	\$ 2,076,660	\$ 1,999,348	\$ 2,200,000
AUXILIARY ENTERPRISES	\$ 8,886,919	\$10,615,272	\$12,318,902	\$13,488,402	\$13,351,090
GA. TECH. ATH. ASSN.	\$ 2,199,000	\$ 3,106,000	\$ 3,537,000	\$ 4,091,100	\$ 4,662,500
STUDENT ACTIVITIES	<u>\$ 941,512</u>	<u>\$ 984,096</u>	<u>\$ 984,351</u>	\$ 1,052,917	\$ 996,909
GA. TECH. FOUND., INC.	\$ 800,000	\$ 626,000	\$ 846,000	\$ 885,288	\$1,794,663
GA. TECH. RES. INST.	<u>\$ 450,000</u>	\$ 2,398,000	\$ 2,455,000	\$ 2,923,811	\$ 3,837,500
TOTAL REVENUE Resident Inst. Eng. Exp. Sta. Eng. Ext. Div. Agricultural Res. Adv. Tech. Dev. Ctr. Auxiliary Enterp.	\$51,807,546 26,778,695 1,052,572 60,000 8,886,919	\$59,490,297 32,316,734 1,261,302 60,000 10,615,272	\$67,792,388 36,899,137 1,521,194 60,000 184,309 12,318,902	\$76,067,478 41,299,418 1,811,485 396,801 409,420 13,488,402	\$80,351,100 55,678,957 1,847,220 431,887 420,557 13,351,090
Ga. Tech. Ath. Assn. Student Activities Ga. Tech. Found.Inc. Ga. Tech. Res. Inst. Unexp. Plant Funds Total	2,199,000 941,512 800,000 450,000 2,818,796 \$95,795,040	3,106,000 984,096 626,000 2,398,000 <u>3,416,653</u> \$114,274,354	3,537,000 984,351 846,000 2,455,000 12,264,173 \$138,862,454	4,091,100 1,052,917 885,288 2,923,811 11,114,084 \$153,540,204	4,662,500 996,909 1,794,663 3,837,500 1,000,000 \$164,372,383

**FINANCIAL DATA - EXPENDITURES** 

#### GEORGIA INSTITUTE OF TECHNOLOGY - FISCAL YEAR 1982-83 CONSOLIDATED EXPENDITURES BY BUDGETARY FUNCTION - \$164.2 MILLION



# EXPENDITURES (continued)

INCTRUCTION	$\frac{\frac{Actual}{FY}}{1978-79}$	Actual 1979-80	$\frac{\frac{\text{Actual}}{FY}}{1980-81}$	$\frac{\frac{Actual}{FY}}{1981-82}$	Original Budget 1982-83
Resident Instruct. Eng. Ext. Div. Total	\$16,232,903 963,067 \$17,195,970	\$13,323,839 1,176,089 \$19,499,928	\$20,468,099 1,405,039 \$21,873,138	\$23,316,794 1,659,936 \$24,976,730	$\begin{array}{r} \$23,770,192\\ \hline 1,650,940\\ \hline \$25,421,132 \end{array}$
RESEARCH Resident Instruct. Eng. Exp. Station Agricultural Res. Eng. Ext. Div.	\$ 6,375,766 6,817,629 57 360	\$ 7,296,782 8,800,961 56,563	\$ 7,818,063 9,857,034 55,746	\$ 8,300,152 11,516,480 372,467 2,832	s 7,524,993 12,992,559 s 401,864
Total	\$13,250,755	\$16,154,306	\$17,730,843	\$20,191,931	\$20,919,416
PUBLIC SERVICE Adv. Tech. Dev. Ctr.		and the set	<u>\$ 175,775</u>	<u>\$ 359,367</u>	<u>\$ 377,791</u>
ACADEMIC SUPPORT Resident Instruct.	\$ 4,479,641	\$ 5,075,274	\$ 5,963,792	\$ 7,312,348	\$ 8,350,331
STUDENT SERVICES Resident Instruct.	<u>\$ 1,218,520</u>	<u>\$ 1,426,048</u>	\$ 1,680,071	\$ 2,008,877	_\$1,922,239
INSTITUTIONAL SUPPORT Resident Instruct. Eng. Ext. Div. Eng. Exp. Station Agricultural Res. Adv. Tech. Dev. Ctr.	\$ 5,677,285 40,366 2,117,878	s 6,644,998 50,472 2,646,446 3,144	s 8,043,490 67,246 2,760,441 3,989 8,006	\$ 9,986,349 78,795 2,900,489 24,223 17,047	\$11,212,877 95,262 1,834,108 30,023 24,619
Total	• <u>\$</u> 7,835,529	\$ 9,345,060	\$10,883,172	\$13,006,903	\$13,196,889
OPERATION OF PLANT Resident Instruct. Eng. Ext. Div. Eng. Exp. Station Agricultural Res. Adv. Tech. Dev. Ctr.	\$ 6,544,509 30,531 759,542	\$ 7,780,405 45,147 779,143	\$ 8,109,111 39,410 1,039,105	\$ 8,569,067 61,151 1,131,066	\$ 8,946,468 51,018 1,360,852 18,147
Total	\$ 7,334,582	\$ 8,604,695	\$ 9,187,626	\$ 9,761,284	\$10,376,485
SPONSORED OPERATIONS Resident Instruct. Eng. Ext. Div. Eng. Exp. Station Adv. Tech. Dev. Ctr. Total	\$ 9,822,695 14,792 17,095,432 <u>\$26,932,919</u>	\$11,218,744 4,240 20,119,552 \$31,342,536	\$13,698,110 8,977 23,257,359 \$36,964,446	\$14,655,904 5,316 25,778,700 <u>\$33,006</u> <u>\$40,472,926</u>	\$16,424,000 50,000 39,491,438 \$55,965,438
SCHOLARSHIPS &					
Resident Instruction	\$ 1,280,555	\$ 1,752,779	\$ 2,076,660	\$ 1,999,348	\$ 2,200,000
AUXILIARY ENTERPRISES	\$ 8,143,086	\$ 9,151,122	\$10,646,546	\$11,573,675	\$13,204,413
GA. TECH. ATH. ASSN.	\$ 2,199,000	\$ 3,106,000	\$ 3,537,000	\$ 4,091,100	\$ 4,662,500
STUDENT ACTIVITIES	\$ 888,124	\$ 953,669	\$ 1,018,244	\$ 1,077,377	\$ 996,909
GA. TECH. FOUND, INC.	\$ 800,000	\$ 626,000	\$ 846,000	\$ 885,288	\$ 1,794,663
GA. TECH RES. INST.	\$ 450,000	\$ 2,398,000	\$ 2,455,000	\$2,923,811	\$3,837,500
UNEXP. PLANT FUNDS	\$ 2,818,796	\$ 3,416,653	\$12,264,173	\$11,114,084	\$ 1,000,000
GRAND TOTAL Resident Inst. Eng. Ext. Div. Eng. Exp. Sta. Agricult. Res. Adv. Tech. Dev. Ctr. Auxiliary Enterp.	\$51,631,874 1,048,756 26,790,481 57,360	\$59,518,869 1,275,948 32,346,102 59,707	\$67,857,396 1,520,672 36,913,939 59,735 183,781 10,646,546	\$76,148,839 1,808,030 41,326,735 396,690 409,420	\$80,351,100 1,847,220 55,678,957 431,887 420,557 13,204,413
Ga. Tech. Ath. Assn.	2,199,000	3,106,000	3,537,000	4,091,100	4,662,500
Ga. Tech. Found.Inc.	800,000	626,000	846,000	885,288	1,794,663
Unex. Plant Fund TOTAL	2,818,796 \$94,827,477	2,398,000 3,416,653 \$112,852,070	12,264,173 \$137,302,486	11,114,084 \$151,755,049	1,000,000

