Georgia Tech: Innovating here and now

President G. Wayne Clough
September 2004
Incoming freshmen

- 2,600 students (+18%)
  - 782 women (+28%)
  - 153 African Americans (+21%)
  - 105 Hispanics (+48%)
  - 116 international (+35%)
- 1337 average SAT
- 8 perfect SATs, 1 perfect ACT
- 5 sets of twins
Students shine

GT Motorsports wins Formula SAE in Australia

Goldwater Scholarships:
- Thomas Oliver
- Mark Callaghan

Monique Gupta, Churchill Scholarship

Jia Xu, Marshall Scholarship

Laurence Ralph, Mellon Fellowship in Humanistic Studies

Gabe Brostow, Marshall Sherfield Fellowship
Faculty honored

National Medal of Technology: Russell Dupuis, elec and comp engineering

Presidential Early Career Award for Scientists and Engineers: Julia Kubanek, biology

National Academy of Engineering: Fred Juang, elec and computer eng, and Jeff Wu, industrial/systems eng

Presidential Green Chemistry Challenge Award: Charles Eckert, chemical & biomolecular engineering, and Charles Liotta, chemistry
Rankings remain high

- Georgia Tech remains among top ten public universities
  - Peer assessment score in top 25 of all universities, tied with Emory and Georgetown
- College of Management moves up to #34
  - 3 programs in the nation’s top 15
- All engineering programs in the top 15
  - 4 engineering programs in the top 5
- Co-op program among 11 “Academic programs to look for”
- #1 among publics in % of alumni who contribute

U.S. News & World Report 2005 Undergraduate rankings
Research: New milestones

- Awards: $342 million
- Expenditures: ~$425 million
- Invention disclosures: 277
- NIH: $17.2 million (doubled in past 2 years)
- Interdisciplinary research: $106.8 million in active contracts with inter-disciplinary centers
- Ovarian Cancer Institute
Tech’s national presence

• National Innovation Initiative
• Sam Nunn Policy Forum on Bioterrorism
• National Lambda Rail
• National Nanotech Infrastructure Network
Construction continues

Campus Rec Center

Student Center Commons

Klaus Advanced Computing Building

Molecular Science and Engineering Building
Technology Square

Joining the Midtown community
New bookstore

Global Learning Center Management Building
It can be done

5 teams in the top 10 for their sport.
15 of 17 teams in post-season play.
Lacrosse, rowing clubs go national.

First basketball team from Georgia to play in national championship game.

Volleyball team finished its season ranked 8th in the nation.

Baseball team won 20 straight, became NCAA Atlanta Region Champs.
Vision and mission

Georgia Tech will define the technological research university of the 21st century and educate the leaders of a technologically driven world.
Strategic goals

- Student-focused Education
- Diverse Community
- Enhance Research Enterprise
- Expanded Outreach
- Intelligent Development of Technology
- Supportive Administrative Infrastructure
- Facilities Improvement and Expansion
Student-focused education

- Appropriate student:faculty ratio
- Full faculty involvement in instruction and research
- Comprehensive curricular and co-curricular programs for student leadership
- Diverse learning experiences (i.e., study abroad, undergraduate research, co-op, drama, recreation, art, athletics, etc.)
Fall enrollment

Over 650 students are at other campuses or online.
Average SAT scores
Incoming freshman class
Retention improves

Percent still enrolled or graduated

Year enrolled as freshmen

- 1996
- 1999
- 2001
- 2003
- Target

2nd year 3rd year 4th year 5th year 6th year
Enhanced research enterprise

- Continue developing research initiatives – especially in microelectronics, nanoscience and technology, bioscience and technology, manufacturing, entrepreneurship, sustainability, and telecommunications
- Diversified research base (i.e., industry, state, etc.)
- Commercialization support
- Opportunities for interdisciplinary collaboration
Faculty honors

Endowed chairs

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<th>Year</th>
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<td>1995</td>
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NSF Centers of Excellence

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Academy members

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<td>1995</td>
<td>13</td>
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<td>2004</td>
<td>30</td>
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NIH research awards
(in millions)
Total Research and Development Expenditures
Top 35 Colleges & Universities
Fiscal Year 2002

R&D Expenditures (Millions)
- $600 +
- $500 - $599
- $400 - $499
- $300 - $399
- $200 - $299

*Source: NSF Survey of Academic R&D Expenditures
Expanded local and global outreach

- Economic development activities
- Advanced Technology Development Center
- Global Learning Center
- Technology transfer
- Research/technology park
Intelligent development of effective information and educational technology

- Wireless campus
- Incorporation of technology into the classroom (Technology Square)
- Enhance faculty effectiveness through technology (CETL)
- Internet 2, National Lambda Rail
National LambdaRail infrastructure

Phase 1 - completed Aug 2004
Phase 2 – planned 2005
ORNL's UltraNet

Operational site
Pass-through site for amplification/regeneration
Future site
Facilities improvement, expansion

- Leading-edge competitive facilities
- Interactive learning centers
- Research neighborhoods

- Live/work/play environment
- Accommodate GT growth
- Sustainability
Square footage


0 2,000,000 4,000,000 6,000,000 8,000,000 10,000,000 12,000,000
The History of Building Construction

1800’s
The History of Building Construction

1800’s

1900’s
The History of Building Construction

- 1800’s
- 1900’s
- 1910’s
The History of Building Construction

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- 1970’s
- 1980’s
- 1990’s
- 2000’s
Four campuses on three continents

Georgia Tech-Atlanta

Georgia Tech-Lorraine

Georgia Tech-Singapore

Georgia Tech-Savannah
Cross-cutting themes

• Not an engineering school, but a leading technological university

• Instead of following, LEAD
  Nanoscience Centers of excellence
  Bioinformatics $$ for emerging ideas

• Multidisciplinary programs and laboratories
Cross-cutting themes

A major research university must be a model for undergraduate education
Cross-cutting themes

• Global flavor to education and research
  – International opportunities for students
  – Strategic partnerships

• Entrepreneurship and economic development
Cross-cutting themes

• Students
  – Compete for the best
  – Aggressively pursue unusual ones
  – Improve student community and life
  – Offer multiple experiential educational experiences

• Faculty
  – Increase in targeted areas
  – Find senior “institutional” leaders
  – Create elite teams of top people
  – Improve faculty community spirit
Cross Cutting Themes

Areas of Opportunity

- Wave of new technologies
- Interdisciplinary initiatives
- Leadership in international platforms
- Emory/GT Partnership
- High performance computing and networking (ORNL, NLR)
- Leadership in diversity
Cross-cutting themes

• Competing with the best is good; winning requires the level of resources available to the best.

• “Georgia Tech is a jewel, and jewels need polishing.”

   Senator Sam Nunn