

# KINESIOLOGY: BIOMECHANICS, PHD

This is a named option in the Kinesiology, PhD. (<http://guide.wisc.edu/graduate/kinesiology/kinesiology-phd/>) For more information, please see our program website (<https://kinesiology.education.wisc.edu/academics/grad-program/>).

Biomechanics is the application of mechanics to biological systems. Within the broad field of biomechanics, specific areas of study at UW–Madison include: tissue mechanics, neuro-muscular control, human performance, sports performance, injury, rehabilitation, and limb dynamics. The program equips students to apply the tools of engineering analysis to biological systems from the cellular to the whole-body level with career objectives in academia, health care, and sports science. Elective coursework within the program allows students to pursue individual interests such as physiological adaptations to mechanical stimuli or computer modeling. Students generally have the opportunity to teach during their training.

The PhD degree is designed to prepare students for independent research and teaching. Formal training includes coursework in some of the following areas: math, statistics, physiology, mechanics, biomechanics, motor control, injury biomechanics, and injury epidemiology. The wide range of courses offered at UW–Madison allows the student to tailor a curriculum that fits their individual interests. Students conduct independent research throughout their training which will be summarized in their dissertation. Presentations are also expected to be made at national scientific meetings and in peer-reviewed journals. Graduates generally pursue additional training (post-doctoral training) and go on to establish careers in academia or industrial settings.