PARTNERS IN TRAINING

Department of Quantitative Health Sciences
Chair: Catarina Kiefe MD PhD

Division of Epidemiology of Chronic Disease and Vulnerable Populations
Chief: Robert Goldberg PhD

Division of Biostatistics and Health Services Research
Chief: Arlene Ash PhD

Division of Outcomes Measurement
Chief: John Ware PhD

Division of Health Informatics and Implementation Science
Chief: Tom Houston MD MPH

Meyers Primary Care Institute
Executive Director: Jerry Gurwitz MD
Mara Epstein ScD

Department of Family Medicine
Robin Clark PhD

Division of Preventive and Behavioral Medicine
Chair: Judy Ockene PhD
Stephenie Lemon PhD, Milagros Rosal PhD, Sybil Crawford PhD, Sherry Pagoto PhD

Commonwealth Medicine
Jay Himmelstein MD

Bedford VA and Central-Western Massachusetts VA
Kristin Mattocks PhD

Quantitative Methods Core
Bruce Barton PhD, Sharina Person PhD

SOAR (Surgical Outcomes in Research Group)
Heena Santry MD

PHARE Research Group (Pharmacy, Health Services, Aging-Research, Epidemiology)
Kate Lapane PhD

CONDUCTING SCIENCE THAT MAKES A DIFFERENCE

UMass Medical School

UMass Medical School (UMMS), located in Worcester, Massachusetts, had federal funding exceeding $308 million, including $181 million from the NIH. We are a national leader in primary care medicine. We partner with UMass Memorial Health Care, an extensive hospital, outpatient, and community practice network, and with Commonwealth Medicine which works with different state agencies and community partnerships to implement evidence-based programs into practice. UMMS has a prestigious Center for Clinical and Translational Science with a strong focus on translating scientific evidence into effective clinical practice through enhanced community engagement.

LOCATED IN WORCESTER, MA

Located 35 miles from Boston, the city of Worcester was recently recognized as one of the 10 "most livable cities in the nation" by Forbes.com. The campus is within a region known for its concentration of high-technology, healthcare, biotechnology, and biomedical engineering research and industry. Worcester offers many affordable living opportunities with accessible educational, cultural, and historical activities.

CONTACT:
Robert Goldberg, PhD
Program Director, MSCI
MSCI@umassmed.edu
UMass Medical School
55 Lake Avenue North
Worcester, MA 01655-0002

www.umassmed.edu/msci

University of Massachusetts Medical School

Graduate School of Biomedical Sciences

Master of Science in Clinical Investigation

ABOUT THE PROGRAM

For clinicians, translational scientists, or bench scientists desiring a career that includes a significant research component, but lack certain research skills, the Master of Science in Clinical Investigation (MSCI) program emphasizes the development of strong clinical investigation skills. The program is based on a solid foundation in study design, observational studies and randomized trials, clinical epidemiology, and biostatistics. Students also acquire excellent writing and oral presentation skills through formal classroom work.

Participating faculty represent the strong collaborative nature of our MSCI Program, coming from the disciplines of epidemiology, biostatistics, clinical research, biomedical informatics, ethics, implementation science, and molecular medicine.

Trainees completing the MSCI Program will acquire the necessary skills to successfully:

1. Operationalize different epidemiologic approaches to carrying out research aimed at better understanding the causes and natural history of disease in human populations for the purpose of implementing primary and secondary prevention strategies;
2. Synthesize the existing medical literature;
3. Design, conduct, and analyze the results of clinical investigations at the individual and population level; and
4. Effectively communicate scientific findings.

Training is provided through coursework and a Masters thesis. Trainees are grounded in the principles of clinical investigation with a flexible multidisciplinary focus. The curriculum is tailored to the needs and interests of trainees as they aspire to become successful independent clinical investigators.

ADMISSIONS REQUIREMENTS

Candidates for the MSCI degree should be affiliated with UMass and have a Doctorate in Medicine, Nursing or a DVM, or have a Ph.D. in the social, physical, or biological sciences. Current UMass medical students are also encouraged to apply.

While no minimum grade point average is required for entry into the program, students applying for admission must have demonstrated superior academic performance and have prior research experience. Candidates must express a strong commitment to developing a well-defined research career and show evidence of departmental support and commitment.

Application Requirements

Applicants must apply online through ApplyYourself. A complete application for admission must include all of the following:

- An official admission online application form through ApplyYourself.
- A two page personal statement describing your educational goals, research career aspirations, research experience and any special qualifications or experience. The personal statement must include a statement regarding time available to pursue coursework and research.
- A current resume or curriculum vitae.
- Three letters of recommendation from individuals who are able to assess past academic performance, research experience, and success in graduate school. At least one letter of support should be from a current mentor who can attest to time available to complete the degree.
- Official transcripts from all undergraduate and graduate institutions attended.
- An application fee of $25 for state residents; $50 for non-residents.
- Foreign applicants must submit TOEFL scores.

Application deadline: June 15th

COURSE REQUIREMENTS

Students enrolled in the MSCI Program complete a structured series of courses, seminars, and workshops related to the design, conduct, and analysis of clinical research. The core curriculum is enhanced with presentations by invited speakers, a journal club, research conferences, and extensive contact with their mentors.

Students must satisfactorily complete a minimum total of 36 credits to obtain the Master's Degree. This includes a core methods curriculum, elective courses, and a minimum of 6 credits for the completion of their thesis.

The program is tailored to meet the needs and research interests of each student. The core curriculum is designed to address competencies in the following areas:

- Epidemiologic methods (minimum: 6 credits)
- Biostatistics (minimum: 8 credits)
- Ethics (2 credits)
- Scientific writing (minimum: 3 credits)

Courses are designed to help students further their scholarly productivity through preparation of scientific abstracts, presentations, posters, peer reviewed publications, and grants. With carefully chosen electives and assignments, students are able to apply what they learn in the classroom setting to their own emerging research programs. Upon acceptance, careful mentor matching and mapping of the students MSCI course work is conducted. Depending on students' quantitative background, they may be encouraged/required to attend an intense summer research bootcamp held annually in July. Students are expected to enroll in a minimum of 9 credits (through mentored research or structured courses) throughout their time in the program.

For the satisfactory completion of a thesis, students must design a research project, develop a formal proposal, perform the described study, and prepare a scholarly scientific paper. The thesis must be relevant to the student's area of interest and written in a format suitable for submission to a scientific journal.