



SCHOOL OF
PUBLIC HEALTH

**Department of Epidemiology and Biostatistics
University of Maryland School of Public Health**

MPH Internship Program Handbook

EPIB778 Internship in Public Health

For Students Who Started the MPH Program Fall 2018 or later

June 2018

I. Introduction

A public health internship is a requirement for the Master of Public Health degree. The internship provides an opportunity to apply classroom- learned public health knowledge to professional practice experience and allows for the development of practical skills in a supervised environment necessary for a career as a public health professional. It is a separate experience from the MPH project requirement. If students are full-time employees, the internship must be separate and distinct from the student's regular job assignments/duties.

II. Internship Purpose

This internship is designed to enable students to gain practical experience as professionals under conditions conducive to educational development. The internship is a time-limited, supervised period of epidemiology and/or biostatistical activities carried out in a public health organization that works with epidemiologic studies and/or uses biostatistical methods. The internship provides students with the opportunity to integrate and apply knowledge and skills obtained in the MPH program. Students gain practical experience in management of epidemiologic studies, data analysis, epidemiologic research, and program evaluation. Students identify specific internship learning goals and select an appropriate work environment that offers opportunities to achieve the goals.

The internship should address specific core competencies of the MPH in biostatistics and epidemiology (appendix). The student will identify which of the competencies will be met during the internship experience and which competencies will be met during their MPH project. All core competencies should be met between both experiences (internship and project).

III. Course Information

The objectives of the course are to:

1. Improve skills through on-the-job experiences.
2. Communicate epidemiologic and/or biostatistics information to lay and professional audiences.
3. Explain and demonstrate program administration and organizational leadership.

Completion of all assignments is required. Satisfactory mid-term and final site preceptor evaluations are required.

Grading is based on the following:

- 10% Participation in three face-to-face meetings (orientation, outgoing student internship presentations, final internship presentation)
- 15% Learning objectives, Competencies, and Site Confirmation form
- 10% Internship Educational Plan
- 15% Bi-weekly progress reports
- 20% Mid-term and final evaluation by site preceptor
- 15% Internship report
- 15% Final Internship presentation

Four (4) credits of EPIB778 are required for graduation. Each credit requires a minimum of 80 contact hours at the placement site, for a total of at least 240-320 hours (~16 hours per week). We expect most students to complete all 4 credits in one semester, but students have the option of spreading the credits out over two semesters. Students may also enroll in EPIB778 during the summer.

IV. Internship Preparation – The Semester BEFORE the Internship

During the semester prior to the internship, the student must accomplish these tasks:

1. Attend an Internship Orientation meeting (**Meeting 1**) to review expectations and requirements.
2. Develop **learning objectives**
3. Meet with your faculty advisor to review plan and objectives and review MPH competencies specific to your program
4. International students should be aware of the employment requirements for students on visas (this applies to internships). Contact the International Student Services when you are preparing to start your internship to determine the requirements for your particular visa <https://globalmaryland.umd.edu/offices/international-students-scholar-services/continuing-students-0>
5. Identify potential **internship sites** consistent with meeting learning objectives
6. Contact sites, identify field site preceptor, interview, and choose site. Provide site with the handout “Hosting an MPH Intern” (appendix). Students must submit the Site Confirmation form to ensure that your internship site is approved by the EPIB Internship Coordinator.

7. Submit the following **pre-internship assignments** to the EPIB778 Pre-Registration Canvas site (forms can be downloaded from the canvas site, see deadlines in appendix):
 - Learning Objectives
 - Internship Site Confirmation
 - MPH competencies addressed during the internship
8. If your internship site requires that you sign an internship agreement/contract, this form must be submitted to the EPIB Internship Coordinator to be routed through the SPH Dean's office and the UMD Legal Office. This process should be started immediately upon receiving the form since it may take a few weeks to complete.
9. Attend the presentations by outgoing EPIB MPH students (**Meeting 2**)
10. Register for EPIB778

Internship Orientation Meeting

This is a mandatory for students to attend the Internship Orientation Meeting the semester prior to the Internship semester. The Orientation Meeting typically takes place within three weeks after the start of classes. The EPIB Internship Coordinator will explain the requirements and deadlines for the internship. After the meeting the Internship Coordinator will give you access to the EPIB778 Pre-Registration Site in Canvas. All forms are electronically available and can be downloaded, completed, signed (when necessary), and uploaded in Canvas.

