



SCHOOL OF  
**PUBLIC HEALTH**

**Department of Epidemiology and Biostatistics**

**MPH Project Handbook**

**EPIB 786: Capstone Project in Public Health (3 credits)**

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**Department of Epidemiology and Biostatistics  
School of Public Health  
University of Maryland, College Park, MD 20742  
MPH Project Guidelines**

## **I. General Information**

The MPH project (**EPIB786**) is a 3-credit course. The project is a capstone experience and should be completed at the end of the program. The internship (EPIB778) and elective coursework may be taken concurrently with the project.

Students enroll for EPIB 786 under the section number of their faculty advisor (or the faculty member who is supervising the project). If the MPH project (EPIB 786) is not completed in the semester for which the student registered, an incomplete contract must be processed. A student must be registered for at least 1 credit in the semester they graduate. If the student does not complete his/her project during their final semester, and they are not enrolling in any additional courses, students must be registered for at least 1-credit of Independent Study (EPIB798) each semester until the project work is completed and defended.

When designing the project, students should review the MPH competencies for Epidemiology and Biostatistics. Students must address each competency between the internship and project. Students should work with their advisor to identify how each competency will be met between the two activities.

## **II. The MPH Project**

The purpose of the final project is to provide the student with a culminating capstone experience where she/he applies the knowledge and skills learned in the MPH program to a specific public health issue or problem. The final project illustrates the student's understanding of epidemiologic and/or biostatistics methods, principles, and processes, as well as her/his ability to actively apply this knowledge and demonstrate acquisition of the necessary skills. The final project must also adequately demonstrate MPH degree competencies (listed in appendix). Under the supervision of the student's advisor, the student will conduct independent work on a project related to either the epidemiology or biostatistics specialization.

The MPH project is an independent project separate from the internship and current work experiences. However, a student may identify a project based on their internship as long as it is a totally separate and independent activity. For example, if you are preparing a report for your internship you cannot use the same report for your project. Any student who wants to complete his/her internship and project at the same location or on a similar topic must clearly state in their project proposal how the two experiences are distinctly different. If a student is conducting a project at his/her workplace, the project must be outside the framework of regular employment duties and responsibilities.

## A. Designing the MPH Project

**Selecting a Project Topic.** The MPH project must be completed in your final semester of the MPH program. The topic must be relevant to the field of public health in either epidemiology or biostatistics. Project topics and scope are mutually agreed on with the student, advisor, and the project examining committee.

**Biostatistics** projects may include using biostatistics methods to determine associations between exposure(s) and outcome(s) or analysis of trends in a public health outcome of interest.

**Epidemiology** projects may include using epidemiologic methods to determine if associations between exposure(s) and outcome(s) exist or evaluating population groups at risk for public health outcomes

Students may select one of two MPH project approaches, the research report or a literature review.

- **Research Report:** this involves the analysis, and/or interpretation of data to address a public health problem. Students may also collect and analyze their own data, but this will most likely take longer than 1 semester to complete. Components of the report include a literature review describing the public health problem, an assessment of the problem and its magnitude, evaluation of its causes and determinants, and a discussion of prevention and intervention strategies.
  - *Secondary Data Analysis:* This option is an analysis of an existing data set. Appropriate IRB approval may need to be obtained for any project that uses data gathered from human subjects. Even in cases where the data is de-identified, a determination should be sought from the IRB office. Final deliverables might be a research brief or fact sheet.
  - *Primary Data Analysis:* Work for the MPH capstone can also involve the collection of data. Data collection for the capstone is usually in the context of an ongoing study, but it is also possible (although not recommended) for MPH students to initiate an original study under the guidance of an EPIB faculty member. In the latter case, the student should allow substantial lead time for research planning and IRB approval. This option may also take more than one semester to complete.
- **Literature Review:** this involves the analysis of an important public health problem through a survey of current literature on the topic. Components of the review include a description of the problem, an assessment of the problem and its magnitude, discussion of its causes and determinants, and a discussion of prevention and intervention strategies if applicable.

**Developing the Project Proposal:** After selecting a project topic, the student will prepare a written proposal that details what is to be accomplished and how it will be done. Approval from both the advisor and from the student's Project Examining Committee is necessary before the student may begin work on the project.

