Academic Summary

Degrees Granted:
- Bachelor's, 447
- Master's, 282
- Doctoral, 79

People Summary

Students:
- Undergraduates, 1,746
- Master's, 435
- Doctoral, 530

Faculty:
- Tenure/Tenure Track, 126
- Non-Tenure Track, 19

Alumni Network:
- Living alumni, 20,948

Academic Degrees

- Biomedical Engineering
- Computer Engineering
- Electrical & Computer Engineering
- Electrical Engineering
- Manufacturing Engineering
- Materials Science & Engineering
- Mechanical Engineering
- Product Design & Manufacture
- Robotics & Autonomous Systems
- Systems Engineering

Interdisciplinary Centers

- Bioengineering Technology & Entrepreneurship Center
- Biological Design Center
- Biomolecular Engineering Research Center
- Center for Autonomous & Robotics Systems
- Center for Computational Science
- Center for Information & Systems Engineering
- Center for Semiconductor Materials & Devices Modeling
- Center for Multiscale & Translational Mechanobiology
- Center for Space Physics
- Center for Forced Displacement
- Fraunhofer Center for Manufacturing Innovation
- Hearing Research Center
- Institute for Global Sustainability
- Institute for Health System Innovation & Policy
- Nanotechnology Innovation Center
- National Emerging Infectious Diseases Laboratories
- Neurophotonics Center
- NSF Engineering Research Center for Biomolecular Nanosystems
- PhD Education Center
- KDI Foundation Alumni Leadership Institute
- KDI Foundation for Computing & Computational Science

An equal opportunity, affirmative action institution.

Rank in research expenditures per faculty member among top-50 ranked engineering graduate programs.

2021-2022

Academic Year Summary
The Boston University College of Engineering implemented a bold new approach to education and research in 2021-22, one that virtually guarantees every undergraduate and graduate student will be exposed to multiple disciplines, and that expertise from widely divergent fields can be brought to bear on solving society’s most pressing challenges.

We’re not just lowering barriers to cross-disciplinary collaboration, we’re building it into our DNA. Faculty from all departments are working with each other and with experts in medicine, business, the sciences, and other fields, each bringing a unique perspective to solving grand challenges critical to our future. It’s not just interdisciplinary. It’s experts who ideate together and approach these challenges in bold and creative ways that are more likely to produce robust, impactful solutions.

We are recruiting faculty and graduate students based on their interest in such research. We are exposing all students to disciplines outside their specialized area of study, including Ak and machine learning. We are engaging with industry partners to build communities and share the curriculum with the skills our students graduate with are the skills today’s employers need.

We have refreshed our College and made it one that is engineered for impact.

Six Research Themes

- Energy, Sustainability & Climate
- Intelligent, Autonomous & Secure Systems
- Materials by Design
- Neuromoduling & Neuroscience
- Photonics & Opto-Electronics
- System Biology, Tissue Engineering & Mechanoengineering

New Robotics Lab

Construction began on a $9 million space for master’s students to create innovative robotics and autonomous systems, and train the professionals to lead the robotic revolution in industry. The space will include a central area, a space for experimenting with flying robots, a smart city for ground robotics and an area for soft robotics. The lab will also enhance student experience in the Robotics & Autonomous Systems Master’s Degree program, and complements the existing research-oriented Robotics laboratory.

Cross-Disciplinary Capstone Course

More than ever before, students are crossing between fields that traditionally exist in silos to solve problems. One course, ‘57, gathered more than just new skills. We exposed graduate students to new ways of thinking and problem solving.

Startup Success

Satellignes is a tissue therapeutics startup that received $10 million in funding since it was founded by Christina Ghassemi (BME, MSE), the company’s president, and Liz Scott (ECE) in 2018. They will use the funds to develop a tissue regeneration therapy that targets diseases of the heart.

Alum Heads to Space Station

Alum Robert Hines (ENG ’97) piloted NASA’s SpaceX Crew Dragon spacecraft to the International Space Station. Hines, a graduate of BU’s Department of Electrical and Computer Engineering, serves as an avionics engineer for Rockwell Collins, working on ISS communications, power systems, and software.