Learning Objectives

These are statements about competencies, skills, knowledge, or understandings that the student plans to achieve in order to enhance his/her public health knowledge and practice abilities, and to optimize a future professional employment placement. The learning objectives should be specific, measurable, and be able to be completed within the time period of the internship experience. The educational plan follows the learning objectives and details the specific internship activities that will be done to meet the learning objectives (see appendix for a description of the assignment).

Students should have at least **three learning objectives** identified prior to the internship semester. The learning objectives must be discussed with the academic advisor and must be approved by the EPIB Internship Coordinator at least one month prior to the end of the semester before the internship starts (i.e., for spring internship they must be approved by mid-November).

Internship Site and Site Preceptor Selection

Internship Site: It is the student's responsibility to choose an internship site, but with the consultation of the EPIB Internship Coordinator. Sites can be located from the University of Maryland School of Public Health approved internships site directory, from organizations seeking interns, from formal internship programs, from faculty connections with organizations, from other students, or from networking at professional meetings. When a student finds a potential internship site, he/she should assess how the site will help achieve his/her learning goals. If the site appears appropriate the student will schedule an interview (either in person or

by telephone) with a site contact to discuss possible internship opportunities. ***The internship site must be approved by the EPIB Internship Coordinator.***

If the internship site is part of a formal internship program, it is the student's responsibility to complete the necessary application materials. Applications for paid summer internships with U.S. Government agencies (NIH, FDA, NCHS, etc.) are usually due by November for the following summer.

Internship sites must:

- Be an organization, agency, or community in which the student can meet his/her learning objectives
- Provide an internship/site preceptor who is willing and able to spend regularly scheduled time with the student to provide guidance
- Be willing to increase student responsibility and independence over the course of the internship
- Require that the student complete the internship on site, and provide work space and resources in order to do so

Site preceptor selection: The site preceptor must have expertise in the assigned project areas and sufficient time, expertise, and interest to mentor the student during the internship. The site preceptor will need to provide on-site supervision of the intern's work and be able to meet with the student regularly to discuss progress and other issues related to the student's activities. The ability to provide constructive feedback to the student is crucial. The site preceptor also must agree to complete the internship evaluation forms mid-way and at the end of the student's internship.

MPH Competencies

Students are required to develop pre-internship competencies based on their Learning Objectives and the work students foresee completing during their internships.

Internship Meeting 2 (at the end of the semester)

Students are required to attend the **Final Presentations** conducted by outgoing EPIB Internship students the semester before starting the internship. This provides insight into previous student internship experiences.

V. Internship Process – Internship Semester

During the Internship semester, the student must accomplish these tasks (all forms, final report and PowerPoint presentation should be uploaded to the EPIB778 course Canvas site):

1. Develop the **Internship Educational Plan** in consultation with the Site Preceptor
2. Upload **Progress Reports** on due dates (at least bi-weekly) for review by the Internship Coordinator
3. Provide the Site Preceptor with the **Mid-Internship Evaluation Form**, sign and upload it
4. Develop the **Final Internship Report**

5. Give the **Final Internship Presentation**
6. Provide the Site Preceptor with the **Final Evaluation Form**, sign and upload it

Internship Educational Plan

The educational plan provides detail on what the student plans to do during the internship. The educational plan is tied to the learning objectives. The plan is initially developed with the student and field site preceptor, and then reviewed and revised with the EPIB Internship Coordinator. The initial plan should be uploaded to the Canvas site no later than the end of the second week of the internship semester. The educational plan has the following components:

1. Title Page (name, site, site preceptor, academic advisor, start and end dates)
2. Brief description of the internship
3. Description of how this internship is consistent with student's career goals
4. Tentative dates that the intern will meet with the field site preceptor for formal evaluation of progress
5. Learning objectives
6. Complete the table by listing the internship projects you will be working on, the proposed product or deliverables for that project, deadlines/tentative due dates for deliverables, and specific learning objectives addressed by the project.
7. Approval Signatures

Progress Reports and Correspondence with EPIB Internship Coordinator

The student will upload biweekly progress reports for review by the EPIB Internship Coordinator at least every 2 weeks during the internship. These Progress Reports should be uploaded into the course Canvas site. Communications with the EPIB Internship Coordinator should be done via Canvas e-mails.

Institutional Review Board

If you will be involved in any type of human subjects' research (e.g. data collection, analysis of identifiable data) during your internship you must submit an application to the UMD Institutional Review Board. Students should discuss this possibility with their faculty advisor as soon as possible since IRB approval can be a long process. See the IRB website for more information <http://www.umresearch.umd.edu/IRB/index.html>.

Field Site Preceptor Evaluations

The field site preceptor will complete and sign a mid- and a final internship evaluation form.

Final Presentation and Report:

The oral presentation (10 min.) should provide an overview of the internship experience summarizing the results of the report for presentation to the class and EPIB faculty. The presentation should also include a table summarizing the MPH program competencies met during the internship experience and a summary of the specific activities for each competency. Presentations will be made during a specified time at the end of the semester.

A final report should include the same information as the presentation but in more detail with examples of the deliverables. The report should expand on the internship educational plan and how it was met or changed over the course of the internship, including:

1. A brief description of the internship site and public health issues it addresses, the department/unit mission and how that fits into the organization's broader structure.
2. Application of the results to public health;
3. Specifics of how the student learning objectives were met
4. Evaluation of the internship placement; and
5. A copy of the thank-you letter written and sent to the field site preceptor.

The report is required by the end of the semester in which the student is registered for the internship. A student cannot receive a grade for EPIB778 without submitting a final report. The final report must be submitted as an electronic copy. Electronic copies will be stored on a server and will be available for future students to peruse as examples.

VI. Summary of Responsibilities

Student

- Semester Before Internship
 - Identify core MPH program competencies for the internship experience
 - Develop internship learning objectives
 - Meet with faculty advisor to discuss and refine learning objectives and finalize core competencies addressed during internship experience
 - Attend the Internship Orientation Meeting, led by the EPIB Internship Coordinator to begin planning internship selection and be given access to the EPIB778 Pre-Registration Canvas site
 - Identify potential internship sites; if needed, seek support from your faculty advisor, the EPIB Internship Coordinator, other EPIB faculty, the EPIB internship database, etc.
 - Interview sites and narrows choices. Provide each site with the handout "Hosting an MPH Intern" (appendix)
 - Inform EPIB778 Internship Coordinator of internship site and site preceptor for final approval of internship using the the Site Confirmation form
 - Attend EPIB778 internship presentations
 - Register for EPIB778

- Internship Semester
 - Develop internship educational plan with site preceptor
 - Submit educational plan through the EPIB778 Canvas site
 - Complete all EPIB778 assignments, including bi-weekly progress reports, evaluations, hours log, final report, final presentation, etc. and upload them by their respective deadlines to the course canvas site.
 - Provide professional, quality work
 - Comply with the policies and procedures of the organization
 - Work with site preceptor to strengthen weaknesses and build upon strengths that become apparent during the internship
 - Prepare and give an oral presentation on the internship experience
 - Formally thank the field site preceptor and organization for the internship opportunity

Faculty advisor

- Semester Before Internship
 - Meet with student to discuss and refine learning objectives
 - Meet with student to discuss core MPH competencies addressed during the capstone experience (MPH internship and project).
- Internship Semester
 - Work with student if IRB approval is required
 - Attend final presentation of internship experience, assess core competencies met during internship