The components of a project proposal should include, at minimum:

Chapter 1: Introduction (2-3 pages)

- Significance of the project
- Specific aims of the project
- Review of relevant literature
- Relevance to public health and epidemiology or biostatistics

Chapter 2: Methods for a **Research Report** (3-4 pages)

- Describe the data set to be used
- Variables (independent, dependent, co-variates etc)
- Statistical methods for the analysis
- Sample data tables
- Project time line

Chapter 2: Methods for a **Literature Review** (3-4 pages)

- Flow chart documenting article selection
- Methods for article selection process including article eligibility and exclusion criteria, names of the database(s) for article searches, and search terms
- Summary table of eligible articles to describe key components and findings
- It is recommended that students use the PRISM guidelines as a checklist for criteria to consider in their literature review (<http://www.prisma-statement.org/>)
- Project time line

Appendix

- EPIB MPH competencies to be addressed
- A statement on the relationship of the project to the internship experience

**Requesting Approval of the Project Proposal:** The Project Examining Committee consists of at least 2 graduate faculty members from the Department of Epidemiology and Biostatistics. One of these must be the faculty advisor and the second member should be chosen in consultation with the advisor. With faculty advisor approval, the student may invite a third member (UMD faculty or non-UMD faculty, e.g. an NIH employee) to be part of the Project Examining Committee. The EPIB Graduate Director is responsible for approving all committees.

**Students must formally present and defend their proposal to the Project Examining Committee no later than December 1 for spring graduation, and May 1 for fall graduation.** The student must submit a copy of his/her proposal at least 10 working days in advance of the meeting. The proposal defense meeting is between the student and his/her committee members and is not an open meeting.

At the same time the student submits her/his proposal to the committee they should complete the google survey ***MPH Project Reporting form***. The link for the form is: [https://docs.google.com/forms/d/e/1FAIpQLSdpWcZyBBI2oTN4ml4QcslG3tm6P8Mb4xd6\\_0TClla8uUf25g/viewform?usp=sf\\_link](https://docs.google.com/forms/d/e/1FAIpQLSdpWcZyBBI2oTN4ml4QcslG3tm6P8Mb4xd6_0TClla8uUf25g/viewform?usp=sf_link)

The presentation and defense of the proposal must be in person with the student and all Project Examining Committee present. If there is an unforeseeable circumstance in which a committee member cannot make the presentation, that committee member may attend by teleconference or video conference call. The committee may approve the proposal without revision, provisionally approve the proposal contingent on revision, or fail the proposal. Revisions can be approved by written (e-mail is acceptable) or oral communication with committee members. A failed proposal means the project is not acceptable and must be redone and presented again to the project examining committee in person. This second attempt must take place within 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 committee approves a project proposal, the members of the committee will sign the *SPH Proposal Approval Form*. The faculty advisor will then forward this to the Director of Graduate Studies, who will sign the proposal approval form and place it in the student's file. All changes to the proposal must be approved within three weeks of the first day of classes in the semester in which the student intends to complete the project.

**Human Subjects Approval:** 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 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, see **POLICIES AND PROCEDURES PERTAINING TO RESEARCH/PROJECTS INVOLVING HUMAN SUBJECTS**, available at (<http://www.umresearch.umd.edu/IRB/index.html>).

**Citations:** References and citations should follow the National Library of Medicine's Citing Medicine format (<http://www.ncbi.nlm.nih.gov/books/NBK7256/>) since that is the format that a large number of journals use (including many epidemiology and public health journals)--see Uniform Requirements for Manuscripts Submitted to Biomedical Journals from the International Committee of Medical Journal Editors ([http://www.icmje.org/urm\\_main.html](http://www.icmje.org/urm_main.html)).

When reporting their own research findings and methods, students should aim as much as possible to be consistent with major biomedical research reporting guidelines ([http://www.nlm.nih.gov/services/research\\_report\\_guide.html](http://www.nlm.nih.gov/services/research_report_guide.html)). For example, guidelines for reporting research findings and methods exist for observational studies (<http://www.strobe-statement.org/Support.html>) and clinical trials (<http://www.consort-statement.org/>).

## B. Completing the MPH Project

After the project proposal has been approved (and Human Subjects approval obtained if required), the student may begin work on the project. It is expected 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 examining committee is required. The student must consult with the faculty advisor to determine which changes are substantive and require committee approval.

The student is required to prepare a written report as evidence of scholarly writing ability. "Scholarly writing ability" is the ability to present in a clearly organized paper, with proper scholarly documentation, evidence of original research and/or critical analysis, and/or evaluation. This report is provided to the Project Examining Committee for final review.

The project report must include a variation on the outline below. Most students will be conducting analysis, if your project does not fit this outline please work with your advisor to develop an outline that better fits your work:

### *Title Page*

- MPH Project
- Title
- Date
- Committee Members (Advisor first)

### *Chapter 1: Introduction*

- Purpose/aims of the project
- Significance of the project
- Review of relevant literature
- Relevance to public health and epidemiology or biostatistics

### *Chapter 2: Methods*

- Description of Sample
- Description of variables and how they were measured
- Methods used in completing the project

### *Chapter 3: Results*

- Findings from the analysis (includes tables, figures, etc.)

