

Strategic Plan

2024–2029



Wallace H. Coulter Department of
Biomedical Engineering



EMORY
UNIVERSITY

Message From the Chair



I'm excited to share the new strategic plan for the Wallace H. Coulter Department of Biomedical Engineering at Georgia Tech and Emory University.

After months of planning, we've established a bold vision for the future of Coulter BME, where our bottom-line mission is to create a vibrant community focused on improving global healthcare outcomes. Our strategic plan is built around five important themes: enriching student experiences, fostering a supportive community, generating impactful research, establishing meaningful partnerships, and increasing resources.

We're committed to preparing our students for diverse career paths, helping them build the skills and qualities needed to become leaders. Our research will lead to groundbreaking discoveries. Through collaborations with medical institutions, private foundations, and industry partners we will impact public policy and improve individual health.

Our journey began 25 years ago with a vision to push the boundaries of biomedical engineering and to create a world-class department from the ground up. As we look to the next 25 years, let's continue to be fearless, collaborative, and relentless as we transform healthcare and make a lasting impact on human health.

Warm regards,

Alyssa Panitch

Who We Are

MISSION

Through a partnership of two premier academic institutions, the Georgia Tech/Emory Biomedical Engineering program is a welcoming community for research and scholarship integrating medicine and engineering. Through dedicated and accomplished faculty, staff, students, and alumni we generate scientific discovery, translational research, and practical solutions that advance healthcare for all.

VISION

We drive discovery and shape the future of healthcare through innovation and education.



Rankings and Statistics

No. 2

**GRADUATE BME PROGRAM
IN THE NATION**

*U.S. News & World Report,
2025 Best Colleges*

No. 1

**UNDERGRADUATE BME
PROGRAM IN THE NATION**

*U.S. News & World Report,
2026 Best Colleges*

1,232

**UNDERGRADUATE
STUDENTS**

498

**GRADUATE
STUDENTS,
FALL 2025**

\$85M+

**ANNUAL RESEARCH
AWARDS, FY25**

85+

**PATENTS ISSUED TO
FACULTY SINCE 2015**

DEGREES OFFERED

- B.S. in Biomedical Engineering at Georgia Tech
- M.S. in Biomedical Engineering at Georgia Tech
- Master of Biomedical Innovation and Development at Georgia Tech
- Ph.D. at Emory University and Georgia Tech
- M.D./Ph.D. at Georgia Tech and Emory University School of Medicine



Priority Outcomes

STUDENTS

- Students are prepared for their chosen future pathways
- Students demonstrate strength in engineering skills applied to health and medicine
- Students demonstrate leadership attributes: curiosity, empathy, communication, ethics, community engagement, interdisciplinary perspective

RESEARCH

- Research leads to publications, medical models, patents, commercialization, and clinical application
- Research impacts public policy to improve healthcare
- Research directly impacts individual health

BIOMEDICAL ENGINEERING FIELD

- Recognition of the BME field and its impact



THEME A

▶ Enrich Student Learning Experiences

OBJECTIVES:

- Expand real-world connections
- Enhance career exploration
- Align and refresh curricula

INITIATIVES:

- Expand opportunities within the curriculum for M.S. and Ph.D. students to learn about non-academic careers
- Continuously engage alumni through mentoring, Capstone projects, networking, recruiting/hiring, and fundraising
- Provide opportunities to increase faculty knowledge of student career pathways
- Expose B.S. students to professional roles for which they are well-qualified to compete
- Build and align connections between outcomes of courses, degrees and strategic plan



THEME B

▶ Foster Faculty, Staff, and Student Community

OBJECTIVES:

- Create a supportive and connected community for all
- Strengthen the integration of Emory and Georgia Tech

INITIATIVES:

- Develop and implement a consistent and high-quality onboarding program for all community members
- Increase departmental engagement through community building
- Build a culture and practice of one department with integrated activity on two campuses

THEME C

► Generate Impactful Research

OBJECTIVES:

- Increase integration of research with clinical practice
- Expand product development and entrepreneurial activity

INITIATIVES:

- Develop programs to encourage collaboration between clinicians and biomedical engineers
- Expand access to medical records data
- Facilitate clinical trials by addressing issues with regulations, liability and quality of research products
- Provide training and incentives for F and K awards to students and postdocs, especially those with clinical collaborators and co-mentors
- Expand funding and staff resources to support commercialization
- Empower trainees to lead Small Business Innovation Research projects (SBIR)



THEME D

► Establish Impactful Partnerships

OBJECTIVES:

- Expand collaboration with medical institutions.
- Increase collaboration with industry and employers

INITIATIVES:

- Enhance opportunities for clinicians and researchers to collaborate and exchange ideas
- Enrich external communications designed to attract industry and potential employers of graduates



