

MPH in Environmental Health

General Track (i.e., not physician-oriented Occupational & Environmental Medicine track)

Thesis and Non-Thesis Options. As adopted by DEH faculty Summer 2002

Background

- DEH faculty recently approved the reinstatement of a non-physician MPH (MPH in General Environmental Health) curriculum. Three students will enter this track this fall.
- All existing masters degree programs (M.S. and M.P.H.) in DEH currently require a formal research thesis as a requirement for the degree. At the time the faculty approved the General Environmental Health MPH track, there was discussion of a non-thesis option for those students, but the decision was deferred pending more discussion and until more detail could be provided.
- An MPH Oversight Committee was created to address ongoing issues related to the new MPH track, with representatives of each DEH academic program. Current members are Joel Kaufman, Terry Kavanagh, John Kissel, and Mike Yost. In addition to program design, the Oversight Committee is charged with admissions issues, pairing of students with faculty advisors and mentors, and monitoring of student progress.
- The MPH Oversight Committee met, and concluded that the new MPH track should offer a non-thesis option. However, non-thesis students should complete a rigorous and well-documented project that demonstrates an advance in public health practice related to environmental health.

Comparison of Thesis and Project

Certain other MPH programs in SPHCM permit a non-thesis project option. The following discussion compares the two options, drawing on the experience of those programs.

In some ways the thesis and project are similar. Both should follow the same basic outline and should represent a scholarly effort of high quality. As noted in the Graduate School requirements, "Graduate programs leading to the Master of Arts, Master of Science, or Doctor of Philosophy degrees emphasize the development of the student's ability for independent scholarly work and the creation of new knowledge through research. Practice-oriented programs, which ordinarily lead to the degree of master or doctor in a particular professional field, emphasize preparation of the student for professional practice at the frontiers of existing knowledge."

Both projects and theses should have a clear statement of the problem and should provide a literature review that covers the important work related to the problem, with content clearly relating to the statement of problem, analysis of results, and statement of conclusions. When there is a question as to whether the proposal is a thesis or a project, the proposal shall be submitted to the MPH Oversight Committee for a decision. This must be done prior to registering for thesis or project credits.

The thesis should answer a question that contributes to new knowledge. The thesis should be analytic, should systematically analyze data, and should develop and make appropriate inferences. Again, referring to Graduate School requirements, "A master's thesis contributes to knowledge, reviews or critiques the state of knowledge in a field, creates a new design or composition, or represents some other appropriate kind of independent contribution. The master's thesis should be evidence of the graduate student's ability to carry out independent investigation and to present the results in clear and systematic form."

The project may answer a question of practical importance, or develop and test intervention, curriculum, or protocol for application within a particular setting. The literature review is one part of both a project and thesis, and the extent will depend upon the nature of the topic. For example, some policy analyses may lend themselves to less data collection and analysis, coupled with a more extensive, critical review of the literature. "Critical" is a key word in the above statement.

A measure of quality of both theses and projects relates to the clarity of thought process, beginning with the statement of the question or problem, to final statement of conclusions or recommendations. An additional measure of the quality of a project may also relate to how effectively it contributes to carrying out the goals and objectives of the agency or organization where the project was done.

For example, an evaluation of a program activity could result in either confirmation of how the program is being carried out, or point toward a set of recommendations that could significantly influence future program direction. Or a project involving the use of descriptive information and statistical evidence could provide an analysis on which to base significant public policy determinations. In both instances, the project could contribute significantly to the agency's mission and be appropriate as a scholarly effort to be presented in the format of a professional and/or scientific journal.

A formal monitoring system to ensure satisfactory progress is required for both the thesis and the project, including a quarterly report which is designed to establish continuing dialogue between the Project Advisor and the student. The Chair or Project Advisor and the Committee members provide guidance and final determination regarding acceptability of the quality of the final product. It is important that there be ongoing communication among students, advisors and/or preceptors. An oral presentation is required for both the thesis and the project.

An important part of the project is for the student to demonstrate the ability to carry out independent inquiry, and communicate the relevance and implications of results to the intended audience.

MPH Project Oversight and Guidelines

1. Project Committee. Student must identify a Project Committee with at least two members. At least one member of the committee should be a regular faculty member in DEH, who will serve as their faculty adviser for purposes of ensuring student progress and will serve as committee chair. --One member of the committee is designated as Project Supervisor; this person need not be a regular faculty member in DEH. If project is community-based, the committee must include a person from the affected community or the intended audience/stakeholder for the project.
2. Project Proposal. Beginning in spring quarter of the first year, the student must report quarterly to their Project Committee on their progress in designing and conducting their project. The committee must approve the written proposal by the end of Autumn of the 2nd year, with a copy submitted to the Graduate Program Office.
3. Project Adequacy. The MPH Oversight Committee reviews all project proposals for adequacy. The project should be adequately rigorous, as discussed above, and demonstrate originality. A reasonable test of adequacy is whether the project stretches the limits of public health practice, and could result in use by a public health agency or publication in peer-reviewed literature.