# MATRICULATION FEES: FALL QUARTERS 1978-1982



Year	Matriculation Fee (Resident & Non- Resident Fee)	Non-Resident Tuition Fee	Total Non- Resident Tuition Fee
1972	\$135	\$235	\$370
1973	135	235	370
1974	145	295	440
1975	145	295	440
1976	168	354	522
1977	185	389	574
1978	185	389	574
1979	185	389	574
1980	195	430	625
1981	236	550	786
1982	285	696	981

#### DISTRIBUTION BY RANK

		Associate	Assistant		
	Professor	Professor	Professor	Instructor	Totals
Full-Time Teaching Faculty	217	150	144	6	517
Research Faculty	2	1	0	2	5
General Administrators	11	1	1	0	13
Academic Administrators	37	7	1	0	45
Librarians	3	7	2	0	12
On-Leave	7	7	5	0	19
Part-Time Faculty <sup>a</sup>	10	7	2	1	20
Other <sup>b</sup>	0	0	0	0	42
Total	287	180	155	9	673

#### DISTRIBUTION BY HIGHEST DEGREE

	Doctorate	First Professional <sup>C</sup>	Ed. Spec/ Master's	Bachelor	Totals
Full-Time Teaching Faculty	447	1	62	7	517
Research Faculty	5	0	0	0	5
General Administrators	11	1	1	0	13
Academic Administrators	41	0	4	0	45
Librarians	3	9	0	0	12
On-Leave	17	0	2	0	19
Part-Time Faculty <sup>a</sup>	12	1	4	3	20
Other <sup>b</sup>	10	0	26	6	42
Total	546	12	99	16	673

#### DISTRIBUTION BY RACE AND SEX

	Black Male	White Male	Other Male	Black Female	White Female	Other Female	Totals
Full-Time Teaching Faculty	3	451	29	5	28	1	517
Research Faculty	0	4	0	0	1	0	5
General Administrators	0	12	0	0	1	0	13
Academic Administrators	1	42	2	0	0	0	45
Librarians	0	3	0	1	8	0	12
On-Leave	0	14	2	2	1	0	19
Part-Time Faculty <sup>a</sup>	0	19	0	0	1	0	20
Other <sup>b</sup>	1	17	0	0	24	0	42
Total	5	562	33	8	64	1	673

<sup>a</sup> Includes only those part-time faculty (those persons who are less than .75 EFT) who are on an academic year contract; does not include part-time faculty who are hired on a per course, per quarter basis as needed. <sup>b</sup>Full-Time Lecturers

<sup>C</sup>Includes M.D., J.D., D. V. M.

Source: Vice President for Academic Affairs

# **RESEARCH PERSONNEL PROFILE**

# Research Personnel As of September 30, 1982

	EES Budgeted	Academic Budgeted <sup>a</sup>	EES Part-time <sup>b</sup>	Academic Part-time <sup>c</sup>	Total
RESEARCH FACULTY	ſ	)istribution b	y Title		
a	52	6	3	2 <sup>e</sup>	64
Principal E/S/1/A	33	23	5	a <sup>e</sup>	199
Senior E/S/I/A	107	23	5	2 <sup>e</sup>	190
Research II E/S/1/A	150	40	4	a <sup>e</sup>	208
Research I E/S/1/A	151	45	0	0	25
Total	510	144	20	12	686
	Di	stribution by	Degree	ð:	
Doctorate	87	52	3	4	146
First Professional <sup>f</sup>	3	2	0	1	6
Masters	236	25	11	2	274
Bachelors	172	46	6	4	228
Other	5	9	0	0	14
No Degree	7	10	0	1	18
Total	510	144	20	12	686
	Dist	ribution by R	ace and Sex		
Black Males	7	4	0	0	11
White Males	458	115	18	8	599
All Other Males	10	6	0	1	17
Black Females	1	0	0	0	1
White Females	34	18	2	3	57
All Other Females	0	1	0	0	1
Total	510	144	20	12	686
GRADUATE RESEARCH	ASSISTANTS		34	435	469

