The PhD Program in Exercise and Health Sciences
University of Massachusetts Boston

A Research-Based Program
Our doctoral program is firmly research-based, with core coursework in research methods, biostatistics, and measurement and evaluation. A student’s primary area of research will align closely with the research of a specific faculty advisor in the Department.

The faculty’s broad expertise ranges from the cellular level (molecular mechanisms) to the society at large (community and population studies), with many collaborative research efforts focused on physical activity, diet, and obesity in children and youth, adults, older adults and special populations across the lifespan.

While a primary faculty advisor helps guide a student’s dissertation research, degree candidates will have options to explore other areas of interest in the form of independent studies and elective courses, preparing them to be well-rounded researchers.

Our Program Prepares Students
To be employed by universities, research centers, and state and federal health and research agencies. Graduates will become high-level, independent scientists who are competitive in obtaining federal funding to support their research. They will also be prepared to teach in academic settings and to fulfill service obligations, both in their area of employment and in their discipline’s professional organizations.

Identify Major Faculty Advisor
Prior to applying, each student will identify up to three faculty advisors in the Department who will potentially chair their dissertation committee and supervise their research. The major faculty advisor will help the student identify or expand on an area of interest, advise the student on relevant coursework for their elective credits, and guide and mentor the student on an original research project.

Curriculum Requirements
The program is designed to take 4 years of full-time study for students entering with the required master’s degree. Students are required to complete 60 graduate credits in the following sequence:

First Semester (9 credits)
- EHS 820 Professional and Ethical Issues in EHS (2 cr)
- EHS 825 Quantitative Research Methods (3 cr)
- EHS 891 Doctoral Seminar 1 (1 cr)
- NURSNG 760 Biostatistics 1: Introduction to Biostatistics (3 cr)

Second Semester (9 credits)
- EHS 810 Teaching in Exercise and Health Sciences (2 cr)
- EHS 826 Advanced Research Methods (3 cr)
- EHS 892 Doctoral Seminar 2 (1 cr)
- NURSNG 770 Biostatistics 2: Advanced Statistical Methods in Healthcare Research (3 cr)

Third Semester (9 credits)
- EHS Elective (3 cr)
- EHS Elective (3 cr)
- NURSNG 705 Health Disparities (3 cr)

Pass Written Qualifying Exam
Each student must pass a written qualifying examination, which is taken after the third semester but no later than the end of the student’s fourth semester. Content covered in the exam is agreed upon by the major faculty advisor and the student. The exam will be completed over the course of several days within a two-week period. Students must pass all areas on either the first or second try before being allowed to continue in the program and work on their dissertation proposal.

Fourth Semester (9 credits)
- Elective (3 cr)
- Elective (3 cr)
- Elective (3 cr)

Form Dissertation Committee
After the student passes the written qualifying examination and advances to candidacy, the faculty advisor will help the candidate identify at least two additional EHS faculty to comprise the dissertation committee. A fourth member, external to the EHS Department, with expertise in the candidate’s research area, is also required to join the committee. The committee, once approved by the Graduate Program Director and the Dean of Graduate Studies, will guide and advise the student regarding the requirements of the dissertation proposal, details related to the design and completion of what is considered an original research project, and the final dissertation document that presents all components of the completed research project.

Fifth Semester (6 credits)
- EHS 899 Dissertation (6 cr)

Defend Dissertation Proposal
Once students are advanced to candidacy, they will develop their dissertation research questions and write a proposal for their intended research project. The proposal will consist of an introduction, rationale and hypothesis, review of the literature, and proposed methods. Precise requirements for the proposal will be developed in consultation with the dissertation committee, and will be based on the focus of the intended research. Candidates will write their proposal and orally present (“defend”) to their dissertation committee no later than the end of the fifth semester.

Sixth Semester (6 credits)
- EHS 899 Dissertation (6 cr)

Seventh Semester (6 credits)
- EHS 899 Dissertation (6 cr)

Eighth Semester (6 credits)
- EHS 899 Dissertation (6 cr)

Final Defense of Dissertation
Each student’s original research project culminates in completion of a dissertation document and oral defense. The dissertation will include an introduction, rationale and hypothesis, review of the literature, description of methods, presentation of results, and discussion of the relevance of the study’s findings to the field at large. The results of the research will be presented in manuscript-ready format including two or more separate papers that are ready to be submitted to peer-reviewed journals. The student will be required to submit at least one of these papers to a journal prior to orally defending their dissertation; the paper must be under peer review to meet this requirement.
The PhD Program in Exercise and Health Sciences

Faculty and Research Expertise
Faculty in the Department of Exercise and Health Sciences at UMass Boston are nationally recognized for their cutting-edge research in areas such as physical activity assessment and promotion, behavioral and public health interventions in historically underserved groups, including racial and ethnic minorities and people with intellectual and developmental disabilities, and obesity prevention and treatment and prevention.