4. Project Completion. The project must result in a formal report, an oral presentation. Posters at Student Research Day may also be a reasonable expectation. When appropriate, the student should also document that they have presented their results to the agency or community affected by the project.

Typical Organization of Project Report

- I. Introduction
- II. Statement of problem to be solved
Background about the problem and the description of other pertinent information
Importance of problem and rationale for approach
- III. Methods
Description of approach, and possible alternative approaches to problem
Setting (problem specific vs. broad organization and community which may be discussed above in Introduction)
Data and/or information available or collected, along with definitions of measures
Define process for analysis of data and information (focus on potential actions)
- IV. Results and Findings
- V. Discussion/Recommendations, Describing Solutions to Problem

Relation of Project to Other MPH Student Responsibilities

In addition to completion of the project (or thesis) and coursework (see attached curriculum), the student will also be responsible for completion of a practicum. Most students will also desire financial support during their graduate studies.

Practicum. The practicum is required for all MPH students in the SPHCM. It is a public health practice experience, can be as few as 120 contact hours, and may be waived for students with substantial prior public health practice experience. A presentation on the practicum is required at the conclusion of the experience. Practicum coordination occurs through the SPHCM Practicum office. It is likely that a student who completes the non-thesis project option could combine the practicum with the project.

Funding. Unlike a thesis conducted in close collaboration with a faculty member, the project option is less likely to be associated with a research assistantship. As a result, students will need to rely on other sources of funding. While some may choose to forego support, other options are possible. They may choose to be an RA in *addition to* their project activities. They may be able to serve as a teaching assistant. Certain outside agencies or organizations may be able to offer students support for their work, either in the form of an RA-ship or part-time employment. Some students may be eligible for training grant support, but such support has not yet been identified.

MPH Curriculum Requirements

Core Requirements

SPHCM requirements:

- EPI 511 Introduction to Epidemiology (3)
 - OR EPI 512-513 Epidemiologic Methods I and II (3 each)
- BSTAT 511 Medical Biometry I (4)
 - OR BSTAT 517-518 Applied Biostatistics (4 each)
- HSERV 511 Introduction to Health Care and Public Health Services (3-4)
- ONE of the following:
 - HSERV 510 Society and Health (3/5)
 - HSERV 580 Society, Chronic Illness, and Disability (3)
 - HSERV 581 Health Promotion and Disease Prevention (4)
 - HSMGMT 514 Health Economics (3)

Departmental requirements:

- ENVH 405 Toxic Chemicals in the Environment (3)
 - OR ENVH 514,515,516 Environmental and Occupational Toxicology (3, each)
 - ENVH 453 Exposure Assessment for Occupational and Environmental Health (3)
 - OR ENVH 553 Instrumental Methods for Industrial Hygiene Measurement (3)
 - OR ENVH 564 Recognition of Health and Safety Problems in Industry (4)
 - ENVH 570 Occupational and Environmental Epidemiology (3)
 - ENVH 577 Risk Assessment for Environmental Health Hazards (3/4)
 - OR ENVH 472 Environmental Risk and Society
 - ENVH 580 Environmental Health Seminar (1 credit each, 3 quarters)
 - ENVH 581 Environmental Health Readings (1)
 - ENVH 583 Environmental Health Reading III
 - OR HSERV 522 Health Program Evaluation (3-4)
 - OR HSERV 523 Community Health Assessment (3)
- And one of the following Technology courses:
- ENVH 446 Hazardous Waste Management (3)
 - ENVH 490 Community Air Pollution (3)
 - ENVH 545 Drinking Water and Health (3)
 - ENVH 552 Environmental Chemistry of Pollution (3)
- (Courses in Technology not chosen can be taken as electives)

Minimum Total Credits from Required Courses =33

Selected Elective Courses

Students electing the thesis track must take at least 2 additional courses (min. 6 credits) at the 400 or 500 levels from the Department of Environmental Health.

Students electing the non-thesis track must take at least 4 additional courses (min. 12 credits) at the 400 or 500 levels from the Department of Environmental Health, and complete an approved project.

Practicum

ENVH 592 Practicum/Field Work in Environmental Health (new course number) (minimum 3 credits)

Thesis program:

ENVH 700 (minimum 9 credits)

Non-thesis program

ENVH 599 Field Studies (for project) (minimum 3 credits)

Minimum total for completion of preceding requirements: 51 credits

Total required credits for completion of MPH degree: 62 credits