<sup>a</sup> Includes OCA <sup>b</sup> Hourly 50% or less

c 50% or less

<sup>d</sup> Engineer/Scientists/Technologist/Associate <sup>e</sup> Includes Visiting /Adjunct Personnel

f Includes J.D.'s and M.D's

# TOTAL EMPLOYEE PROFILE



EEO Code	Category	Male	Female	Total
1	Executive, Administrative, Managerial	178	40	218
2	Faculty-Academic	542	105	647
3	<b>Research Faculty &amp; Other Professionals</b>	638	183	821
4	Clerical and Secretarial	64	505	569
5	Technical and Para-Professional	153	41	194
6	Skilled Crafts	153	2	155
7	Service and Maintenance	189	82	271
	TOTAL	1917	958	2875

Source: Associate Vice President for Academic Affairs

### **GEORGIA TECH FOUNDATION**

The Georgia Tech Foundation, Inc. was chartered in 1932 to "promote in various ways the cause of higher education in the state of Georgia; to receive capital funds for the support and enhancement of the Georgia Institute of Technology; and to aid the Georgia Institute of Technology in its development as a leading educational institution." It is a nonprofit corporation which receives, administers, and distributes virtually all contributions made in support of the Georgia Institute of Technology. It has been certified by the Internal Revenue Service of the United States and the Department of National Revenue-Taxations of Canada as a tax-exempt organization.

The Board of Trustees of the Foundation is composed of thirty individuals distinguished by their success in their chosen profession and their long-time interest in, service to, and support of the Institute. The trustees are elected to three-year terms, with no limit on the number of terms they can serve. They meet the first Tuesday of each month except July and August. Twelve emeritus trustees continue to advise the Foundation and actively support the Institute.

The assets of the Foundation as of June 30, 1982 were \$28,260,622. The Foundation provides monies for:

- (1) faculty salaries;
- (2) faculty professional and curriculum development;
- (3) faculty and staff recruiting;
- (4) student loans, scholarships, and fellowships, such as National Merit Scholars, National Achievement Scholars, and President's Scholars;

(5) various other special projects.

The elected officers of the Foundation are: J. Erskine Love, Jr., President; George W.Felker III, Vice President; and Robert H. Ferst, Treasurer.

The appointed officers who are responsible for its day-to-day administration are: Warren Heemann, Vice President; and Robert N. Leitch, Secretary.

The office of the Foundation is located on the second floor of the L. W. "Chip" Roberts Alumni/Faculty House on North Avenue.

Source: Vice President, Georgia Tech Foundation, Inc.

The Price Gilbert Memorial Library's scientific, engineering, architectural, and management collection includes 1,569,000 bibliographic units and 1,900,000 microtexts.

The library has a collection of over 4,250,000 patents, the largest in the SoutHeast. The library acquires research reports from the National Technical Information Service, the U. S. Department of Energy, and the National Aeronautics and Space Administration. It is a depository for publications issued by the U. S. Government Printing Office and for maps issued by the U. S. Defense Mapping Agency, Topographic and Aerospace Center, U. S. Geological Survey, and the U. S. National Oceanic Survey.

Over 13,775 serials, including 5,800 periodicals, are currently received. Approximately 80 percent of them are in scientific and technical fields. Especially strong is the collection of abstracts, indices, and bibliographies for science and engineering.

The catalog record of the library collection has been converted to computer output microfilm (COM). The COM catalog is located on each floor of the library, in selected dormitory areas, in the Student Center, and in each academic and research department. Twice daily, books and other library documents are delivered to requesting faculty. The Georgia Tech library participates in consortium with eleven other libraries in the Atlanta area and in Athens, Georgia, and offers a union catalog of the holdings of all member libraries. Borrowing reciprocity between Georgia Tech and Georgia State University provides the students and faculty of each institution with direct access to the collections of both libraries.

The library's vast store of information is also available to individuals and businesses outside the Georgia Tech community. The on-demand information service offered is financed from fees charged for services rendered. Available are computer or manual search services, copying services and loan services.

### **COMPUTING SERVICES**

The Office of Computing Services is responsible for the operation of a central computing facility for providing effective, efficient, and conveniently accessible computing services and resources to students, faculty, and staff in support of education, research, and administration.

The facility consists of a Control Data Corporation dual processor CYBER 170/730 and a CYBER 170/760 coupled through extended core storage. Coupled to these two systems is a large IBM 4341 configuration. The four CPU's within this coupled system are capable of executing about 14 million instructions per second. Attached is an array of magnetic tape units, disk drives, card reader/punches, local printers, and data communications equipment. Also attached is a tape cartridge storage system with a capacity of 20 billion characters. The data communications system is connected through a dual Interdata minicomputer front-end system that accommodates various synchronous and asynchronous line speeds for remote job entry and interactive terminals.

Additional access to the system is provided through two user-operated batch terminals and 49 hardwired interactive terminals located within the Rich Building, and over 200 ports for the many remote batch and interactive terminals provided by other campus units.

Computing Services also provides many support services to make the use of the computing system easier. These include a wide variety of programming languages and subroutine libraries, a Calcomp 1039 3-pen plotter, a Versatec electrostatic plotter, and an NCS 7010 optical mark reader.

