

MPH in Quantitative Methods
AY 2010-2011
University of Illinois at Chicago, School of Public Health

Minimum credit hour requirement: 48 semester hours

Core MPH requirements

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|------------------|--|--------------|
| BSTT400 | Biostatistics I | 4 |
| EPID403 | Introduction to Epidemiology: Principles & Methods | 3 |
| CHSC400 | Public Health Concepts and Practice | 3 |
| HPA400 | Principles of Management in Public Health | 3 |
| EOHS400 | Principles of Environmental Health Science | 3 |
| CHSC401 | Behavioral Sciences in Public Health | 3 |
| IPHS698 | Capstone | 1 |
| Sub-total | | 20 SH |

Quantitative Methods requirements

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|------------------|---|--------------|
| BSTT401 | Biostatistics II | 4 |
| BSTT505 | Logistic Regression and Survival Analysis | 2 |
| BSTT506 | Design of Clinical Trials | 3 |
| BSTT507 | Sampling and Estimation Methods | 3 |
| EPID404 | Intermediate Epidemiologic Methods | 4 |
| CHSC447 | Survey Research Methods | 3 |
| Sub-total | | 19 SH |

Field Practicum

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|------------------|-----------------|---------------|
| IPHS650 | Field Practicum | 3-5 |
| Sub-total | | 3-5 SH |

Schoolwide Requirements

Investigator 101 - What Researchers Need to Know Before Research Can Start
 HIPAA Research 101

Concentration Electives sub-total **6-10 SH**

The following are some examples of possible courses in SPH areas of concentration, which would complete requirements for the MPH in Quantitative Methods. Other electives can be chosen in consultation with the academic advisor.

Example of Concentration in EOHS

Option 1:

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|---------|---|---|
| EOHS405 | Environmental Calculation | 1 |
| EOHS411 | Water Quality Management | 3 |
| EOHS418 | Analysis of Water and Waste Water Quality | 2 |
| EOHS421 | Fundamentals of Industrial Hygiene | 2 |

Option 2:

| | | |
|---------|---------------------------|---|
| EOHS431 | Air Quality Management I | 3 |
| EOHS438 | Air Quality Laboratory | 2 |
| EOHS532 | Air Quality Management II | 2 |

Example of Concentration in CHS

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|---------|---------------------------------------|---|
| CHSC431 | Community Assessment in Public Health | 3 |
| CHSC433 | Public Health Planning and Evaluation | 3 |
| CHSC434 | Qualitative Methods | 2 |

Example of Concentration in HPA

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|--------|---|---|
| HPA465 | Health Information and Decision Support Systems | 4 |
| HPA522 | Public Health Research Design and Methods | 3 |
| HPA557 | Measurement in Health Services Research | 3 |

Program Total **48-53 SH**

Other Important Program Information – MPH in Quantitative Methods

** See the SPH Online Student Handbook for complete details on all program requirements.

Learning Objectives

Students in this degree program will be trained to be competent in the management, analysis, and interpretation of public health data, and will gain knowledge of data analysis issues as applied to a particular area of public health. A graduate of this program will be qualified to access, manipulate and analyze public health data under the direction of a statistician.

Program Content

Students must choose from one of three areas of concentration corresponding to the other three Division: EOHS, CHS, or HPA. Students will be required to take 18SH of the MPH common core requirements; 20SH of courses required for all Quantitative Methods students; a group of courses specific to their chosen area of concentration for 7-10SH; and a field practicum for 3-5SH, for a total of 49-56SH for the entire program. Students will identify a faculty member in their area of concentration to work out an appropriate set of courses totaling 7-10 SH to complete their requirements.

Eligibility

Students who meet school-wide requirements for the MPH program and who show promise and interest in quantitative skills are eligible. A concentration in EOHS requires some additional background in chemistry and mathematics beyond what is required for a concentration in CHS or HPA.

Performance Standards

Students in Biostatistics are allowed only one grade of C in required courses. A student who receives two Cs in required courses will not be allowed to graduate from the program. A student may re-take a course one time and attempt to replace the C with a higher grade.

Program Proposal

Students are required to complete and submit a program proposal during their first semester in the MPH program. This document outlines the student's plan for coursework and research. The program proposal requires the approval of the student's academic advisor, the divisional academic coordinator, and the division director.

MPH Field Experience Guidelines (IPHS 650)

All Biostatistics majors admitted to the MPH program in Quantitative Methods must undertake a field experience or practicum of 3 to 5 semester hours (64 clock hours per sh in a 16-week semester). The field experience must be practical, applied and public health in orientation, and should preferably be with an organized public or private agency. This is often the base of the student's Capstone experience, although this is not a requirement. The field experience need not be an unpaid internship. Working with his/her advisor, the student must submit a field experience proposal for advisor approval. Students must obtain signed agreements with the agency and the on-site supervisor. Final evaluations are required of both the supervisor and the student, and must be signed by the student's academic advisor.

See Gwen Slaughter, SPH Assistant Director of Student Affairs, **one semester prior to your intended Field Experience** for critical documentation and other important information.

IRB: Institutional Review Board

All students must undergo Institutional Review Board (IRB) training at the end of their first year of study, and are required to submit IRB review or exemption forms *prior to beginning the field experience*. They must submit for IRB review as early as possible, to allow sufficient time for the lengthy review process. Students should consult the SPH Student Reference Guides available in the division, and speak with their advisors. The field experience and capstone cannot be undertaken without IRB review or exemption.

Capstone Requirement (IPHS 698)

All MPH Quantitative Methods students are required to complete a capstone project in their area of concentration, typically a data management and analysis project for a study in that area. Each student will work with their field experience supervisor or a key faculty member in their area of concentration, as well as a faculty member in Biostatistics, to design a plan for an appropriate capstone project. The capstone project will consist of obtaining a data set, stating a research question, performing an appropriate analysis of the data to address that research question, and preparing a written report. The written report will typically include 1. Abstract summary; 2. Introduction describing the research question; 3. Methods section describing how the data was collected and the statistical methods to be used; 4. Results section summarizing analysis results; and 5. Conclusion section. The results of the analysis should include some descriptive information, as well as directly addressing the original research question. The report will be evaluated by three faculty members.

For further information, please see the online SPH Student Handbook, or contact Dr. Sally Freels, Section Coordinator, at (312) 996-4763 or sallyf@uic.edu.