

Biomedical Engineering

Graduate Program Overview

The Philosophy of Our Graduate Curriculum

"... many of the job opportunities of the future will favor students with greater breadth of academic and career skills, so the universities and their partners in the graduate education enterprise should therefore cooperate to broaden curricular options for graduate students ..."

Medical Scientist Training Program (MD/PhD)

BME Graduate students are eligible to enroll in a combined medical degree and doctoral degree program. Students typically complete 2 years of medical school followed by their PhD and then medical training is completed.

Scholars in Biomedical Sciences

BME Graduate students are eligible to apply for this program which aims to engage graduate students in translational medical research. Students in this program work with a research mentor and a clinical mentor.

CAMPEP Accredited Medical Physics Program

The Stony Brook Medical Physics track is interdisciplinary with faculty from: radiology, radiation oncology, biomedical engineering and Brookhaven National Laboratory. We offer sub-tracks in Imaging Physics, Nuclear Medical Physics and Oncology Physics. Specific course requirements apply to students that would like to graduate from the Medical Physics Program.

Our History

The Department of Biomedical Engineering was formally established in December 2000, jointly underwritten by the College of Engineering and Applied Sciences (CEAS) and the School of Medicine (SOM), and facilitated by a Development Award and two Special Opportunity Awards from the Whitaker Foundation. The mission of the Department is to fully integrate the cutting edge of engineering and physical sciences with state-of-the-art biology to advance our understanding of biomedical problems, and to use that science to drive the development of therapeutics, diagnostics and medical devices. Areas of research expertise include biomechanics, bioelectricity, tissue engineering, bioinstrumentation, cell and molecular bioengineering, bioimaging, nanobiotechnology and biomaterials.

The BME Department has grown at a rapid rate, and currently serves as the home to 15 core faculty and a student body of approximately 500 students (20% graduate, 80% undergraduate). A comprehensive description of the department and its research and education programs can be found on our website, at stonybrook.edu/bme.



Stony Brook
University

Department of Biomedical Engineering

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Biomedical Engineering

Doctoral Program

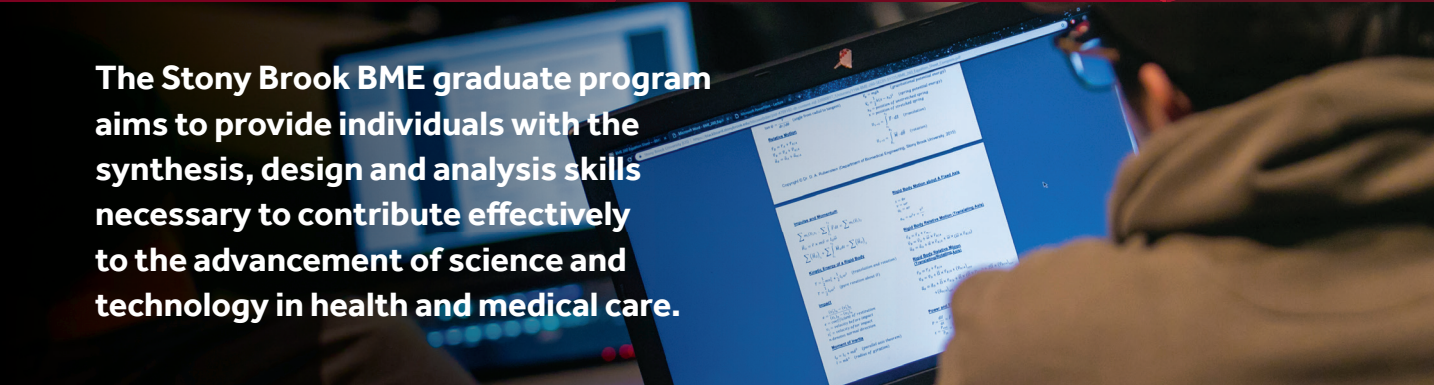


Go further, faster.



Stony Brook University

FAR BEYOND



The Stony Brook BME graduate program aims to provide individuals with the synthesis, design and analysis skills necessary to contribute effectively to the advancement of science and technology in health and medical care.

Many Fields, Many Opportunities: Our BME graduates can be found in medicine, dentistry, academic research, national laboratories, the biotechnology industry and intellectual property (law). Our program has a specific focus on training students for industry positions and academic positions.

Top-Notch Facilities: Our new building offers specialized “wet” labs and a state-of-the-art clean room. We have close ties with Brookhaven National Laboratories, Cold Spring Harbor Laboratories and the Center for Biotechnology (a New York State Center for Advanced Technologies).

Research Labs: Our faculty are conducting cutting-edge research in areas related to Biomechanics, Biomaterials, Biotechnology, Cell, Molecular and Tissue Engineering, Biosensors, Bio-system Modeling, Bioinstrumentation, Bioinformatics and Medical Imaging.

A Highly Valued Stony Brook Degree: Stony Brook University is listed in the top 1 percent of all universities in the world by the *London Times Higher Education World University Rankings. U.S. News & World Report* ranks Stony Brook among the top 100 public national universities and includes us on its list of notable programs for undergraduate research/creative projects. *Kiplinger* lists Stony Brook in the top 25 of the 100 best values in public colleges and universities.

Fellowship/Scholarship Opportunities:

Stony Brook University provides multiple scholarship and fellowships including the Graduate Council Fellowship (available for exceptionally qualified incoming doctoral students, \$50,000 over five years), the W. Burghardt Turner Fellowship (available for qualified underrepresented students with a total combined value of at least \$100,000 over five years) among other internal and external awards.

Teaching Assistantships: The biomedical engineering department offers teaching assistantships to the most meritorious PhD students.

Research Assistantships: Based on the availability of funding from individual faculty members, students may be offered a research assistantship during their education. In general, PhD students are given preference for these assistantships, but all students must maintain good academic standing and complete their assigned projects duties satisfactorily to maintain funding.

Degree Requirements: Those PhD candidates without an acceptable MS degree are required to complete our core course sequence and a technical elective sequence. For PhD students, once an approved MS degree is earned, there are no additional course requirements per se. PhD candidates must satisfy a teaching requirement and pass a qualifying examination, a proposal defense and a dissertation defense.

How to Apply

Stony Brook University's BME Graduate Program is highly competitive with an acceptance rate of approximately 10-15%.

All applications must be submitted electronically through the online portal which can be found on the Graduate School website: grad.stonybrook.edu/

To receive full consideration, all student must complete and submit the following:

- Official online application
- Personal statement describing the student's educational and career goals with a list of at least 3 faculty you envision working with
- Three letters of recommendation
- Two official copies of all previous college transcripts and one copy uploaded
- A non-refundable application fee
- TOEFL scores or other documentation for proficiency in English (non-native/non-primary English speakers only)

The Deadline for Application is January 1st.

Students who excel in our rigorous program typically have an undergraduate and/or MS degree in engineering, physics, applied mathematics or biological sciences (with a quantitative focus).

Students can specialize in:

- Biomedical Principles
- Biomedical Design
- Biomedical Entrepreneurship

For More Information

VISIT: stonybrook.edu/bme

CONTACT: bme_grad_program@stonybrook.edu