The rough rigorous training and hands-on mentoring from faculty, our PhD Program in Exercise and Health Sciences prepares students to effectively address chronic diseases and conditions caused by lack of physical activity and poor nutrition. Our program’s goal is to produce the next generation of accomplished researchers and leaders in exercise and health sciences.

Sarah Camhi, PhD University of Maryland; physical activity, obesity, cardiometabolic health.
Rachel Drew, PhD University of Birmingham, UK Understanding how aging and health disparities alter cardiovascular responses to exercise.
Richard Fleming, PhD University of Massachusetts Amherst; childhood obesity prevention and treatment, physical activity and oral health promotion in people with intellectual and developmental disabilities.
Phil Gona, PhD Boston University; statistical methods for epidemiology, cardiovascular and infectious diseases epidemiology, time-to-event analysis, metaanalysis, global health.
Ana Cristina Lindsay, DrPH Harvard School of Public Health; child health and nutrition, childhood obesity prevention, community-based research, program evaluation, minority health, global health with a focus on Latin America.
Laurie Milliken, PhD University of Arizona; body composition assessment, obesity prevention, obesity treatment.
Heidi Stanish, PhD Oregon State University; physical activity promotion for individuals with disabilities.
Phil Troped, PhD University of South Carolina; physical activity and public health, environmental determinants of physical activity, use of accelerometers and GPS devices in determinants and intervention studies.
Jessica Whiteley, PhD Virginia Polytechnic Institute and State University; clinical health psychology, health promotion interventions
Julie Wright, PhD University of Rhode Island computer-assisted self-care interventions, childhood obesity prevention and treatment.
Huimin Yan, PhD University of Illinois at Urbana-Champaign The interaction of diet and exercise on cardiovascular function in health, disease and disability throughout the human lifespan.
Tongjian You, PhD University of North Carolina Greensboro; metabolic and physical dysfunctions associated with obesity and aging, adaptations to diet and exercise.
Kai Zou, PhD, University of Illinois at Urbana-Champaign Molecular and cellular mechanisms regulating skeletal muscle metabolism with obesity, Type 2 Diabetes and exercise.

Research Facilities
Our faculty has access to two laboratory facilities dedicated to supporting student research: the Exercise Physiology Lab and GoKids Boston. The Exercise Physiology Lab, approximately 1,100 sq. ft. in the Center for Clinical Education and Research, is the primary teaching lab for laboratory courses and is fully equipped with exercise and physiology equipment for use in student and faculty research projects.
GoKids is UMass Boston’s unique research and practice-based center for working to prevent and treat childhood obesity and related diseases through physical activity and the promotion of healthy living while reducing health disparities in underserved families. GoKids offers a comprehensive treatment program, to youth aged 8-18, embracing physical activity including state-of-the-art “exergaming” in combination with nutrition and lifestyle counseling. GoKids is unique in that it provides a highly controlled environment for research, which can evaluate its effectiveness and impact. GoKids Boston consists of 5,400 sq. ft. dedicated to fitness training, research, and teaching by our exercise and health sciences faculty as well as faculty from other UMass Boston departments.

Admission Requirements
Typically, PhD program applicants will have a master’s degree in exercise science, nutrition, or a related field from a nationally accredited college or university or its international equivalent. The review committee will admit applicants with degrees in other disciplines at their discretion. The Graduate Program Director will review coursework from other graduate programs on a case-by-case basis to determine transferability of credits up to a maximum of 6 credits.

Preference will be given to all applicants whose transcripts show completion of the following courses with a minimum GPA of 3.0, taken within the past seven years: one year of anatomy and physiology with lab, exercise physiology with lab, chemistry with lab, fitness assessment, and statistics. Students may be required to address deficiencies as a condition of acceptance.

The Application Process
Applicants are strongly encouraged to apply by our priority deadline of February 1. Research and teaching assistantships may be available and preference will be given to those applicants who meet the February 1 deadline. Applications will be accepted through June 1, and must be mailed to:
Office of Graduate Admissions
University of Massachusetts Boston
100 Morrissey Boulevard
Boston, MA 02125-3393

A completed application includes:

• Completed application form and required fee.
• Official transcripts for all undergraduate and/or graduate programs attended.
• GRE General test scores and, if applicable, TOEFL scores.
• Three letters of recommendation from persons with whom the applicant has had extensive contact. At least one reference must be from academia (e.g. a professor) and at least one must be from a professional (e.g., a supervisor).

PhD applicants must submit an essay of no more than 1,500 words addressing the following:

• Specific interest and rationale for pursuing a PhD in exercise and health.
• Current major research and interests in the fields of exercise or health sciences (we strongly recommend that applicants contact EHS faculty directly concerning their research interests before applying).
• Description of career goals, post-PhD.

To request application materials or for more information, please visit the UMass Boston web site at:
www.umb.edu

If you have questions about the program, please write:
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