MPH Project/Thesis Handbook

MIEH 786: Capstone Project in Public Health

MIEH 799: Master’s Thesis Research
I. General Information

All MIAEH Master of Public Health (MPH) students are required to complete either a capstone project (MIEH786, 3 credits) or a thesis (MIEH799, 3 credits). The completion of the capstone project or thesis, along with the completion of the internship (MIEH 785, 3 credits) fulfills the “Capstone Experience” requirement for the MPH program. The capstone project or thesis should be completed during the final semesters of the MPH program after all other required coursework is completed. The purpose of this document is to describe the requirements for both the capstone project and the thesis. The requirements for the internship (MIEH 785) are described in the MPH Internship Handbook (found on the MIAEH website).

A student may register for all 3 credits of the thesis (MIEH 799) during the semester in which it is to be finished or may register for portions of the total credit hours in each semester while working on it. An incomplete should be submitted for any MIEH 799 credit(s) taken until the thesis is completed. The student must be registered for at least 1 thesis credit of MIEH 799 the semester he/she defends the thesis. If a student opts to complete a capstone project (MIEH 786) and it is not completed in the semester for which the student registered, an incomplete contract must be processed. Thereafter, the student must register for at least one credit of independent study (MIEH 789) each semester until the project is completed. Students enroll for MIEH 786 or MIEH 799 under the section number of their faculty advisor.

When designing the capstone project or thesis, students should review the MPH competencies for the specialization in Environmental Health. All of the Environmental Health competencies must be addressed between the capstone project or thesis, and the internship. Students should work with their advisor to identify how each competency will be met during this “Capstone Experience” (capstone project or thesis + internship).
II. The MPH with Project Option

The purpose of the capstone project (MIEH 786) is to provide the student with a culminating experience where s/he applies the knowledge and skills learned in the MPH program to conduct independent work (under the supervision of the student’s advisor) on a project related to a specific environmental health issue or problem. The final project illustrates the student's understanding of the chosen environmental health issue or problem as well as her/his ability to actively apply this knowledge towards the solution of the issue or problem. Capstone projects are generally very applied in nature and provide some sort of materials, guide, or plan that can be used immediately by the community, agency or group that is facing the environmental issue or problem at hand. Examples of capstone projects include (but are not limited to) environmental health planning for a specific locality, education/outreach involving a community, and implementation of a solution to an environmental health or safety problem in a workplace.

A. Designing the MPH Project

Selecting a Project Topic: The topic of the capstone project must be relevant to the field of environmental health. Project topics and scope are mutually agreed upon by the student, advisor, and the Project Examining Committee. If a student is conducting the project at his/her workplace, the topic of the project must be outside the framework of regular employment duties and responsibilities. Similarly, if a student is conducting a project associated with the internship site that is somewhat related to the work performed during the internship, it must be made clear how the project and internship activities are different and how they culminate in different projects.

Developing the Project Proposal: After selecting a project topic, the student will prepare a written proposal (5-15 pages) that details what is to be accomplished and how it will be completed. The written proposal must be approved by both the student’s advisor and the student’s Project Examining Committee. The components of a project proposal should include, at minimum:

a. The purpose of the project
b. The significance and relevance of the project to environmental health
c. The Environmental Health MPH competencies to be addressed
d. A description of the project
e. Methods to be used in completing the project
f. The project deliverables
g. A project time line

Requesting Approval of the Project Proposal: The Project Examining Committee consists of graduate faculty members from the Maryland Institute for Applied Environmental Health or other Departments in the University. One of these must be the faculty advisor and two other members are chosen in consultation with the advisor. Consistent with the criteria for all MIAEH graduate committees, the majority of faculty on the committee must be full-time, tenure-track graduate faculty in the Maryland Institute for Applied Environmental Health who are currently conducting research in their discipline. The MIAEH Graduate Director is responsible for approving all committees.
Students must formally present and defend their proposal before the Project Examining Committee by the end of the third week of their final semester in their MPH program. These presentations and proposal defenses will occur during the annual MIAEH Capstone Project Proposal Presentation Day. During this day, each student who is proposing a project will provide a 15-minute presentation, followed by 15 minutes of discussion/questions by the Project Examining Committee. At least 10 working days before this day: (1) the proposal must be provided to the Project Examining Committee, and (2) the abstract of the proposal must be posted publicly on the department’s website. Students should complete the School of Public Health Graduate Research Meeting form at this time and have it signed by their Project Examining Committee during Capstone Project Proposal Presentation Day.