EPIB Internship Coordinator

- Semester Before Internship Begins
 - Manages the Pre-Internship Canvas site
 - Conduct the Internship Orientation session for students planning to do their internship the following semester. This session guides students in identifying an appropriate internship site and reviews requirements and deadlines
 - Meet with students individually or in groups, as needed, to discuss their internship site options and assess how a site will help achieve their learning goals
 - Update information on available internship sites and informs interns about new sites seeking interns
 - Approve new internship sites
- Internship Semester
 - As needed, meet with student to discuss and refine educational plans
 - Maintain regular contact with student to assess progress of internship through bi-weekly progress reports
 - Grade assignments
 - Set date and attend final presentation of internship experience, assess core competencies met during internship

Site Preceptor

- Semester Before Internship Begins
 - Sign the Site Confirmation Form
 - Participate in a site approval call with the EPIB Internship Coordinator

- Internship Semester
 - Work with the intern to help him/her develop their internship educational plan to meet learning objectives, approve and sign the plan
 - Orient the intern to the work environment
 - Provide work space and needed resources to the intern
 - Mentor the intern and provide constructive feedback on progress
 - Complete a mid- and final written evaluation on the intern's progress and performance

Appendices

1. MPH Program Competencies
2. Required Internship Forms/Assignments
3. Internship Learning Objectives
4. Hosting an MPH Intern (given to potential internship sites by student)

EPIB MPH Program Competencies

MPH in Biostatistics	MPH in Epidemiology
1. Meet the core-specific competencies for the MPH degree.	1. Meet the core-specific competencies for the MPH degree.
2. Describe and apply basic concepts of probability, random variables, and commonly used statistical probability distributions.	2. Investigate a public health problem in terms of magnitude, person, time and place.
3. Distinguish among the different measurement scales or types of variables and select appropriate descriptive statistical methods for summarizing public health data.	3. Explain the importance of epidemiology for informing scientific, ethical, economic and political discussion of health issues.
4. Select appropriate inferential statistical methods to answer research questions relevant to public health research.	4. Apply the basic terminology and definitions of epidemiology.
5. Conduct descriptive and inferential statistical analyses that are appropriate to different basic study designs used in public health research.	5. Define and calculate basic epidemiology measures of disease frequency and measures of association between risk factors and disease.
6. Critically evaluate statistical analyses presented in public health literature.	6. Define and calculate advanced epidemiology measures.
7. Perform appropriate sample size and power calculations to ensure that the study is sufficiently powered to achieve the scientific aims.	7. Differentiate among the criteria for causality.
8. Use statistical analytical software packages (e.g. SAS, R, STATA) to describe, explore, and summarize data as well as perform statistical procedures.	8. Draw appropriate inferences from epidemiologic data.
9. Identify statistical approaches to address threats to validity in epidemiologic studies.	9. Describe epidemiologic study designs and assess their strengths and limitations.
10. Demonstrate skills in public health data management	10. Evaluate the strengths and limitations of epidemiologic reports.
11. Communicate results of statistical analyses to lay and professional audiences.	11. Demonstrate skills in public health data management.
	12. Communicate epidemiologic information to lay and professional audiences.

Required Forms for EPIB778 Public Health Internship

All EPIB778 assignment forms are posted on the EPIB778 Pre-Registration Canvas site and the EPIB778 Course Canvas Site. You will have access to the Pre-Registration site once you attend the orientation meeting.

