

KINESIOLOGY: MOTOR CONTROL AND BEHAVIOR, 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/>).

The graduate program in Motor Control and Behavior involves advanced study of the psychological and neurophysiological foundations of motor control, motor learning, motor development, and disorders of movement. The program emphasizes the development of a competent independent researcher and is designed to provide a thorough grounding in the area of motor performance, exposing the student to the underlying theoretical processes that influence the control, acquisition, and development of motor behavior. Students may focus specifically on control, learning, or developmental issues, or design their program to expose them to a broad range of study in motor behavior. The graduate student will work closely with his/her advisor in both formal and informal educational settings. Students entering the Motor Control and Behavior named option in the Kinesiology PhD should have a commitment to research in the motor control and behavior area. Within the first year, the graduate student is usually conducting research under close supervision. Students are encouraged to begin research early and to engage in it throughout their graduate career.

Several laboratories (human, animal) are available for research in the area of Motor Control and Behavior. The Human Motor Behavior Laboratory (<https://kinesiology.education.wisc.edu/research/motor-behavior-lab/>) is an active research environment where faculty and students collaborate on projects aimed at gaining a better understanding of the planning and performance of simple and complex upper and lower limb activities in both natural and virtual environments. The Motor Systems Physiology Laboratory (<https://kinesiology.education.wisc.edu/research/motor-systems-physiology-lab/>) focuses on understanding the neural control of reaching to grasp, which is essential to primate motor behavior and strongly depends on cerebellar function. The Sensory Motor Integration Lab (SMIL) (<https://kinesiology.education.wisc.edu/research/pickett-lab-smil/>) focuses on improving the everyday lives of older adults through the implementation of physical activity interventions—delivered in-home via telehealth and through group classes held at community-based facilities. The Neuromuscular Coordination Laboratory (<https://ncl.labs.wisc.edu/>) conducts fundamental research on the interactions between mechanics, neural control, and muscular coordination that allow humans and other animals to navigate their environments.