Exercise Physiology M.S. and Ph.D. Programs

Program Description

The M.S. and Ph.D. specializations in Exercise Physiology are research programs designed for advanced study and research related to physiological responses and adaptations to acute and chronic physical activity. The M.S. degree program prepares individuals for doctoral-level graduate work and may lead to careers in allied health professions, adult fitness/health promotion, teaching, coaching and research. The Ph.D. degree prepares individuals for careers in universities, government, private industry, or allied health fields.

Faculty

Dr. Elaine Cress, Dr. Kirk Cureton, Dr. Gary Dudley, and Dr. Kevin McCully are advisors for students in the program. Dr. Cress' research involves aging and physical performance. Dr. Cureton's research involves studies of metabolic and cardiorespiratory responses and adaptations to exercise, and body composition. Dr. Dudley's research involves skeletal muscle physiological and biochemical responses and adaptations to physical activity. Dr. McCully's research involves the effects of aging and disease on muscle metabolism and functional capacity, including the relationship among oxidative metabolism, oxygen delivery, and blood flow. Other faculty in the Department providing support for the program include: Dr. Ted Baumgartner in measurement and evaluation, Drs. Rod Dishman, Patrick O'Connor, and Dr. Phil Tomporowski in exercise psychology, Dr. Harry DuVal in adult fitness/cardiac rehabilitation, and Dr. Kathy Simpson in biomechanics.

Admission

Admission to the program is competitive and based on the student's prior academic record, graduate record exam (GRE) scores, recommendations, and research interests. Minimum requirements include a GRE score (verbal + quantitative) of 1000, an undergraduate grade point average of 2.6 (master's) or 3.0 (doctoral), a graduate grade point average of 3.5 (doctoral) and, in the case of foreign students, a score of 550 on the Test of English as a Foreign Language (TOEFL) exam. Applications from minorities are encouraged. Preference is given to students who have strong basic and exercise science backgrounds, and who have research interests compatible with one of the faculty advisors. Students not accepted into the M.S. program may qualify for admission into the M.Ed. program in clinical exercise physiology. For students interested in an assistantship, admission applications should be completed before February 1.

Prerequisites

Prerequisites for the specialization include a background in physical and biological science, including, physics, chemistry through organic, biology and physiology. Math through integral calculus is recommended. Students are expected to have an undergraduate or master's degree in exercise science or an appropriate related field. Under most circumstances a Ph.D. applicant will have completed a master's degree and thesis or equivalent before being admitted. Alternatively, a Ph.D. applicant can be admitted with a bachelor's degree if he/she meets the following

Graduate School criterion: undergraduate GPA x 1000 + GRE verbal + GRE quantitative > 4300.

Program of Study

M.S. degree. The program of study is developed by the student and major professor based on the student's backgrounds, interests, and career goals. Requirements for the degree include completion of 24 semester hours of course work and a thesis. Course work must include at least 12 semester hours, exclusive of independent study, in the Exercise Science Department, including two courses in exercise physiology and one in research methods (EXRS 7150). Courses in descriptive (ERSH 6300) and inferential (ERSH 8310) statistics also are required. Completion of the program typically requires two years.

Ph.D. degree. The program of study is developed by the student and a four-person advisory committee based on the student's background, interests, and career goals. A minimum of 30 semester hours of course work is required. The program is designed to provide in-depth knowledge in the area of specialization and proficiency in designing and conducting research. Students are expected to be involved in research throughout their Ph.D. program. The program requires approximately three to four years for those who have previously completed a master's degree.

Course work required of all Ph.D. candidates in the Exercise Science Department includes: 4 hours of research seminar (EXRS 8990), statistics (ERSH 8310 and 8320), and a minimum of 3 hours of doctoral dissertation (EXRS 9300D). Courses taken as part of the master's degree can be used to fulfill requirements.

Courses commonly taken in addition to those listed above are typically selected from:

EXRS 6090 Exercise Physiology II
EXRS 6300 Exercise Epidemiology
EXRS 6320 Physical Activity and Aging
EXRS 6600 Measurement and surveillance of Physical Activity
EXRS 7000 Master's Research
EXRS 7140 Current Problems in Exercise Science
EXRS 7310 Adult Fitness and Cardiac Rehabilitation
EXRS 7330 Metabolic and Cardiorespiratory Aspects of Exercise
EXRS 8300 Advanced Topics in Exercise Physiology
EXRS 8320 Evaluation of Human Neuromuscular Performance
EXRS 8410 Neuromuscular Mechanisms in Exercise
EXRS 8420 Muscle Energetics and Oxygen Transport During Exercise
EXRS 9000 Doctoral Research
EXRS 9630 Directed Reading in Exercise Science

VPHY 6090 Comparative Mammalian Physiology
VPHY 6100 Comparative Mammalian Physiology

PHRM 8000 Advanced Cardiovascular Physiology
PHRM 8420 Cardiovascular Pharmacology
VPHY 8010 Mammalian Cell Physiology
VPHY 8120 Renal and Fluid-electrolyte Physiology
CBIO 6737 Endocrinology
VPHY 6050 Animal Physiological Chemistry
PHRM 6050 Laboratory Techniques in Biochemistry and Molecular Biology
GRNT 6010 Physical Aging
FDNS 6400 Advanced Macronutrients
ERSH 8510 Multivariate Methods

Descriptions of these courses may be found in the Graduate School Bulletin.

Laboratory Facilities

The Department of Exercise Science has well-equipped Aging and Physical Performance, Biomechanics, Metabolism and Body Composition, Exercise Psychology, Exercise Vascular Biology, Cognition and Skill Acquisition, Athletic Training, and Muscle Biology Laboratories that are actively involved in applied and basic exercise physiology research. A separate Fitness Center conducts Adult Fitness, Cardiac Rehabilitation, and Senior Adult programs for University faculty/staff and the Athens Community.

Assistantships

Assistantships are available on a competitive basis that require working in the Exercise Physiology Laboratories (teaching and research), or Fitness Center (fitness program), or teaching in the Basic Physical Education Program. Graduate School research assistantships and out-of-state tuition waivers are also available to highly qualified applicants.

For additional information on this program contact:

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For more information on admission please contact:

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Information about Exercise Science programs and faculty is available on the world-wide-web at the following address: http://www.coe.uga.edu/exs.

A completed application includes:

* application form and fee sent to the Graduate School
* official transcripts sent to the Graduate School
* official report of GRE scores sent to the Graduate School
* three letters of recommendation sent to the Department
* Department questionnaire including resume, statement of purpose, research interests, and previous experience sent to the Department