MASTER OF SCIENCE DEGREE PROGRAM
EPIDEMIOLOGY

MS students in epidemiology are under Graduate Division Plan II, which requires a minimum of 48 units and an oral comprehensive examination. The MS degree requires two years of academic residence to meet minimum requirements. Students admitted to the MS program are generally limited to those considered highly likely to seek admission to doctoral studies in epidemiology upon completion of their MS degree.

Students in the MS program generally follow a curriculum similar to that of students in the two-year MPH program in epidemiology/biostatistics, but do not have to meet the school-wide breadth requirements, although they are strongly encouraged to take courses in various public health disciplines outside epidemiology and biostatistics.

Learning Objectives

Upon satisfactory completion of the two year MS program in epidemiology, graduates will have specific skills in the following areas:

- Describe the nature of disease distributions in populations and the factors that influence these distributions.

- Describe and understand the strengths and weaknesses of the key study designs used in epidemiological research, i.e. cross-sectional, ecological, case-control, cohort, and experimental (field trials) designs and the analytic approaches and techniques applicable to each design.

- To answer a given epidemiologic question, select the most appropriate study design and develop a detailed study proposal.

- Understand and be able to use biostatistical concepts and methods appropriate to epidemiological research.

- Prepare, enter and analyze epidemiologic data sets using appropriate computer hardware and software packages.

- Evaluate critically the research questions, methods, analyses and findings of epidemiological research reports and presentations.

Course Requirements

Students in the MS program in epidemiology are expected to take:

PH 250A - Epidemiologic Methods I
PH 250B - Epidemiologic Methods II
PH 142 - Intro to Probability & Statistics in Biology & Public Health
PH 145 - Intro to Probability & Statistics in Biology & Public Health
PH 241 - Statistical Analysis of Categorical Data
PH 245 - Intro to Multivariate Public Health Statistics

Students interested in a greater understanding of epidemiologic methods and their theoretical underpinnings are encouraged to take PH 250C.

All students in this program are required to take PH 292(6), Epidemiology Seminar, in the fall semester of their first year. Students who do not already possess substantial skills in SAS programming and in analysis of large data sets are strongly encouraged to take PH 251A, Practicum in Epidemiologic Methods. Students who do not have experience reviewing the epidemiologic literature and writing about epidemiologic topics are strongly encouraged to take PH 251C, Causal Inference and Meta-Analysis in Epidemiology, in the fall semester. Students interested in a greater depth of understanding of epidemiologic methods and theoretical underpinnings are encouraged to take PH 250C, Epidemiologic Theory. Students are also encouraged to take courses in a third area related to their research interests (e.g. virology, demography, anthropology, sociology, etc.).

Comprehensive Examination for the Masters Degree

During the spring semester preceding graduation, students in the MS program must present and defend an in-depth paper on an epidemiologic topic that is handed in early in the spring semester. The paper can take the form of a critical review of the existing epidemiologic literature about a particular topic; a formal meta-analysis; a paper describing the results of an original epidemiologic study by the student; or a detailed research proposal for an epidemiologic study. In the fall semester before the paper is due, each student will be assigned to a faculty member with expertise in the subject matter of the student’s proposed paper. The student will work with and receive ongoing input from that faculty member during the various stages of planning and writing the paper. (Details concerning the paper topic, format, due dates for various stages of development of the paper, etc., are in the Epidemiology Masters Paper Guidelines.) In the spring semester, each student will give a brief oral presentation concerning his or her paper on a pre-assigned date and will then be examined orally by two or more faculty.

Specifically, in this oral comprehensive examination, the student will be expected to defend his or her written paper and, in the process, demonstrate competence in and a firm grasp of epidemiologic and biostatistical methods and approaches relevant to studies of disease causation and prevention. Decisions on the outcome of the comprehensive examination will be given to the student the day of the examination as satisfactory or unsatisfactory. In the event of an unsatisfactory outcome, a written and/or oral re-examination is the usual recommended course of action. Students who do not pass the re-examination are not eligible to receive the Masters degree.
Advancement to Candidacy

Masters students must advance to candidacy prior to taking the comprehensive examination. Graduate Division requires that a minimum period of study of one term must intervene between formal advancement to candidacy and the conferring of the master’s degree. Therefore, the Division will submit a list of students who are advancing to candidacy no later than the end of the fifth week of classes in the term in which students are expected to complete the degree requirements.

The School of Public Health Student Services Unit reviews students’ applications against their academic records to determine eligibility for advancement to candidacy. A student who is not eligible to advance will be notified that advancement has been deferred. Once the deficiency has been cleared and can be verified, the student will be advanced to candidacy.

Advising

Faculty advisors are expected to work closely with students to help them develop a program consistent with their previous education, experience and future plans. Each student is assigned an advisor, but advisors may be changed at any time by mutual consent. Each student should arrange to see his or her advisor at least twice each academic year: near the beginning of the fall and spring semester, respectively. All members of the faculty are expected to be available to any student in the epidemiology or epidemiology/biostatistics programs for consultation from orientation week at the beginning of the fall semester throughout the academic year. To save you time, it is advisable to make an appointment in advance with the faculty member you would like to see. Office hours for all faculty members are posted outside their office doors. ANY STUDENT ENCOUNTERING DIFFICULTY MAKING AN APPOINTMENT WITH A FACULTY MEMBER WITHIN A REASONABLE TIME FRAME SHOULD NOTIFY THE DIVISION HEAD WITHOUT DELAY.