

PhD in Nutrition and Exercise Physiology

The PhD in Nutrition and Exercise Physiology is unique in providing foundational knowledge in both disciplines with a research focus in how nutrition and exercise impact chronic disease. This degree prepares students for careers in academia, industry or the public sector.

Degree Requirements

The PhD in Nutrition and Exercise Physiology has two emphasis areas, Exercise Physiology (<https://catalog.missouri.edu/collegeofagriculturefoodandnaturalresources/nutritionexercisephysiology/phd-nutrition-exercise-physiology-emphasis-exercise-physiology/>) and Nutrition (<https://catalog.missouri.edu/collegeofagriculturefoodandnaturalresources/nutritionexercisephysiology/phd-nutrition-exercise-physiology-emphasis-nutrition/>). A student must choose an emphasis area.

The **Exercise Physiology PhD Emphasis Area** is designed to provide advanced training in both the basic and applied aspects of exercise, physical activity and physical inactivity. The curriculum has a scientific basis with core courses in exercise physiology, nutrition, biochemistry, and physiology. Currently, the research focus is to examine the mechanisms by which physical activity levels and/or exercise modulate risk and development of obesity, type 2 diabetes, as well as metabolic and cardiovascular diseases using both animal models and human subjects, and to be able to translate the findings into the clinical or applied setting.

The **Nutrition PhD Emphasis Area** provides training in the distinct core nutrition knowledge described by the Graduate Nutrition Education Committee of the American Society for Nutrition: general research skills; structure and biochemical and metabolic functions of nutrients and other dietary constituents; food, diets, and supplements; nutritional status assessment; nutrition and disease; nutrition interventions and policies; and, analytical skills. Basic, translation and clinical research focuses on obesity and associated conditions such as fatty liver disease, diabetes and bone fragility.

Graduate students receive training in laboratory research, seminar preparation, scientific writing, problem solving and grant writing. Graduate studies in **Nutrition and Exercise Physiology** offer the advantage of interdisciplinary exercise research that is facilitated by numerous collaborations at the many research centers at MU. The MU Nutritional Center for Health (MUNCH), which is used for study meal preparation and feeding studies is housed in NEP. MU Physical Activity and Wellness Lab (MU-PAW) is a state-of-the-art human clinical research space for the assessment of (semi)-invasive physiological and behavioral health-related outcomes. The Exercise Physiology and Nutrition research programs collaborate closely with other units on campus including the Department of Biomedical Sciences in the Vet School, and the Departments of Internal Medicine and Medical Pharmacology and Physiology in the School of Medicine among others. Interdisciplinary nutrition research that is facilitated via the many research centers including the Botanical Center and the Life Sciences Center.

Teaching and research assistantships are available on a competitive basis.

Admissions

At this time, the program does not accept students into the doctoral program without a master's degree. A student without a master's degree who would like to pursue a doctoral degree must apply to the master's graduate program. Once accepted into the master's program it is possible to apply and transfer to the doctoral program after the first year of graduate study. Specified criteria must be met for the transfer to be approved by the Graduate Admissions Committee. Please contact the department for more information on this subject.