THEME E

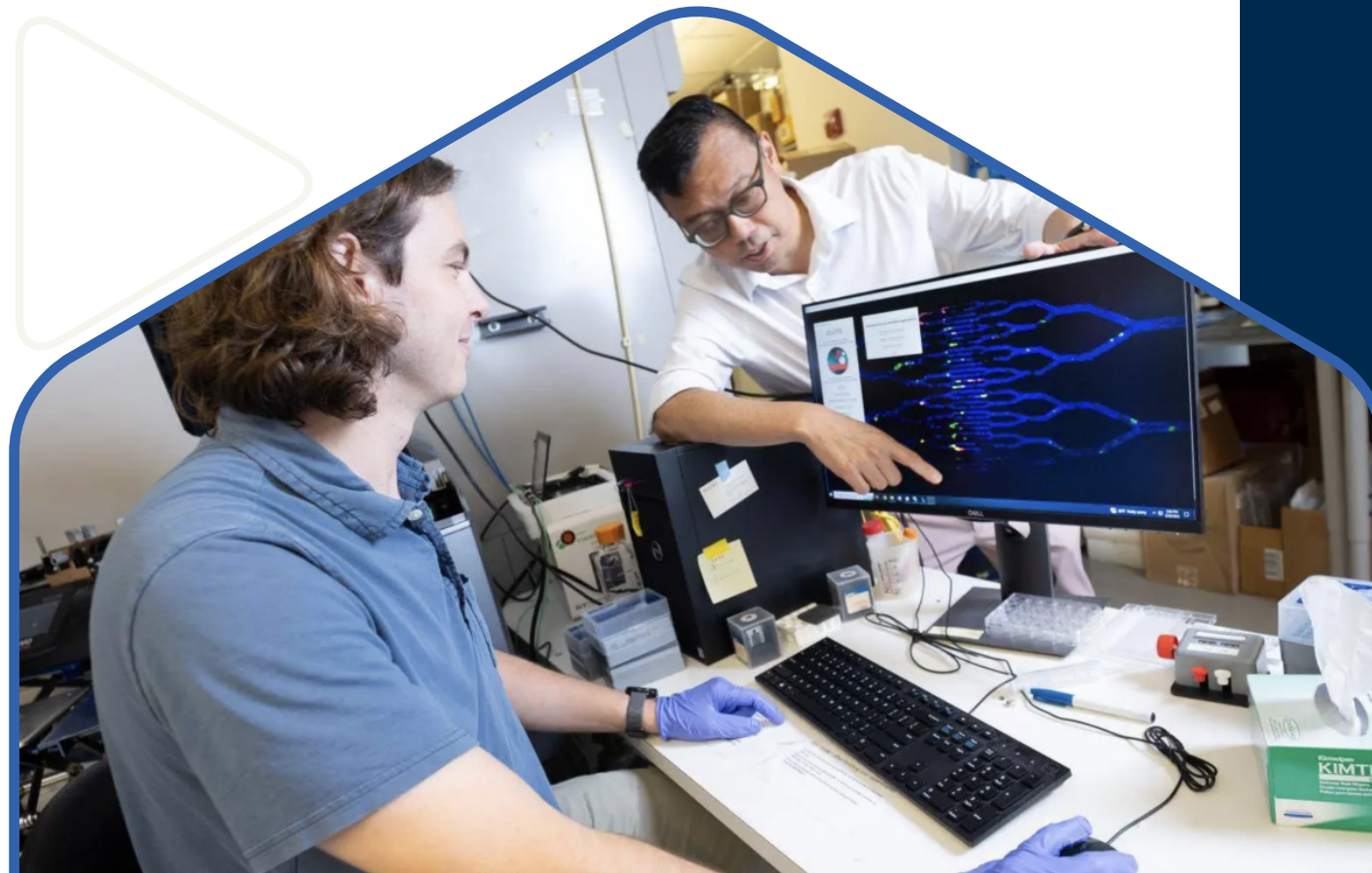
► Increase Resources

OBJECTIVES:

- Expand sources of research funding
- Increase funding to support students
- Increase funding to support faculty
- Optimize physical space

INITIATIVES:

- Create and utilize inventory of potential funding sources aligned to BME research areas
- Support and incentivize faculty to pursue diverse funding sources
- Develop a process for identifying and communicating a “big idea” related to each research area
- Establish fundraising campaign for undergraduate scholarships, graduate fellowships and student support
- Expand opportunities for increased financial support for junior and senior faculty
- Develop effective approaches to maximize shared space
- Secure additional space



With Gratitude

The Wallace H. Coulter Department of Biomedical Engineering at Georgia Tech and Emory University would like to thank the following individuals for their work and support during the strategic planning process.

CHAIR

Alyssa Panitch, Ph.D.

EXTERNAL ADVISORY BOARD

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Mario Ball (BME '07)

Sylvia Bartley, Ph.D.

Ambika Bumb, Ph.D. (BME '05)

Elizabeth Cosgriff-Hernandez, Ph.D.

Ryan Davis (BME '05)

Gautam Goel, Ph.D.

(MS BIOE '06; PHD BIOE '09)

Elizabeth Harrison, Ph.D.

(Board Chair)

Heather Hayes, Ph.D. (BME '10)

Angela Holmes (ME '96)

Shawna Khouri (BME '12, '14)

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Kelly Petty

Kim Paige

Luke O'Connell

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STAKEHOLDER MEETINGS AND PLANNING SESSIONS

BME Faculty and Staff

Retreat: Aug. 8, 2024

Student Input Sessions: Sept. 3, 2024 and Sept. 5, 2024

BME External Advisory Board Meeting: Nov. 8, 2024

BME Strategic Plan Workshop: Oct. 16, 2024

BME Strategic Plan Implementation Workshops:

Theme A: Feb. 17, 2025

Theme B: Feb. 20, 2025

Theme E: March 18, 2025



Georgia
Tech.

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