



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 and 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
- Undergraduate grade point index of 3.0
- Course experience in calculus, with a grade of B or better
- Course experience in Anatomy & Physiology, with a grade of B or better
- 12 credits of mixed Laboratory Science courses and/or courses most applicable to the individual's planned area of research, with a grade of B or better

For more information about graduate admission and to apply online, visit the Graduate College at 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 15th** and Spring applications received prior to **October 15th**.

CONTACT

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

Samuel C.K. Lee, PT, Ph.D.

BIOMS Program Director

Associate Professor

Physical Therapy

Email: slee@udel.edu

Office Phone: 302-831-2450

Elianna Wydra,

Academic Program Coordinator

Email: ewydra@udel.edu

Office Phone: 302-831-6174



UNIVERSITY OF DELAWARE
GRADUATE COLLEGE

Learn more at grad.udel.edu