Assignments with Approximate Due Dates

	Spring Internship	Summer Internship	Fall Internship
Internship Orientation Meeting	In the first 3 weeks of the Fall semester	In the first 3 weeks of the Spring semester	In the first 3 weeks of the Spring semester
Learning Objectives	No 15	April 15	April 15
Site Confirmation	Dec. 1	May 1	May 15
Site Approval Call to Site Preceptor	by Dec. 15	by May 31	by May 31
Start Date	Start of Semester	Start of Semester	Start of Semester
Educational Plan	Feb. 7	Jun. 7	Sept. 15
Competencies Pre-	Feb. 7	Jun. 7	Sept. 15
Progress Report (1)	End-Feb.	Mid-Jun.	End-Sep.
Progress Report (2)	Mid-Mar.	End-Jun.	Mid-Oct.
Progress Report (3)	End-Mar	Mid-Jul.	End-Oct.
Progress Report (4)	Mid-Apr.	End-Jul.	Mid-Nov.
Progress Report (5)	End-Apr.	Mid-Aug.	End-Nov.
Preceptor Mid-term Evaluation	Mar. 15 or after 120 hours	Jul. 15 or after 120 hours	Oct. 15 or after 120 hours
Preceptor Final Evaluation	May. 15 or at the end of 240 hours	Aug. 15 or at the end of 240 hours	Dec. 15 or at the end of 240 hours
Presentation and Final Report	Around May. 1	Around Aug. 10 or Dec. 1	Around Dec. 1

MPH Internship Learning Objectives

Requirements: 3-4 learning objectives identified prior to the internship semester.

Deadline: These must be approved by the EPIB internship coordinator at least one month prior to the end of the semester before the internship starts

The learning objectives and internship educational work plan are the foundation for the internship experience. The learning objectives sought from this experience are agreed upon by the student, field site preceptor, and internship coordinator.

Learning objectives are statements about competencies, skills, knowledge, or understandings that the student plans to achieve in order to enhance his/her public health knowledge and practice abilities, and to optimize a future professional employment placement.

The learning objectives should be specific, measurable, and be able to be completed within the time period of the internship experience. The educational plan follows the learning objectives and details the specific internship activities that will be done to meet the learning objectives.

Use Blooms Taxonomy to assist you with writing your measureable objectives (https://www.youtube.com/watch?v=Qfp3x_gx5IM).

To develop learning objectives, the student should consider the knowledge, skills, and experiences he/she would like to experience. Please make sure that you use your MPH program competencies as a guideline for developing your learning objectives. Your learning objectives may follow these four areas:

1. **Personal development:** What are your personal needs in regard to advancing your education in epidemiology or biostatistics?
2. **Academic learning:** Think about topics in which you have academic curiosity. Develop goals that will help you make discoveries or study an area in greater depth.
3. **Career development:** You might want to explore the different options available to someone graduating with an MPH concentration in epidemiology or biostatistics
4. **Skill development:** You may want to gain or hone skills such as how to manipulate large data sets, develop a data management system, evaluate a program's effectiveness, design or conduct a survey, gain experience conducting advanced biostatistical methods

Other questions for students to ask themselves as they develop learning objectives are:

1. Is there a target population, target exposure, or target outcome you are most interested in working with?
2. Is there a specific agency in which you are most interested? Do you want to learn more about health departments, hospitals, government agencies, research agencies, non-profit organizations?

Sample Learning Objectives from Previous EPIB Student

Epidemiology Students

1. Strengthen public health data analysis and management skills by working hands on with a large dataset.
2. Gain experience in assessing the public health needs of a minority population and work with Public Health professionals to address these needs
3. Strengthen public health data editing, coding, analysis and epidemiologic calculation skills by working with the NEHRS survey dataset in SAS.
4. Gain experience working with government officials to address public health needs while demonstrating organizational leadership and program administration skills.
5. Use biostatistical methods to analyze the relationship between access to care and health outcomes.
6. Apply skills to manipulate and manage large national datasets.
7. Explore career possibilities in the federal government.
8. Learn about job strain and its effect on one's mental and physical health
9. Develop the ability to analyze primary data and communicate epidemiological information to lay and professional audiences
10. Develop potential policies and compliance strategies that will assist in minimizing risk for the public's health.
11. Gain further insight into cancer survivorship by determining the causes of death among cancer survivors.