The presentation and proposal defense (that occurs during MIAEH Capstone Project Proposal Presentation Day) must be in person with the student and all Project Examining Committee members present. If there is an unforeseeable circumstance in which a committee member cannot make the presentation, that committee member may attend by teleconference. The committee may approve the proposal without revision, provisionally approve the proposal contingent on revisions, or fail the proposal. Revisions can be approved by written (e-mail is acceptable) or oral communication with committee members. A failed proposal means that the project proposal is not acceptable and must be redone and presented again to the Project Examining Committee in person. This second attempt must take place with the next two weeks of the semester or the following semester. If the project is not approved the second time, the student is dismissed from the program. No proposal can be approved until all committee members grant written approval.

Once the Project Examining Committee approves a project proposal, the members of the committee will sign the School of Public Health Proposal Approval form. The faculty advisor will then forward this to the MPH Director of Graduate Studies, who will sign the proposal approval form and place it in the student's file.

**Institutional Review Board (IRB) Approval for Human Subjects Research:**

If the project involves human subjects, IRB approval should be requested only after the proposal has been approved by the Project Examining Committee. The student’s faculty advisor is the actual IRB applicant on behalf of the student. The student may prepare the IRB application under the advisor’s direction, but the advisor must take the ultimate responsibility for the student’s work with respect to the protection of human subjects. Any student who collects data from human subjects (qualitative or quantitative) must obtain IRB approval before collecting any data. For complete details, visit the UMD IRB website at [http://www.umresearch.umd.edu/IRB/index.html](http://www.umresearch.umd.edu/IRB/index.html). Students collecting data from human subjects also need to complete an online Collaborative Institutional Training Institute (CITI) course ([www.citiprogram.org](http://www.citiprogram.org)). Typically it is the “Biomedical Research - Basic/Refresher, Basic Course” that should be completed; however, students should check with their advisors before they begin the online course. Students may choose to (and are encouraged to) complete CITI training before submitting an IRB proposal.
B. Completing the MPH Project

After the project proposal has been approved by the Project Examining Committee (and the IRB, if required), the student may begin work on the project. It is expected that the project will be conducted according to what was approved by the Project Examining Committee. If substantive changes to that proposal are sought, approval from the Project Examining Committee is required. The student must consult with the faculty advisor to determine which changes are substantive and require committee approval.

Once the project is completed, the student will prepare a written report (25-50 pages), as evidence of “scholarly writing ability,” and complete all other deliverables (if applicable) associated with the project. “Scholarly writing ability” is the ability to present one’s ideas in a clearly organized paper, with proper scholarly documentation and evidence of original research and/or critical analysis, and/or evaluation. This report is provided to the advisor for final review.

Format of project paper and other deliverables: The project paper in final form should include an approval sheet, a title page, an abstract or executive summary and a table of contents. Students should consult with their advisors for the desired final format of the remainder of the paper. Other project deliverables should take on a format agreed upon in the approved project proposal.

C. Defending the final MPH Project

The final step in completing the MPH project is to pass an oral defense conducted by the Project Examining Committee during the annual MIAEH Capstone Project Presentation Day at the end of the semester. During this day, student presenters will provide a 30-minute presentation of their project, followed by 15 minutes of discussion/questions from the Project Examining Committee. In addition to committee members, any member of the faculty or any student may attend this meeting. Committee members must receive the final project paper at least 10 working days in advance of the final presentation to the committee. Students should complete the School of Public Health Graduate Research Meeting form again and have it signed during the MIAEH Capstone Project Presentation Day.

The final MPH project will be evaluated on the following criteria (and other criteria as deemed appropriate).

1. Organization, clarity, rigor
2. Inclusion of pertinent information (includes appendices)
3. Appropriate application of Environmental Health MPH competencies
4. Relevance to environmental health

The Project Examining Committee may approve the project without revision, provisionally approve the project contingent on revision, or fail the project. Revisions can be approved by e-mail communications without the need for a formal committee meeting. A failed project means that the project is not acceptable and must be redone and presented again in-person to the Project Examining Committee in a formal meeting. This may require that the student return the next semester to repeat the project. If the student again fails the project, he/she is dismissed from the program. The project is
not approved until all committee members grant their approval with their signatures. When final approval is granted, the Project Examining Committee will acknowledge this in writing on the form titled School of Public Health MPH/MHA Project Evaluation. The advisor will forward this form to the MIAEH Director of Graduate Studies. Following final approval, the student must provide one hard copy of the project paper to the MIAEH Director of Graduate Studies. A copy of the final project paper will be placed in a file that future students may refer to. **Note:** Students are NOT required to submit a copy of the final project paper to the Graduate School.
III. The MPH with Thesis Option

Instead of completing a capstone project, a student may elect to complete the MPH thesis (MIEH799). The thesis should be completed after all other required coursework is completed. Electives may be taken concurrently with the completion of the thesis. MPH students who are considering a research-oriented career, or who plan to continue on for a doctoral degree, are strongly advised to do an MPH thesis. As noted above, a student who chooses to complete a thesis must still complete the 3-credit internship (MIEH 785) in addition to the thesis. University of Maryland Thesis and Dissertation Style Guides and Templates can be found online at www.gradschool.umd.edu. Click on Forms and Publications.

