



The mission of the Biomechanics & Movement Science (BIOMS) Graduate Program is to advance the understanding of complex human systems through interaction of experts who cross traditional divisions of academic study. BIOMS comprises faculty from the Colleges of Arts & Sciences, Engineering, and Health Sciences who use an interdisciplinary approach to research and graduate education, which affords students a more diverse educational environment. The collective research laboratories of the participating units provide exposure to outstanding research opportunities in the study of human movement and exercise; the biomechanical and physiological alterations observed as a consequence of injury; disease; various intervention strategies; and the study of rehabilitation. We strive to train outstanding researchers who will contribute to the advancement of health science through translational and interdisciplinary research.

#### EXCEPTIONAL LEARNING OPPORTUNITIES

- Faculty from the following ranked programs hold joint appointments in BIOMS and are dedicated in their training of our graduate students: Physical Therapy (#1), Kinesiology & Applied Physiology (#5), Chemical Engineering (#8), Biomedical Engineering (#49), and Mechanical Engineering (#49).
- As one of the nation's oldest universities and one of the few institutions nationwide with Land, Sea, and Space Grant missions, the Carnegie Foundation for the Advancement of Teaching classifies the University of Delaware as a research university with very high research activity, a designation given to less than 3% of U.S. colleges and universities.
- The BIOMS Program embraces diversity, inclusion, connectedness, and professionalism as core institutional values. We believe that a diverse student, faculty, and staff body are critical to our teaching and scholarship and are a much needed reflection of the diverse patients and caregivers for whom we provide care.

# CORE RESEARCH AREAS

**MOTOR CONTROL** focuses on the development, acquisition and control of the underlying process responsible for movement. Emphasis may be placed on issues of motor behavior, development, learning, and/or neuromuscular mechanisms.

**REHABILITATION** focuses on the neural and behavior mechanics that contribute to learning and recovery of sensory and motor function after neural injury through the use of robotics, neuroimaging, neurostimulation, and computational modeling.

**ORTHO** focuses on the musculoskeletal system, including bones, joints, ligaments, tendons, and muscles that are responsible for movement. Emphasis may be placed on issues of injury mechanics, prevention, and rehabilitation strategies.

**ENGINEERING** focuses on the quantifying structure, function, and mechanobiology of musculoskeletal tissues and systems to solve orthopedic disorders in aging, degeneration, injury, including developing therapeutic treatment and repair.

## TO APPLY

Admission is selective and competitive based on the number of well-qualified applicants and the limits of available faculty, funding, and facilities. Those applicants who meet the below stated minimum academic requirements are not guaranteed admission, nor are those applicants who fail to meet those minimum requirements necessarily precluded from admission if they offer other appropriate strengths.

- GRE scores are optional, however, if submitted BIOMS recommends 300 on combined quantitative and verbal scores
- Undergraduate grade point index of 3.0
- 3 credits of Calculus
- 3 credits each of Anatomy & Physiology
- 12 credits of course experience in laboratory sciences

For more information about graduate admission and to apply online, visit the Graduate College at [udel.edu/academics/colleges/grad](http://udel.edu/academics/colleges/grad). Applicants must have a bachelor's degree.



## FUNDING

Applicants are required to identify a faculty member with appropriate expertise who will provide funding and serve as an advisor throughout the degree program. Once a faculty member has agreed to be the applicant's advisor, formal consideration for admission to the BIOMS program will be reviewed by the BIOMS Executive Committee.

## ADMISSION DEADLINES

The BIOMS Program offers rolling admissions, however, priority will be given to Fall applications received prior to **January 15<sup>th</sup>** and Spring applications received prior to **October 15<sup>th</sup>**.

## CONTACT

For more information about program prerequisites, requirements, and application procedures, please contact:

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