## PHYSICAL FACILITIES

#### SQUARE FOOTAGE BY FUNCTIONAL AREA FALL,1982

INSTRUCTION 849,650 **General** Academic 849,650 ORGANIZED RESEARCH 305,651 Research Center (EES) 244,499 550,150 Individual or Project Research PUBLIC SERVICE 18,897 18,897 **Community Education** ACADEMIC SUPPORT 140,576 Libraries Audio/Visual 2,540 18,221 **Computing Support** 166,056 Academic Administration & Personnel Development 4,719 STUDENT SERVICES 286,287 Social and Cultural Development 5,320 **Counseling and Career Guidance** 1,010,201 718,594 Student Support INSTITUTIONAL SUPPORT 9.592 **Executive Management Fiscal Operations** 24,937 18,264 **General Administration Services** 19,011 Logistical Services **Physical Plant Operations** 64,697 Faculty and Staff Services 11,600 158,839 10,738 **Community Relations** INDEPENDENT OPERATIONS 7,528 **Outside** Agencies 12,478 4,950 Investment Property UNASSIGNED 90,741 Scheduled for Renovation 90,741 **BUILDING SERVICES** Circulation, Mechanical, Construction, Custodial 1,503,893 1,503,893 4,360,905 **GRAND TOTAL** 

Source: Vice President for Planning

### CONTINUING EDUCATION

The 33-institution University System of Georgia is committed, by action of the Board of Regents, to three major activities: teaching, research, and public service. In 1908--just twenty years after first opening its doors in 1888--Georgia Tech responded to a growing public service need by establishing a night school to provide a professional education service to working adults. Through the ensuing 74 years, with occasional changes in its programs, as well as in its name and organizational structure, this unit has, without interruption, provided a continuing service to the adult community. In 1964, its name was officially changed to the "Department of Continuing Education of the Georgia Institute of Technology."

Through the public service activities of this Department, the Institute's resources in the areas of teaching and research can be utilized to bring to local, state, regional, national, and international communities continuously updated basic and advanced knowledge, skills, and technical expertise. Short courses and conferences which respond to the needs expressed by both individuals and management groups in industry and business, technical and professional societies, and government laboratories and agencies are conducted throughout the calendar year.

With regular college enrollments waning nationally, and greater numbers of adults wishing to participate in professional continuing education, the Department of Continuing Education faces a new and growing challenge. It is moving vigorously to meet that challenge by serving as a delivery system through which both on-campus and off-campus programs can be provided by the faculties of its four Colleges: Engineering, Architecture, Management, and Sciences and Liberal Studies, the staff of the Engineering Experiment Station, the Advanced Technology Development Center, as well as the various research centers in the Office of Interdisciplinary Programs.

#### PROGRAM INFORMATION

Number of:	1977-78	1978-79	1979-80	1980-81	1981-82
Programs	96	104	106	117	163
Participants	6,039	4,810	4,689	4,802	4,758
States Represented*	49	46	49	**	48
Non U.S.A. Persons	225	415	576	* *	661
Ga. Residents	1,276	1,504	2,101	* *	2,414
Ga. Counties Represented	76	87	90	**	112
Institutional CEU's	20,274	14,355	15,911	24,877	23,913

\*Includes the Canal Zone, Puerto Rico, and Virgin Islands

\*\*Figures not available

Source: Director, Continuing Education

## INDUSTRIAL EDUCATION

Industrial Education, a part of the Engineering Extension Program, provides public service activities to Georgia's industrial community. This department, administered by the Engineering Experiment Station, offers the resources and technical expertise at Tech to individual firms when solutions to problems are sought. A wide variety of seminars, workshops, and conferences have been provided for textile and other industries.

For over sixty years, the department has helped industrial firms through training and educational services. Some recent in-plant training activities have included workshops on supervisory skill development, which enabled one company to reduce its turnover rate from 66.6% to 21.9% in two years. Another activity involved the development of realistic training programs using analytical methods, which resulted in streamlining one firm's training program at great dollar savings. Other workshops have encompassed the topics of safety and health, human relations, labor relations, management awareness, and instructor training.

Conducted by Industrial Education				
1977-78	1978-79	1979-80	1980-81	1981-82
234	193	192	221	197
3,330	2,772	2,809	3,525	3,305
69	63	69	73	61
79,719	68,115	50,714	71,562	63,362
1,225	1,043	1,645	1,503	1,782
	Conducted b <u>1977-78</u> 234 3,330 69 79,719 1,225	Conducted by Industrial Edu   1977-78 1978-79   234 193   3,330 2,772   69 63   79,719 68,115   1,225 1,043	Conducted by Industrial Education1977-781978-791979-802341931923,3302,7722,80969636979,71968,11550,7141,2251,0431,645	Conducted by Industrial Education1977-781978-791979-801980-812341931922213,3302,7722,8093,5256963697379,71968,11550,71471,5621,2251,0431,6451,503

#### Five-Year Summary of In-Plant Classes Conducted by Industrial Education

Source: Director, Engineering Experiment Station

The Center for Media-Based Instruction, a part of the Education Extension Division, is a media service agency for the Georgia Tech community.

The Center's Instructional Resources Service provides both media production and audiovisual equipment loans. Media production service includes, but is not limited to, graphics, photography, transparencies, audio taping, video taping and multi-media productions. Faculty and administrators may borrow a variety of audiovisual equipment for brief periods of time. The Instructional Resources Service is located in room G-6 in the Engineering Science and Mechanics (ESM) building, and the Media Production Supervisor's telephone number is 894-3378.

The Center's Videobased Instructional System operates an electronic-based educational delivery system to deliver course materials and graduate-level programs to qualified students offcampus. The Electronic Maintenance Engineer's office is located in the master control room, ESM 211, and his telephone number is 894-3379.

