

Biomedical Engineering

Bachelor of Science

ABET-ACCREDITED

PROGRAM OVERVIEW

The University of the District of Columbia (UDC) is the only Historically Black College & University (HBCU) nationwide to offer an ABET-accredited Bachelor of Science in Biomedical Engineering Program.

The overall mission of the Biomedical Engineering (or BME) Program is to prepare and equip students to become competitive graduates, meeting the needs and demands of a growing technological era aimed toward solving problems tied to human health and medicine. BME is a new and rapidly growing multidisciplinary field that involves the application of engineering principles and design concepts to solve medically-related problems that affect human health and quality of life.

At UDC, the Bachelor of Science in Biomedical Engineering Program, housed within the Department of Mechanical Engineering, exposes students to fundamental courses in Mechanical Engineering and specialized courses in Biomedical Engineering. This enables our BME Program graduates the capacity to engineer and to design for living systems; they are equipped to enter the workforce upon graduation, to pursue advanced degree programs in Biomedical Engineering and other related fields and have the capacity to pursue medical school.

Example graduate career options include: Doctor/Physician, Consultant, Biomedical Scientist/Researcher, Rehabilitation Engineer and Medical device/technology developer.

RESEARCH OVERVIEW

The UDC BME Program brings together research expertise in balance and postural control, biomedical imaging, assistive robotics and rehabilitation engineering. Within the state-of-the-art Center for Biomechanical and Rehabilitation Engineering (CBRE), students have access to unique research and education opportunities. The CBRE is focused on balance and mobility in impaired and un-impaired populations, aids and devices and injury prevention and treatment. Further, students are trained and participate in research focused on diagnostic ultrasound skeletal assessment, cancer and functional imaging.

Additionally, UDC is establishing a National Institutes of Health sponsored Specialized Technological Center for Assistive Rehabilitation Research comprised of new laboratories and equipment to further enhance biomedical research. The focus areas are: Gait & Balance, Assistive Robotics for Rehabilitation, Biomechanics (inclusive of biomedical imaging and additive manufacturing) and Virtual Reality Rehabilitation.

WHY BIOMEDICAL ENGINEERING AT UDC?

- ✓ **ABET Accredited**
- ✓ **Affordable and accessible** — lower tuition fees compared to other schools
- ✓ **Student-focused campus mission**
- ✓ **Diverse student body** — compared to other engineering fields, there is a higher percentage of female students than male students (2021 program projection is 80% female.)
- ✓ **High faculty to student ratio**
- ✓ **Small classes** — average is less than 15 students
- ✓ **Convenient to DC area residents**
- ✓ **Part of a consortium of 17 schools**
- ✓ **Access to world-renowned institutions conducting BME research**
- ✓ **Hands-on education and research experiences, as well as professional development** — ability to be involved in paper publications, research opportunities and attend national and international conferences
- ✓ **Student scholarships and internships available** — National Institutes of Health, Walter Reed Military Medical Hospital, United States Food and Drug Administration, MedStar National Rehabilitation Hospital, the United States Food and Drug Administration (FDA), Boston Scientific Corporation).



FOR MORE INFORMATION, VISIT [UDC.EDU/BME](https://udc.edu/bme)

PROGRAM LEADERSHIP

With a background in Mechanical Engineering (University of Massachusetts Lowell), Aeronautical/Astronautical Engineering (Stanford University) and Biomedical Engineering (Harvard-MIT), Dr. Lara Thompson leads UDC's Biomedical Engineering Program.

Dr. Thompson's Ph.D. research while in the Harvard-MIT Division of Health Sciences and Technology (HST) investigated vestibular dysfunction and the effects of compensative strategies, as well as an invasive vestibular prosthesis prototype, on balance and postural control in non-human primates. In Fall 2013, directly upon obtaining her Ph.D., Dr. Thompson joined the University of the District of Columbia as an Assistant Professor. Currently, she is an Associate Professor and has spearheaded both the Biomedical Engineering Program and the Center for Biomechanical & Rehabilitation Engineering (CBRE) as the founding director and initiator for each. Dr. Thompson is a principal investigator on multiple, awarded grants from the National Institutes of Health, National Science Foundation, National Aeronautics and Space Administration, and the Department of Aging and Community Living.



FOR MORE INFORMATION

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for Biomechanical & Rehabilitation Engineering (CBRE)*

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TO APPLY: <https://www.udc.edu/admissions/>

DID YOU KNOW?

1 of 107

UDC is the only one of 107 HBCUs nationwide to offer an ABET-accredited Bachelor of Science in Biomedical Engineering degree program.

\$92K+

According to the Bureau of Labor and Statistics (May 2020), the median salary for biomedical engineers is \$92,620.

UNIVERSITY OF THE
DISTRICT OF COLUMBIA