### *Chapter 4: Discussion*

- Comparison of results with other studies
- Strengths and limitations of the study
- Conclusions

### *Appendix*

- Actual Project Timeline
- IRB Approval/Waiver
- Statement of project and how it is different from the internship experience
- Table describing the EPIB MPH BIOS or EPDM competencies addressed in the project and how each was met

## C. Submitting the Final MPH Project

The final written project document should be submitted to the Project Examining Committee before the date established by the graduate school for graduation (if graduating in the semester you are completing the project). **Committee members must receive the final report at least 10 working days in advance of this date so the committee has time to review and students have time to make any required edits.**

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

1. Organization, clarity, rigor
2. Inclusion of pertinent information (includes appendices)
3. Appropriate application of MPH competencies
4. Relevance to epidemiology or biostatistics
5. Timeliness

The Project Examining Committee may approve the project without revision, provisionally approve 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 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 signature. When final approval is granted, the project examining committee will acknowledge this in writing on the form titled *MPH-MHA Project Evaluation* and forward their results to the Director of Graduate Studies. Following final approval, the student must provide one hard copy and an electronic copy of the project to the Director of Graduate Studies. One copy of the project will be placed in the Department for examples that future students may refer to it as an example.

## D. EPIB Project Symposium

All students who defend their projects will give a short **10-minute oral presentation** during the EPIB project symposium. The presentation should describe the project methods and results. All EPIB faculty and graduate students will be invited to attend. The group presentation session will be scheduled during the last week of classes. This presentation is mandatory.

## D. Important Deadlines

**Final Defense & Graduate Forms Deadline:** The final oral defense and any changes that need to be made must be completed before the Graduate School Deadline for graduation forms which is set each semester ([www.gradschool.um.edu](http://www.gradschool.um.edu)). You do **NOT** have until the last day of class or until finals week. You must submit the *Certification of Master's Degree without Thesis Form* to the graduate school by their deadline to inform them that you have completed all degree requirements. Your project must be completed by the time the form is due to the graduate school. Go to

[http://www.gradschool.umd.edu/current\\_students/deadlines\\_for\\_graduate\\_students.html](http://www.gradschool.umd.edu/current_students/deadlines_for_graduate_students.html) for the current Graduate School deadlines for graduating students.

**Note:** Students are not required to submit a copy of the completed project to the Graduate School.



## MPH Project Frequently Asked Questions

- 1. For MPH projects, 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.*

- 2. What does the MPH project presentation entail? Is it simply a basic overview of the project?**

*The presentation should be brief, about 10 minutes, and summarizing the key aspects of your MPH project.*

- 3. When would a good time be to discuss our project with our advisor?**

*You should begin to discuss your project ideas with your advisor in the beginning of the semester before you will conduct your project so that you have time to get everything in order for your work in the last semester.*

- 4. When should we officially present the project, start the IRB process, etc.?**

*As this is a capstone experience, the project is during your last semester. The guidelines stipulate that your project proposal must be completed and approved by your committee no later than December 1 for spring graduation or May 1 for fall graduation. Once your proposal is approved, if appropriate, you must obtain IRB approval for the project. You submit your final project to your committee for final grading at least 10 days in advance of the graduate school certification of graduation deadline. It is up to the student to know this deadline (<https://gradschool.umd.edu/calendar/deadlines/academic-deadlines>).*

- 5. What is the nature of a successful MPH project? Does it need to include data analysis?**

*A successful MPH project demonstrates the program 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. The project should be an independent research experience or literature review that exhibits theoretical and/or methodological competencies expected of an MPH.*

- 6. How would one go about finding an advisor?**

*Your academic advisor is your MPH project advisor.*

**What role does our 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 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?**

*Projects should be proposed in the semester before it will be completed. The project work is conducted during the final semester.*

**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.*

**9. How long is the typical project proposal?**

*8-10 pages.*

**10. How long are the final written reports?**

*25-50 pages.*

**11. Since the project committee can reject the project or approve it with certain changes, how early in the process should this be done?**

*The final project should be submitted to the committee no less than 10 days before the graduate school deadline for that semester. If there are major revisions requested by the committee, students need to have time to make the revisions and have them approved by the committee before the graduate school deadline. If the student cannot make the deadline then he/she will officially graduate the following semester.*

**12. Is it possible for a project 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.*

**For more information, please visit our Department of Epidemiology and Biostatistics' website <https://sph.umd.edu/departement/epib> and Graduate School's website <http://www.gradschool.umd.edu> for the most current forms and deadlines**