The Center's professional staff maintains educational media resource materials and are available for consultation on matters pertaining to facilities design, equipment purchase, and the production or purchase of educational media software.

Source: Director, Center for Media-Based Instruction





### **RESEARCH AT GEORGIA TECH**

Georgia Tech is a major center for advanced technology in Georgia and the Southeast. With a full-time staff of more than 1,300 scientists and engineers, it conducts research of national significance, provides services and facilities to faculty, students, industry and government agencies, and supports the economic and technological growth of the state. Operations are carried out through a group of schools, centers, and research laboratories, with each performing research in a particular field of interest.

Most of the research is supported by contracts with governmental organizations and private industry. The Georgia Tech Research Institute, a non-profit organization incorporated under the laws of the State of Georgia, serves as the contract agency. It also handles patent matters.

Research programs range from alternate energy research to the development of electronic defense systems to protect our nation; from economic development assistance to business and industry to the application of computer technology in a variety of settings; from analyses of systems for monitoring stratospheric pollution to the design and implementation of totally new radars; from the evolution of processing techniques for earth resources satellites to management of the nation's second largest solar energy test facilities. Contracts vary in size from an \$8.5 million contract with the federal government to a \$500 contract with a rural industry. There are programs with local, regional and state governments, with major companies, with other R & D organizations, and with developing nations.

Much of the total research activity is within the broad field of electronics, including electronic defense, electronic systems, electronic techniques and components, antennas, electromagnetics, and optics. Energy research on solar and other alternate energy forms and work on energy conservation and applications are also important areas, as well as the following: domestic and international economic development; computer technology and applications; and the fields of physical, chemical, material, earth atmospheric, and social science.

Most of the research is performed on the Georgia Tech campus, but there are a variety of off-campus facilities managed by the Engineering Experiment Station (EES). About 65% of the research and extension activities are managed by the Engineering Experiment Station and 35% are managed by academic schools and centers.

**RESEARCH AT GEORGIA TECH** (continued)



#### **RESEARCH GRANTS AND CONTRACTS\***

AWARDING AGENCY	FY 1982	(% of Total)
National Science Foundation	\$2,511,354	(4.1)
National Aeronautics & Space Administration	1,103,692	(1.8)
U.S. Air Force	17,761,823	(29.2)
U.S. Army	13,299,404	(21.8)
U. S. Navy	4,022,122	(6.6)
U.S. Department of Energy	1,828,025	(3.0)
U.S. Department of Health and Human Services	1,861,436	(3.1)
Other Federal Agencies	5,168,785	(8.5)
Total Federal Government	47,556,641	
State and Local Governments	875,833	(1.4)
Miscellaneous, Industrial & Other	12,474,660	(20.5)
GRAND TOTAL	\$60,907,134	

\*This summary does not include other extramural support such as fellowships, traineeships, training grants and instructional equipment grants.

### RESEARCH SUMMARY

#### July 1981-June 1982

UNIT	PROPOSALS		AWARDS	
	Number	Amount	Number	Amount
Engineering	466	\$45,459,199	289	\$10,205,185
Architecture	31	2,537,251	14	397,746
College of Sciences & Liberal	198	23,789,946	111	5,713,954
Management	12	577,488	6	72,481
Research Centers	40	3,240,349	26	626,180
Engineering Experiment Station	871	152,778,644	517	43,891,588
Other Research-Related Proposals	57	3,569,000	118	820,833
& Awards				
TOTAL	1,675	\$231,951,877	1,081	\$61,727,967
	FY 81-82 Awards:	\$61,727,967		
	FY 80-81 Awards:	\$54,016,873		
	FY 79-80 Awards:	\$46,423,509		
	FY 78-79 Awards:	\$37,419,167		
	EV 77-78 Awards	\$31 533 396		

### **RESEARCH CENTERS**

The Office of Interdisciplinary Programs, established in October 1973, coordinates interdisciplinary research centers at Georgia Tech. The office currently provides administration to the fifteen units listed below. While the centers offer no designated degrees, center staff teach courses in other departments and schools of the Institute, assist in the development of interdisciplinary curricula, conduct various research projects, engage in public service programs, and coordinate appropriate interdisciplinary activities.

The <u>Bioengineering Center</u> emphasizes the application of knowledge, techniques and approaches of the physical sciences, engineering, social sciences and mangement to the problems of the biological sciences. In addition to developing interdisciplinary study and research opportunities for qualified students at Georgia Tech, the center conducts cooperative programs in bioengineering education and research with other universities and foundations. Curriculum planning and arrangements are coordinated by the Office of the Dean of Engineering.

The <u>Computational Mechanics Center</u> is dedicated to the advancement of the science of computational analyses. Major research thrusts include non-linear and dynamic fracture mechanics, failure analysis, advanced stress and durability studies, heat section jet engine technology, fatigue analysis, and advanced computational techniques for manufacturing processes.

The <u>Environmental Resources Center</u> coordinates applications of Tech's expertise in science and technology to address problems of managing environmental resources. It organizes and administers water resources research projects thoughout Georgia and disseminates their results.

The <u>Environmental Safety Center</u> performs research and services that contribute technology for the promotion of environmental safety. This technology principally involves methodology for the evaluation and control of hazards in the human environment, with emphasis on the safe handling and use of hazardous materials.

The objective of the <u>Fracture and Fatigue Research Lab</u> is to encourage interdisciplinary research and educational opportunities at Georgia Tech in the field of fracture and fatigue of materials. The research programs encompass the behavior of a wide range of materials, including metals, ceramics, polymers, and composites.

