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

A Flexible Research-Based Program
The master of science program offers advanced study in exercise and health sciences. Depending on the option of study chosen, students fulfill program requirements by: (1) completing a research thesis; (2) designing and completing a practicum project; or (3) passing a comprehensive examination after the completion of their coursework.

Located in Boston, which is one of the major medical and health research centers in the United States, the program is one of a handful located in an urban setting. This provides students with the unique opportunity to study issues regarding physical activity and urban health in a multicultural setting. The program’s research focus will enhance the career growth potential of our students, whether they choose to apply their research skills in advanced academic study, or in workplace settings where sophistication in conducting and managing research projects is required.

A wide range of course electives and faculty research areas complement the core courses tight focus on research methods, health fitness assessment and advanced physical activity, nutrition, and health. Students are encouraged early in the program to choose a faculty mentor with whom they wish to study. Faculty research interests include physical activity measurement, physical activity for persons with disabilities, behavioral strategies for improving physical activity and health, and obesity treatment and prevention.

Our Program Prepares Students
To pursue careers in research or to become practitioners and leaders in areas that include (but are not limited to):

- Exercise Physiologist
- Research Coordinator/Project Director
- Physical Activity/Public Health Specialist
- Worksite Wellness Director
- Fitness Director
- Exercise Biochemist

Curriculum Requirements
The 38-credit hour master’s degree program (26 core credits and 12 elective credits for the thesis option; 29 core credits and 9 elective credits for the project option; 23 core credits and 15 elective credits for the exam option) encompasses research methods, biostatistics, public health, physical activity measurement, clinical and exercise physiology, exercise in special populations, chronic disease prevention and management, and behavioral strategies for improving health.

Sequence of Courses
The program is designed to take 2 years of full-time study, and students are required to complete 38 graduate credits in the following sequence.

First Semester (10 credits)
- EHS 630 Advanced Health, Fitness, and Nutrition Assessment (3 cr)
- EHS 655 Advanced Physical Activity and Health (3 cr)
- EHS 661 Master’s Seminar in EHS (1 cr)
- NURSNG 760 Biostatistics 1: Introduction to Biostatistics (3 cr)

By the end of the first semester, each student should identify a major faculty advisor who will chair the student’s thesis, project, or exam committee and with whom they will conduct their research. The major faculty advisor will help the student identify an area of focus, advise the student on relevant coursework for their elective credits, and guide and mentor the student in their selected option.

Second Semester (10 credits)
- EHS 625 Quantitative Research Methods (3 cr)
- EHS 635 Program and Project Management (3 cr)
- EHS 656 Advanced Nutrition and Health (3 cr)
- EHS 651 Master’s Seminar in EHS (1 cr)

Third Semester (9 credits)
- EHS 645 Leadership and Communication (for the project and exam options) (3 cr)
- EHS 690 Proposal Development (for the project and thesis options) (3 cr)
- EHS elective (for thesis and exam options) (3 cr)

During their third semester, each student’s faculty advisor will help identify at least two additional faculty to comprise the student’s thesis, project or exam committee. Project committees will also include the student’s project supervisor. The committee, once approved by the Graduate Program Director and the Dean of Graduate Studies, guides the student in completing their thesis, project or exam as well as in the oral defense of their thesis or project portfolio.

Fourth Semester (9 credits)
- EHS 669 Thesis (for thesis option) (3 cr)
- EHS 698 Project Practicum (for project option) (3 cr)
- Elective (3 cr)

The student who elects this option wishes to strengthen their project management and leadership skills in the workplace. The student will identify a project topic in consultation with their faculty advisor, the project committee (consisting of the advisor and two other faculty with expertise related to the desired topic), and the practicum site supervisor. This option requires a written proposal and an oral presentation for an original project (3rd semester), completion of the project at the practicum site, a written portfolio, and a final oral defense (4th semester).

Completing the Project Option
The student who elects this option wishes to obtain advanced academic credentials in order to enhance his/her future professional career. The Comprehensive Examination will be conducted during the final semester of the program and will consist of four areas of coursework agreed upon by the faculty advisor and the student. The Exam Committee will consist of at least three faculty who have expertise in the areas selected. The exam will be conducted over the course of several days within a 1 week period. Each question must be completed within 3 hours. Students must pass all areas on either the first or second try. The Exam Committee will grade the written exam.

Completing the Examination Option
The student who elects this option wishes to carry out a research project in two stages. The thesis proposal stage involves a literature review, writing objectives and aims, study design, and a written and oral presentation of the proposed research (3rd semester).

The second stage of the thesis involves conducting the research, analyzing the results, writing the thesis, and passing an oral defense (4th semester). The final thesis product will be in a manuscript-ready format eligible for submission to a peer-reviewed journal. The student’s major faculty advisor will coordinate the student’s oral defense of the thesis.

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The MS Program in Exercise and Health Sciences

Faculty and Research Expertise
Faculty in the Department of Exercise and Health Sciences are nationally recognized for their cutting edge research in areas such as public health, physical activity measurement, obesity prevention and treatment, physical activity in those with disabilities, and behavioral interventions in historically underserved populations.

Our MS Program in Exercise and Health Sciences provides the synergy and momentum needed to continue addressing chronic health conditions and diseases caused by lack of physical activity and poor nutrition, while at the same time contributing to training the next generation of researchers. Given the impact of sedentary lifestyles and poor dietary choices, it is no longer enough simply to stay ahead of the curve—our goal is to define the curve!

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 have access to laboratory facilities that provide support in two dedicated labora-tory spaces: 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.

Both laboratories are fully equipped to perform body composition and exercise testing, as well as other physiological tests.

Admission Requirements
MS applicants must have a bachelor’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.

Prefer-ence will be given to applicants whose transcripts show attainment of a minimum overall GPA of 3.0 and completion of the following courses (also 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 applying for the program are eligible to waive the GRE requirement if they earned a cumulative GPA of 3.5 or greater in the Exercise and Health Sciences Bachelor of Science Program at UMASS Boston within the last 3 years.

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).

MS applicants must also submit a typed two-part Statement of Interest and Intent:

• Part One: The applicant’s reasons for wishing to pursue graduate study (at least 300 words).
• Part Two: The applicant’s specific interests and kind of work he or she will pursue in the field. The applicant should indicate which option (thesis, project, comprehensive examination) she/he may select to complete the program.

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:

Tongjian You, PhD, Graduate Program Director
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Boston, MA 02125-3393
email: tongjian.you@umb.edu