Satellite Images Earth’s Magnetic Field

A satellite built by Brian Walsh’s team (ME, ECE) will orbit Earth for the next five years. It will use an array of sensors to image earth’s magnetic field and high-sensitivity mapping of cell metabolism.

Data Science Center

Construction across our campus as a Data Science Center, which will be focused on data science, machine learning, AI. It is fully an engine of innovation for engineering researchers.

A Living Mini Heart Chamber

The NAV BIC-GU LLC created a miniature living heart that pumps blood and creates a realistic blood flow. The tissue is composed of heart tissue, neural tissue and bone to repair damage from heart attacks. Also, BU’s student entrepreneurs’ projects have made major strides in actually bringing this technology to the broader sphere of research and development.

Strong Research Funding

Ground breaking early discoveries, consumer-ready transitions and programs almost in equity in 2021,

- $14,384,307 from the Department of Education was awarded to the Laboratory for Manufacturing Innovations, overseen by Professor Anirudha Panda (ME). It will run a new super-sensitive material过去ing engine, and affordable housing investigations.
- $8,895,200 from Intel’s Advanced Research Projects Activity grants advance Jagly’s (ECE) Cybersecurity Computing potential for autonomous vehicles, and
- $2,382,700 from the Department of Defense to Smith and Associates (ECE) to improve new technologies and self-driving cars.
- $2,000,000 from the National Institutes of Health to literature (ECE) and David Hsu (CSE) for advancing neuroscience in the field of artificial intelligence.
- $1,750,000 from the National Institute of Biomedical Imaging and Bioengineering to support Ruby Chen (CSE, MSE, ECE) and Joyce Wong (ECE, MSE) to develop high-speed, high-contrast and high-sensitivity imaging of cell metabolism.
- $1,289,239 from the National Cancer Institute to Richard Cheng (ECE), who will develop new precision medical imaging technology.
- $1,200,000 from the Air Force Office of Scientific Research to Alexander Sergienko (ENG) and Abdoulaye Ndao (ENG) to develop novel sensors for the national defense.
- The Scaling Collaborative Innovation Award went to Alexander Green (ENG) to advance the development of a new type of sensor capable of detecting breath for hidden organs within a cell. With $200,000 grants from New York (ECE), NDAOLAK (ECE) and Hsu (CSE) to introduce students to the challenges of a new technology and community and to address the questions of inference and data solutions.
- The National Science Foundation grant supported the College of Engineering in holding an annual summit for students interested in new technologies and cyberphysical systems.

Because Great Minds Do Not Think Alike

Rank among all US graduate engineering programs.

Source: US News & World Report
Because Great Minds 
Do Not Think Alike

The Boston University College of Engineering implemented a bold new approach to education and research in 2021-22, one that virtually guarantees every undergraduate and graduate student will be exposed to multiple disciplines and that expertise from widely divergent fields can be brought to bear on solving society's most pressing challenges.

We’re not just lowering barriers to cross-disciplinary collaboration, making it a part of our DNA. Faculty from all departments are working with each other and with experts in medicine, business, the sciences and other fields, each bringing a unique perspective to solving grand challenges critical to our future. It’s not just interdisciplinary. It’s experts who decide together and approach these challenges in bold and creative ways that are more likely to reproduce, impactful solutions.

We’re recruiting faculty and graduate students based on their interest in such challenges, and we’re exposing all students to disciplines outside their specialized area of study, instilling an active. We’re engaging with industry partners to build makerpaces and share the curriculum with the skills our students graduate with are the skills today’s employers need.

We’ve relabeled our College and made it one that is Engineered for Impact.

Six Research Themes
Research, education, and faculty and student recruitment are centered around six cutting-edge areas within the Boston University College of Engineering: taking strength and potential to make significant impact.

- Energies, Sustainability & Climate
- Intelligent, Autonomous & Secure Systems
- Materials by Design
- Neuroengineering & Neuroscience
- Photonics & Optical Systems
- Robotics, Biomechanics, & Manufacturing

New Robotics Lab
Construction began on a $9 million space for master’s students to create innovation robotics and autonomous systems, and that lies at its heart is a robotics wet lab for interdisciplinary students. The space will include robotic area, a space for experimenting with flying robots, a mini-city for ground projects, and an area for soft robotics. The lab will be used by students to experience the Robotics and Autonomous Systems Master’s Degree program, and complements the existing research-oriented Robotics laboratory.