The <u>Georgia Mining and Mineral Resources Institute</u> was organized for the purpose of providing research and education for the mineral industries of the state and Southeast. The major emphasis in research is in non-metallics and, to a lesser degree, coal.

The <u>Georgia Productivity Center</u> assists Georgia companies in improving productivity through the application of technology. Direct short-term help is provided state-wide through Tech's eight extension offices. Longer term research needs are approached through special projects for special industrial groups. Emphasis is placed on production technology, industrial economics, business and human resource management.

The <u>Georgia Tech Microelectronics Research Center</u> provides a mechanism for the formal coordination of campus programs of a microelectronics nature conducted within existing campus organizational units. The center also provides a focus for the development of specialized facilities used in support of interdisciplinary research activities. Typical research programs encompass thin film deposition and characterization, anisotropic etching, high field-hot electron effects on device modeling, laser annealing, and very large scale integration (VLSI) chip design.

The <u>Health Systems Research Center</u> provides an interdisciplinary and interinstitutional program of health systems research, community outreach, and continuing education. The center develops, applies, and disseminates new knowledge and techniques in all aspects of improved operational and managerial systems for the delivery of health care to the public. The center emphasizes systematic planning, engineering design, and scientific management of health care facilities, work methods, and human resources.

The <u>Nuclear Research Center</u> provides access for multiple-discipline users of a five megawatt research reactor. On-going work includes trace element analysis, production of radioisotopes for medical and industrial use, medical application research, and personnel training programs for industry. An additional program supports reactor use by colleges and universities throughout the southeastern United States.

The <u>Center for Radiological Protection</u> coordinates research and training in health physics. Its Environmental Radiation Laboratory provides analytical support for faculty research programs complementary to and supportive of the School of Nuclear Engineering's undergraduate and graduate degree programs in health physics.

The <u>Rehabilitation Technology Center</u> facilitates research on devices and systems which help handicapped or disabled persons by removing functional barriers in the workplace, home, land community environments. Collaborative research relationships have been established with the Atlanta Veterans Administration Medical Center; the Division of Vocational Rehabilitation (Georgia Department of Human Resources); the Roosevelt Warm Springs Institute; and Emory University.
The <u>Technology Policy and Assessment Center</u> brings together faculty and student research teams to conduct research on major technology policy issues which face our society. Typical areas of investigation involve analyses of social impact, organizational behavior, institutional responsiveness and cost-risk-benefit features associated with alternative policies and strategies for the management of scientific and technological development.

The <u>Material Handling Research Center</u> is a joint university/industry activity that produces research results which will utimately improve the handling, storage and control of material. The Center's research programs include design, development and operational studies that have applications in manufacturing, warehousing and logistics. Research staff members of the Center work closely with member companies to keep the program oriented toward significant and relevant research opportunites.

The <u>Center for Research in Writing</u> addresses literacy, language use and development, and the composing process. Research and services are performed by a network of scholars whose results have been widely applied to teaching and learning, both within and beyond the academic setting.

Source: Director, Office of Interdisciplinary Programs

## **CONTRACT ADMINISTRATION**

The Vice President for Research has the executive responsibility for all research programs conducted at the Georgia Institute of Technology. He works with the deans, school and center directors, and the director of the Engineering Experiment Station in establishing research policies and procedures. In partnership with the Office of the Vice President for Research and the Georgia Tech Research Institute (GTRI), the Office of Contract Administraction (OCA) provides management support for the research program at Georgia Tech. Organizationally, the program is administered through the Office of Director and five divisions:

<u>The Office of Director</u> is responsible for annual overhead negotiations with the federal government. The Director's office also provides a telex and telecopier service for the campus for official Georgia Tech business only. Policy and procedures are set in the Director's office and such functions as monitoring overdue deliveries for the Vice President for Research are handled here.

The <u>Program Development Division (PDD)</u> assists the faculty in identifying potential funding sources by means of a weekly report entitled, "Research Opportunities." PDD also serves as the central coordinating point for the entire campus for ordering and distributing RFP's (Requests for Proposal).

The <u>Program Initiation Division (PID)</u> is responsible for handling all proposals and grant applications from the Georgia Tech Research Institute and the Georgia Institute of Technology for all sponsored activity. Contracting officers in PID review proposals and cost estimates for compliance with the business policies of both the Institute and awarding agencies. Further, PID negotiates all resulting grants and contracts. Contracting sponsors include almost every department of the U.S. government, many state and local governments, corporations, universities and colleges, and foreign government agencies. PID's contracting officers are organized to interface with specific sponsoring agencies. They have developed a certain expertise with these agencies over the years and you should contact the appropriate contracting officer for any discussions related to your proposal.

The <u>Program Administration Division (PAD)</u> has the responsibility of monitoring active grants and contracts. This office is organized so that each contracting officer is assigned specific departments on campus with which to interface. After an initial in-depth review of the award documents, the relevant initiation forms are prepared and distributed. Complete project files are established and maintained for the duration of each program. All modifications to an existing program are processed by PAD, such as budgetary changes, an extension of time, and/or a change in scope of work or terms and conditions.

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## CONTRACT ADMINISTRATION (continued)

Liaison with the sponsor is maintained by PAD contracting officers and their support staff whose responsibility it is to monitor programs to see that potential problems in meeting contractual obligations are called to the attention of Georgia Tech management in a timely manner. Upon completion of a grant or contract, PAD facilitates close-out of the program, i.e., certification of satisfactory performance, preparation of research property records, accounting for patents and classified documents, final billing, and submission of all deliverables, as well as various closing certificates to the sponsor.

The <u>Legal and Subcontracting Division (L&SD)</u> provides assistance in subcontract activities related to contracts and grants. Patent and license review, copyright and patent applications processing, and negotiation of royalty fees are other legal services provided by this division. The International Traffic in Arms Regulations (ITAR) and Export Administration Regulations (EAR) are checked for compliance assurance. L&SD is available to handle any legal problem related to research activities.