A. Designing the Thesis Research Project

Selecting a Thesis Topic: The thesis begins with a research question about some aspect of environmental health that a student wishes to answer. The purpose of the thesis is to design, conduct, and evaluate an original, independent research study to answer the research question.

Developing the Thesis Proposal: After selecting a thesis topic, the student, in consultation with her/his faculty advisor prepares a written proposal (5-15 pages) that details what is to be accomplished and how it will be done. The final structure of this proposal follows published University guidelines as referenced above. Students should begin to develop their thesis proposal the semester before they plan on defending their final thesis.

Requesting Approval of the Thesis Proposal: A Thesis Examining Committee of three faculty members must approve the thesis proposal. All three members must be members of the Graduate Faculty of the University of Maryland. One of these three must be the student’s faculty advisor, who chairs the committee. In addition to the chair, at least one other member of the thesis examining committee must be a member of the Maryland Institute for Applied Environmental Health.

When the proposal is ready for review, the student will schedule a meeting with the Thesis Examining Committee. The meeting should take place no later than December 1 if the student intends to graduate in the spring, or May 1 if the student intends to graduate in the fall. During the meeting, the student will provide a 30-minute presentation on their proposal, followed by 30 minutes of discussion/questions by the Thesis Examining Committee. The student must submit a copy of her/his proposal to the examining committee at least 10 working days in advance of the meeting. He/she must also post an abstract of the study and information about the meeting time, place and date, 10 working days before the meeting on the MIAEH website. Students should complete the School of Public Health Graduate Research Meeting form in advance of the meeting. At the proposal meeting, the thesis proposal may be approved as is, approved with revisions, or rejected. In the latter two cases, the student will revise the proposal and submit the proposal to the chair of the committee. If needed, a second formal in-person meeting may be required. NOTE: Students are limited to two formal proposal meetings.
Once the proposal is approved, committee members will provide written approval in the form of signatures on the School of Public Health Proposal Approval form. The thesis advisor forwards this form to the MIAEH Director of Graduate Studies, who will sign the form and place it in the student's file.

**Institutional Review Board (IRB) Approval for Human Subjects Research:**
If the project involves human subjects, IRB approval should be requested only after the thesis has been approved by the Project Examining Committee. The student’s faculty advisor is the actual IRB applicant on behalf of the student. The student may prepare the IRB application under the advisor’s direction, but the advisor must take the ultimate responsibility for the student’s work with respect to the protection of human subjects. Any student that collects data from human subjects (qualitative or quantitative) must obtain IRB approval before collecting any data. For complete details, visit the UMD IRB website at [http://www.umresearch.umd.edu/IRB/index.html](http://www.umresearch.umd.edu/IRB/index.html). Students collecting data from human subjects also need to complete an online Collaborative Institutional Training Institute (CITI) course ([www.citiprogram.org](http://www.citiprogram.org)). Typically it is the “Biomedical Research - Basic/Refresher, Basic Course” that should be completed; however, students should check with their advisors before they begin the online course. Students may choose to (and are encouraged to) complete CITI training before submitting an IRB proposal.

**B. Completing the Research**

After the thesis proposal has been approved (and IRB approval has been obtained, if required), the student may begin work on the thesis research. It is expected that the thesis research will conform to what was approved by the Thesis Examining Committee. Before making any substantive changes to the proposed research, approval from the examining committee is required. The student must consult with their faculty advisor to determine which changes are substantive and require committee approval.

Once the thesis research is completed, the student will prepare a final written thesis (25+ pages) to cover all aspects of the work. As noted above, University of Maryland Thesis and Dissertation Style Guides and Templates can be found online at [www.gradschool.umd.edu](http://www.gradschool.umd.edu). Click on Forms and Publications. The final thesis is then provided to the Thesis Examining Committee for final review.

**C. Defending the Thesis**

The final step in completing an MPH thesis is to successfully pass an oral defense conducted by the Thesis Examining Committee, ideally the same committee that approved the thesis proposal. Again, the chairperson and at least one member of the Thesis Examining Committee must be from MIAEH.