Six Research Themes

- Photonics & Optical Systems
- Neuroengineering & Neuroscience
- Materials by Design
- Energies, Sustainability & Climate
- Intelligent, Autonomous & Secure Systems
- Robotics, Biomechanics, & Manufacturing

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Because Great Minds Do Not Think Alike

The Boston University College of Engineering implemented a bold new approach to education and research in 2021-22, one that virtually guarantees every undergraduate and graduate student will be exposed to multiple divergent fields can be brought to bear on today's employers need. We're not just lowering barriers to cross-disciplinary collaboration, but making it part of our DNA. Faculty from all departments are working with each other and with experts in medicine, business, the sciences and other fields, each bringing a unique perspective to solving grand challenges critical to our future. It's robust, impactful solutions. We are recruiting faculty and graduate students to disciplines outside their specialized area of study, introducing AI and machine learning. We are engaging with industry partners to build makerpaces and share the curriculum with the skills our students graduate with are the skills today's employer needs.

We have included our College and made it one that is Engineered for Impact.

Six Research Themes

Research, education, and faculty and student recruitment are centered on six cross-cutting areas where the Boston University College of Engineering has existing strength and potential to make significant impact:

- Energy, Sustainability & Climate
- Intelligent, Autonomous & Secure Systems
- Materials by Design
- Neuroscience & Neurosensory
- Photonics & Optical Systems
- Synthetic Biology, Tissue Engineering & Mechanobiology

New Robotics Lab

Construction began on a $9 million square foot maker space to create innovation robotics and autonomous systems, and train students to be leaders in robotics in industry. The space will include robotic areas, a space for experimenting with flying robots, a mini-city for ground robotics, an area, and a space for soft robotics. The lab will enable student experience in the Robotics and Autonomous Systems Master's Degree program, and complements the existing research-oriented Robotics laboratory.

Start-up Success

SatelliteBio is a tissue therapeutics startup that received $110 million in funding last year. Founded by Christopher Chen (BME, MSE), the company is focused on aggregating these new tools, stem cells, and tissue engineering to repair damaged tissue or organs.

Alum Heads to Space Station

Alum Andre Sharon (ECE, MSE) is an advanced materials scientist. Crop Organ-preserves outside the International Space Station, unsure of our own food in developing economies.

Satellite Images Earth’s Magnetic Field

A satellite built by Brian Walsh’s team (ME, ECE) will orbit Earth for over five years, using it as an opportunity to capture the earth’s magnetic images of Earth and the sun’s magnetic fields colliding.

Data Science Center

Construction recently began on a 36,000 square-foot, Data Science Center, which will be focused on data science, machine learning, AI. It is radically expanding opportunities for Engineering researchers.

A Living Mini Heart Chamber

The NSF-NEE CS&E- sponsored a miniaturized living heart model where we observed tuning granular calcium oscillations in a three-dimensional, preclinical and clinical repair to damage from heart attacks. Alkaline, NAD(+)recovery technology programs have made major strides in actively inducing this paradigm of tissue healing.

Cross-Disciplinary Capstone Course

More than four times before opted to assemble teams that understood from the difference between disciplines. Said one team, "Gained more than just new skills, we experienced a new way of thinking and problem solving.”

6,000 engineering students from the Boston College of Engineering have been exposed to a new way of thinking and problem solving.”

Strong Research Funding

Ground-breaking early discoveries, consumer ready transitions and programs almost ready to advance in 2021:

- $4,980,000 from the Department of Energy was awarded to the NSF to advance the top-down technology for energy generation.
- $9,680,000 from ISEERCA to advance research in advanced computer systems.
- $6,350,000 from the Department of Defense to advance research in advanced computer systems.
- $2,700,000 from National Institute of Health to advance research in advanced computer systems.

Rank among all US graduate engineering programs.