The <u>Support Services Division</u> located in the Graduate Library Basement serves as the distribution point for all proposals and progress reports, the filing center for all progress reports during the life of a project, and the office of record for the dispatch of both research proposals and progress final reports on grants and contracts. They work closely with the printing and photographic department to assure timely reproduction, with the Program Initiation Division to coordinate proposal submission, with the Program Administration Division for report identification and contractual compliance, with the Archives section of the Georgia Tech Library for disposition of files on completed projects, and with the various commercial and U. S. Postal Service carriers to assure expeditious and economical delivery of research documents.

The <u>Printing and Photographic Center (PPC)</u> has modern printing equipment and a layout section to support the press department with design and line drawing capabilities. A copy camera for enlargements/reductions is available so that writers' concepts can be translated into plate-ready material for reproduction. The finishing department has all the standard equipment and materials for normal binding. The photographic department is equipped with a wide variety of cameras, movie and still, high-speed and slow-motion, for either in-house or research laboratory use. All developing and printing capabilities, except color processing, are available. PPC is well-equipped and staffed to meet the instruction, research, and administrative requirements of a major academic institution.

Source: Director, Office of Contract Administration

## ENGINEERING EXPERIMENT STATION



The Engineering Experiment Station (EES) is chartered by the Georgia legislature as a nonprofit organization. Its missions include: service to the community, state and nation; conducting scientific, engineering, and industrial research; encouraging the development of natural resources of Georgia; aiding industrial and economic development; and participation in national programs of science, technology, and preparedness. In performing these missions, EES is simultaneously making the maximum possible contribution to Georgia Tech's overall research, educational, and service goals.

The director of EES reports administratively to the Georgia Tech Vice President for Research, who is the focal point for all research at the Institute. There is considerable interaction in research and instruction between the staff of EES and the academic schools and departments at Tech. There is also increasing involvement in the presentation of seminars and other forms of specialized training for off-campus groups.

EES is headquartered on the Georgia Tech campus where most of its staff is located. EES activities are also located at an off-campus leased facility in nearby Cobb County, as well as eight field offices located throughout the state in Albany, Augusta, Carrollton, Douglas, Gainesville, Macon, Rome, and Savannah. In addition, other groups are at Eglin Air Force Base, Florida, and

### ENGINEERING EXPERIMENT STATION (continued)

Huntsville, Alabama, performing research at the sponsors' locations. Georgia Tech provides onsite contract management for the European Research Institute of Ireland (ERII), a non-profit applied research and development activity, located at Limerick and sponsored by both the Irish government and industries operating in the Republic of Ireland.

EES is organized into two major groups of laboratories by research areas, with five electronics and three resource laboratories as described briefly below:

#### ELECTRONICS

The five electronics laboratories have major activities in systems analysis, radar, radiometry, computers, biomedical, and communications research. A brief description of the electronics labs and their principal research areas shows the wide variety of projects underway and the skills invested in the staff and students that are needed to carry out the programs.

The <u>ELECTROMAGNETICS LABORATORY (EML)</u> is composed of three major research units: Electro-Optics; Physical Sciences; and Radiation Systems, plus an office located in Huntsville, Alabama. A broad spectrum of research programs covers both governmental and industrial activities. Some of these are: digital image processing, millimeter-wave technology, molecular beam epitaxy (MBE), radiometric systems, remote sensing applications, semi-conductor materials, IMPATT diode chips, chemical kinetics and photochemistry, neutrino physics, characteristics of human tooth enamel, and absorption and desorption processes in hydrogen storage alloys. One of the more important projects is the development of a radiometric system for detecting ice buildup on the space shuttle tanks.

The <u>ELECTRONICS AND COMPUTER SYSTEMS LABORATORY (ECSL)</u> is composed of six major research units: Biomedical Research; Communications Systems; Computer Technology and Applications; Electromagnetic Compatibility; Electromagnetic Effectiveness; and Command and Control. A sample of the research activities performed in ECSL includes bio-effects research to provide information to aid in setting personnel safety standards and in design of improved heart pacers; research on embedded computer systems, digital signal processing, security systems,

## ENGINEERING EXPERIMENT STATION (continued)

computerized instrumentation, nuclear safety systems, electromagnetic scattering, and the design/development of antenna systems for adverse environments.

The **RADAR AND INSTRUMENTATION LABORATORY (RAIL)** is composed of five major units: Modeling and Simulation; Analysis; Development; Instrumentation and Measurements; and a Special Projects Office. Areas of national recognition include millimeter-wave technology, characterization of targets and clutter, polarization processing, instrumentation radars and reflectivity measurements, stationary target detection, target classification, radar transmitters and modulators. New research thrusts include electronic counter countermeasures, advanced radar transmitter/modulation technology, tracking radar systems, fiber optics technology/applications, counter-mine technology, and mobilization concepts.

The <u>SYSTEMS AND TECHNIQUES LABORATORY (S&TL)</u> is composed of two program offices and three major units: Defense Electronics; Microwave Systems; and Systems Development. The majority of the research in S&TL is related to threat radar tracking systems. This work focuses on the analysis, design, fabrication, and testing of new radar systems and major components. Other major technical areas are microwave antennas, particularly track-while-scan types; millimeter-wave and phased array antennas; and multiple-target instrumentation systems. A few of the major accomplishments include the development of major radar systems, both fixed and mobile, extensive upgrading of three mobile gunfire control radars, and the development of a large antenna system for an industrial sponsor.