This committee must first be approved by the Graduate School, using the Nomination of thesis or dissertation committee form (available at [www.gradschool.umd.edu](http://www.gradschool.umd.edu), click on Forms and Publications and then click on Graduate School Forms). Note the deadline for submitting this form is 60 days prior to
the final defense. Once the Graduate School has approved the Thesis Examining Committee, the Graduate School will issue and send to the Department the Report of Examining Committee form.

Ten working days prior to the oral defense meeting, the student must give each member of the examining committee and the MIAEH Director of Graduate Studies a final copy of the completed thesis manuscript to review, and post the thesis abstract on the MIAEH website. Also the student should complete both the School of Public Health Graduate Research Meeting form and the School of Public Health MPH/MHA Project Evaluation form prior to the oral defense meeting. Any member of the faculty or any graduate student may attend the oral defense meeting, which is typically held in the MIAEH/EPIB conference room.

During the oral defense, the student provides a 45-minute presentation, followed by 15 minutes of questions from anyone attending the defense (“the public”). Everyone except the Thesis Examining Committee will then be excused and the Thesis Examining Committee will continue to ask the students a series of questions. This portion of the defense generally lasts up to 1 hour. Three things can happen at the conclusion of the oral defense: the thesis can be accepted as is, can be rejected, or can be accepted on the condition that certain changes are made within a specified time frame. When final approval is granted, the Thesis Examining Committee will sign and submit the Report of Examining Committee form to the Graduate School, and sign and submit the School of Public Health MPH/MHA Project Evaluation form to the MIAEH Director of Graduate Studies. After passing the oral defense, the student must submit an electronic copy of his/her thesis to the Graduate School (submit on-line at www.gradschool.umd.edu/etd/) and one hard copy to the MIAEH Director of Graduate Studies.
MPH Project/Thesis Frequently Asked Questions

1. For MPH projects/theses, can we turn in IRB approval the semester BEFORE graduation? For example, if we plan to graduate in May, can we submit the project proposal and IRB proposal a semester before?
You can only submit to the IRB once your examination committee has approved your proposal. Your examination committee can only approve your proposal when you are registered for either thesis or project credits.

2. What are some of the pros and cons of choosing a project over a thesis or choosing a thesis over a project?
If you plan on conducting research or pursuing a doctorate, a thesis will better prepare you for future work in research. Completing a thesis will allow you to engage in a formal research process, which may include submitting a manuscript for publication. If you are more interested in applied public health and not planning on pursuing a doctorate, then a project may be more suitable since projects tend to contribute applied knowledge to the solution of an immediate problem faced by a community, agency or other group.

3. When would a good time be to discuss your project/thesis with our advisor?
You should begin to discuss your project/thesis ideas with your advisor in the beginning of the semester before you will conduct your project/thesis so that you have time to get everything in order for your work.

4. When should we officially present the project/thesis proposal, start the IRB process, etc.?
The guidelines stipulate that your project/thesis proposal must be completed and approved by your committee no later than December 1 for spring graduation or May 1 for fall graduation.

5. What is the nature of a successful MPH project/thesis? Does it need to include data analysis, meta analysis, etc.?
A successful MPH project/thesis demonstrates the goal competencies and skills of the degree. If you could have done the same MPH project before you entered the program, it is not a successful MPH project. If on the other hand, a successful MPH project exhibits theoretical and/or methodological competencies expected of an MPH, and has challenged you to your limits, it is probably a very good project/thesis.

6. How would one go about finding an advisor?
Your academic advisor is your MPH project/thesis advisor.

What role does your advisor play in the project?
Reviews and approves your work. He or she may also serve in a mentoring capacity depending on the situation.

Is my advisor purely a guiding force, or should he/she collaborate with me in some way?
Your advisor is to be your mentor and provide guidance regarding the valid execution of your project/thesis and your evaluator. He/she is not your collaborator as this should be your independent work and demonstrate your personal competency and capacity.

7. What is the general timeframe (from start to finish) of the project?
The project is to be conducted during the final semester. The thesis is to be conducted during the final two semesters.

8. What can we do for the project that isn’t human subjects related (not having to go through the IRB)?
   The IRB is not to be feared. It is a good experience for students to go through the IRB process. But if you do not collect data from human subjects, IRB is not required.


10. How long are the final written reports? 25-50 pages.

11. Since it is possible that the proposal can be rejected or approved with certain changes, how early in the process should the proposal defense be done?
   For the project, the proposal should be defended no later than the end of the third week of your final semester in the MPH program. For the thesis, the proposal should be defended no later than December 1 for spring graduation and May 1 for fall graduation.

12. Is it possible for a project/thesis to be rejected and for the student to be unable to graduate?
   Yes. This is an evaluated activity and if the student does not demonstrate MPH competency, it is the faculty’s responsibility not to graduate them.