$114 Million in Research Expenditures.
Academic Summary

Degrees Granted:
- 447 Bachelor's
- 282 Master's Degrees
- 79 Doctoral Degrees

People Summary

Students:
- 1,746 Undergraduates
- 435 Master's Students
- 530 Doctoral Students

Faculty:
- 126 Tenure/Tenure Track
- 19 Non-Tenure Track

Alumni Network:
- 20,948 living alumni

Academic Degrees

Biomedical Engineering
Computer Engineering
Electrical & Computer Engineering
Electrical Engineering
Manufacturing Engineering
Materials Science & Engineering
Mechanical Engineering
Product Design & Manufacture
Robotics & Autonomous Systems
Systems Engineering

Interdisciplinary Centers

Bioengineering Technology & Entrepreneurship Center
Biological Design Center
Biomolecular Engineering Research Center
Center for Autonomous & Robotics Systems
Center for Computational Science
Center for Information & Systems Engineering
Center for Semiconductor Materials & Devices Modeling
Center for Multiscale & Translational Mechanobiology
Center for Space Physics
Center for Forced Displacement
Fraunhofer Center for Manufacturing Innovation
Hearing Research Center
Institute for Global Sustainability
Institute for Health System Innovation & Policy
Nanotechnology Innovation Center
National Emerging Infectious Diseases Laboratories
Neurophotonics Center
NSF Engineering Research Center in Cellular Metamaterials
Photonics Center
Precision Diagnostics Center
Rafik B. Hariri Institute for Computing & Computational Science

An equal opportunity, affirmative action institution.

Faculty Honors

- Ahmad ‘Mo’ Khalil (BME) received the Schmidt SciencePolymaths Award for fueling the possibility of engineering of new multicellular systems.
- Xin Zhang (ME, ECE, BME, MSE) was named Guggenheim Fellow, and honored by the Boston Patent Law Association for inventing a device that buffers sound.
- James Galagan (BME), Xue Han (BME) and Dimitrije Stamenovic (BME, MSE) were elected to the National Academy of Engineering.
- Mark Grinstaff (BME, MSE, Chem, MED) was elected to the National Academy of Sciences.
- Theodore Moustakas (ECE, MSE) was elected to the National Academy of Engineering.
- Greg Blonder (ME) was elected to the National Academy of Inventors.
- Wilson Wong (BME) and Christopher Chen (BME, MSE) were named Paul G. Allen Family Foundation Investigators.
- Laura Lewis (BME) was named a McKnight Scholar.
- Emma Lejeune (ME) was named a Heart Association Career Development Award Investigator.
- Robert Gray (ECE) was named the Okawa Prize.

The Obus Foundation honors and celebrates its sixty-sixth anniversary, recognizing the contributions of Robert Obus.

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Bu.edu/Eng
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- Institute for Health System Innovation & Policy
- Nanotechnology Innovation Center
- National Emerging Infectious Diseases Laboratories
- Neurophotonics Center
- NSF Engineering Research Center for BioEnable Technologies
- Power Electronics Center
- Kavli Institute for Computing and Computational Science

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- Xin Zhang (ME, ECE, BME, MSE) was named Guggenheim Fellow, and honored by the Boston Patent Law Association for inventing a device that buffers sound.
- American Institute for Medical and Biological Engineering elected three Fellows: James Galagan (BME), Xue Han (BME), and Dimitrije Stamenovic (BME, MSE).
- National Academy of Inventors elected Greg Blonder (ME) as Fellow.
- National Academy of Sciences elected Mark Grynszpan (ME, MSE) as Fellow.
- The Franklin Institute elected Theodore Hudson (EECS) as Fellow.
- The National Academy of Inventors elected Long Guo (BME) as Fellow.
- Paul G. Allen Family Foundation named Ahmad "Mo" Khalil (BME) and Dimitrije Stamenovic (BME, MSE) Allen Distinguished Investigators.
- The John Templeton Foundation and the Templeton Foundation elected Laura Lemos (EECS) to receive the John Templeton Award.
- American Institute for Invention and Innovation elected three Fellows: John F. Bower Jr. (BME), Cindy Daza (BME), and Alex Kretlow (BME).
- The Obus Foundation for Information and Telecommunication awarded the Obus Prize to Robert Grzyb (EECS).

2021-2022 Academic Year Summary