The <u>SYSTEMS ENGINEERING LABORATORY (SEL)</u> is composed of four major units: Concepts Analysis; Countermeasures Development; Defense Systems; and Electronic Support Measures. In addition, SEL has an Advanced Programs Office and a Techniques Analysis Program Office on campus, plus a field office located at Eglin Air Force Base in Florida. They are engaged in largescale systems analysis and in-depth modeling of system concepts. Areas of expertise are electronic countermeasures (ECM), electronic warfare (EW), electronic support measures (ESM), and electronic counter countermeasures (ECCM). Much research is underway in EW simulator development, EW software development, and advanced digital signal processing. Another area of research is the experimental evaluation of new techniques for use with operational radar systems. Studies are also performed in the collection, processing, and analysis of electronic data.

### RESOURCES

The Resources Laboratories conduct a wide variety of applied research and extension programs which include, among their principal thrusts, economic development, productivity improvement, alternative energy development and energy conservation.

The <u>ECONOMIC DEVELOPMENT LABORATORY (EDL)</u> conducts programs in three major areas: Safety and Health; Business Development; and Productivity Improvement. EDL operates the Industrial Extension Service with eight offices throughout the state of Georgia. Other programs are directed toward minority business development, the problems of inventors and small businesses, and firms hurt by import competition. Environmental impact analyses have detailed practical solutions to questions surrounding the effects of energy development programs on the environment. An area of national interest has been the forecasting of end-use energy demand in the commercial sector, using models that analyze the market penetration of coal technologies and electric heat pumps.

The ENERGY AND MATERIALS SCIENCES LABORATORY (EMSL) is composed of three major units: Solar Energy; Materials Sciences; and Bioengineering. Much of the research is directed toward advanced engineering and the physical sciences as applied to energy production, development of new materials, and the resolution of environmental problems. Some projects include hightemperature solar energy research, technology related to the conversion and utilization of biomass, the development and evaluation of high-temperature materials, and protective coating technology. The most significant of these programs are entrained pyrolysis and gasification of biomass, wood conversion to fuels and chemicals, and operation of the Advanced Components Test Facility (Solar Test Site).

The <u>TECHNOLOGY APPLICATIONS LABORATORY (TAL)</u> is composed of several major units: Process Technology; Mechanical Systems; Water & Sanitation; Industry and Energy; and Industrial Education Department. Research is oriented toward determining and demonstrating technical feasibility in applied engineering projects. Major efforts are underway to develop ways to improve energy efficiency in industrial processes and to develop cost-effective photovoltaic systems to provide electric power for residential and industrial users. Wood energy research is directed toward improving the state of technology. International Programs deal with rural water resources, alternative energy technologies, and technology for small manufacturers.

Source: Director, Engineering Experiment Station

# ENGINEERING EXPERIMENT STATION (continued)



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Source: Director, Engineering Experiment Station

# ENGINEERING EXPERIMENT STATION PROFILE

#### STAFF

September 30, 1982

### Regular (full-time)

Prof	essional			523	
	By Highest Degr	ee			
	Doctorates*	90	(17.2%)		
	Masters	236	(45.1%)		
	Bachelors	178	(34.0%)		
	Other	5	(1.0%)		
	No Degree	14	(2.7%)		
Support			372 2.	252	
Total Regular (full-time)					775
Supplement	ary (part-time)				
Professional				21	
Support				106	
Graduate Research Assistants				34	
Co-op Students				137	
Student Assistants				70	
Total Supple	ementary (part-time)		368		
TOTAL STAFF					1,143

\*Includes 2 J.D's and 1 M.D.

### FY-81/82 FINANCIAL DATA

Act	ivity Level/Funding Sources	
	Research Contracts and Grants	\$34.6 million
	Interdepartmental Services	2.1 million
	State Appropriation	4.6 million
	TOTAL	\$41.3 million

### **RESEARCH FACILITIES**

Campus Research Space	220,028 sq. ft. 142,707 sq. ft.	
Off-Campus Leased Reseach Space		
TOTAL	362,735 sq. ft.	
Total Research Equipment (cost)	\$17.5 million	

Source: Director, Engineering Experiment Station

## ADVANCED TECHNOLOGY DEVELOPMENT CENTER

The Advanced Technology Development Center (ATDC) was created in July of 1980 jointly by Governor George Busbee and the General Assembly. Located on the Georgia Tech campus, it serves as a catalyst for attracting and fostering high technology industrial growth in Georgia.

ATDC programs include recruiting new high technology firms, assisting high technology entrepreneurs, helping existing companies develop new technology-based products, assisting in the formation of venture capital resources, and conducting educational programs in high technology business development. The Center offers the following services to companies considering expansion or relocation to Georgia: technical information about state resources; low-cost incubator space on campus; access to Tech's facilities, engineers and scientists; and other support and training needed to facilitate their operation.

As part of its assistance to high technology companies, the ATDC can help identify product markets; locate venture capital; provide management, finance and marketing assistance; and evaluate new products and ideas. ATDC-sponsored short courses and conferences, utilizing the wide variety of management and technical expertise at Georgia Tech, can enable members of the business and financial communities to update their technological understanding or improve their management skills.

The ATDC will be housed in a two-building complex located on the northern edge of the Tech campus facing Tenth Street. The first building, a three-story structure containing about 45,000 square feet of space, is scheduled to be completed in 1983. The lower floor will consist of open bay areas suitable for laboratory or production use, with the upper floors designed to house administrative offices, support services and conference facilities. In addition to providing reasonably priced temporary space for developing businesses, the building will allow convenient access to Tech's library, computer center, sophisticated test equipment, and other facilities.

Source: Director, Advanced Technology Development Center



For additional information about this publication contact: Dr. Patricia White Office of the Associate Vice President for Academic Affairs 894-3311