Biostatistics Students

1. To develop proficiency in programming and data management skills
2. To learn and apply new statistical method such as Bayesian mixture modeling
3. To perform data analyses, interpret and communicate statistical results to lay and professional audiences
4. Employ quantitative techniques through the use of SAS and other statistical computing packages to apply descriptive and inferential methods.
5. Learn the skills required of data mining and/or manipulating large data sets for statistical analysis. Learn to apply appropriate statistical techniques to answer questions in public health projects.
6. Develop my experience in using statistical software, such as SAS, STATA.
7. Learn to manipulate large dataset.
8. Learn to perform appropriate quality control procedures for collection and analysis of public health data.
9. Learn how to conduct a statistical analysis from beginning to end: data management, exploratory analysis, formal modeling, making tables and graphs, and writing up the analysis and results
10. Learn and apply modern methods for longitudinal data analysis using marginal (GEE) models and random effects models
11. Learn how to organize and manage large datasets for statistical analysis



Hosting an MPH Intern

Thank you for taking the time to interview a potential intern from the Department of Epidemiology and Biostatistics. Internship placements are typically for a full semester and students will be enrolled in EPIB778 Public Health Internships (4 credits). Students are expected to work a minimum of **16 hours a week** at their internship site, for the duration of the 15-week semester, however, this may vary according to the internship (e.g. if the internship spans over two semesters). The objectives of the internship are for students to improve skills in epidemiologic and/or biostatistical methods through on-the-job experiences, communicate epidemiologic and/or biostatistic information to lay and professional audiences, and explain and demonstrate program administration and organizational leadership. EPIB students may begin their internships after 1 year in the program.

Below is an overview of the primary responsibilities of a host agency/internship preceptor:

- Designates a qualified site preceptor/mentor for the intern. Typically, this person has a PhD or MPH degree or 5 years of experience in public health.
- Participates in a Site Approval phone call with the EPIB MPH Internship Coordinator
- Provides meaningful work that promotes the professional growth of the intern in the field of epidemiology/biostatistics/public health while pursuing the goals of your organization.
- Provides an orientation and training program for the intern, similar in quality to that provided to new employees. This includes orienting the student to the background, structure, regulations, and operations of the agency.
- Works with the student to develop an Internship Educational/Work Plan (an overview of activities or projects in which the intern is likely to participate during the internship period).
- Offers a range of opportunities for learning (such as staff meetings, conferences, public hearings, etc.) whenever possible.
- Assigns routine clerical or custodial tasks only to the extent that the intern derives some learning experience from them.
- Provides the intern with adequate work space and supplies.
- Makes agency staff available to the intern to answer questions and provide support when needed.
- Prepares two evaluations of the intern (forms will be provided by the intern).
- Signs-off on intern's bi-weekly hour log.
- Provides updated information and materials related to internships within your organization to the Internship Program Coordinator.

If your organization require interns to sign an internship agreement/contract, the University of Maryland now requires that outside agreements/contracts be reviewed by the UMD legal department. This process may take a few weeks to a month. We advise organizations to start this process as soon as possible so there is no delay in the internship start date.

In recent years, we have noticed that more students need to support themselves financially at the same time they are in school. While it is not a requirement that organizations pay interns, and many non-profit organizations are unable to do so, some type of stipend or reimbursement for expenses is increasingly necessary to enable students to participate in their internship. We would greatly appreciate if you could consider some amount of assistance for the intern if at all possible.

The university carries Professional Liability Insurance for each intern that is working in the field. A certificate of insurance will be sent to the host agency if needed.

Our MPH interns should address their program competencies during their internship experience. Internship preceptors are not required to ensure our students meet all of the competencies, this is the student's responsibility.

Thank you again for your interest in interviewing a student intern. We feel confident that you will find the experience mutually beneficial for your agency and our student internship program. Benefits will include:

- Assistance in pursuing organizational goals from an interested and enthusiastic student with current training in epidemiology or biostatistics. Interns provide valuable work and service to the organization.
- Fresh perspectives, insights and ideas on a variety of projects and tasks, given that the student has just completed her/his course work in the field of epidemiology or biostatistics.
- An opportunity for your organization and the university to collaborate, providing mutually beneficial outcomes to the community.
- An opportunity to contribute to the further development of epidemiology/biostatistics/public health professionals.

Should you have additional questions, please feel free to contact:

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