MASTER OF ARTS IN PUBLIC HEALTH BIOLOGY, MA

Program Overview

The MAPHB degree is a fully online, part-time degree program focused on biological tenets and research methods that are relevant to current issues in public health. It is an interdepartmental program involving Biochemistry and Molecular Biology, Environmental Health and Engineering, and Molecular Microbiology and Immunology, with required coursework provided through each. The program is designed to provide a solid, conceptual basis for an understanding of the rationale, tools and approaches that are essential for addressing problems in public health.

Summary of Graduation Requirements

- A minimum of 48.5 credit hours to fulfill the degree
- Students are required to complete a thesis research course
- Students must take one course from BMB, EHE, and MMI as detailed in the MAPHB Curriculum section
- All students must maintain minimum academic standards and have satisfactory grades as detailed in the Academic Standards section

Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

MAPHB Curriculum

1. Code Title Credits

   Required Courses
   Introduction to online Learning (must be completed prior to beginning program) 0
   PH.550.630 Public Health Biology 3
   PH.550.631 Biological Basis of Public Health 3
   PH.550.855 Ma Public Health Biology Thesis 5 - 6
   PH.552.601 Foundational Principles of Public Health 0.5
   PH.552.602 The Role of Quantitative Methods in Public Health 0.5
   PH.552.603 The Role of Qualitative Methods and Science in Describing and Assessing a Population’s Health 0.5
   PH.552.604 Causes and Trends in Morbidity and Mortality 0.5
   PH.552.605 The Science of Primary Secondary and Tertiary Prevention in Population Health 0.5
   PH.552.606 The Critical Importance of Evidence in Advancing Public Health Knowledge 0.5
   PH.552.607 Essentials of Environmental Health 0.5
   PH.552.609 Psychological and Behavioral Factors That Affect A Population’s Health 0.5
   PH.552.610 The Social Determinants of Health 0.5
   PH.552.611 Globalization and Population Health 0.5
   PH.552.612 Essentials of One Health 0.5

   Total Credits 16.5-17.5

   Optional Foundation Courses
   PH.140.611 Statistical Reasoning in Public Health I 3

   PH.140.612 Statistical Reasoning in Public Health II 3
   PH.340.721 Epidemiologic Inference in Public Health I 5

   Total Credits 11

Code Title Credits

   Required Course, Environmental Health Sciences
   Choose at least one of the following:
   PH.180.601 Environmental Health 5
   PH.183.631 Fundamentals of Human Physiology 4
   PH.187.610 Public Health Toxicology 4
   PH.187.632 Molecular Toxicology 4

   Required Course, Biochemistry and Molecular Biology
   Choose at least one of the following:
   PH.120.600 Biochemistry I 5
   PH.120.602 Concepts of Molecular Biology 4
   PH.120.627 Stem Cells and the Biology of Aging and Disease 3
   PH.120.620 Fundamentals of Reproductive Biology 3

   Required Course, Molecular Microbiology and Immunology
   Choose at least one of the following:
   PH.260.611 Principles of Immunology I 4
   PH.260.656 Malariology 4

Academic Standards

Students must meet minimum academic standards to remain in the MPH Program. A student’s failure to meet any of the criteria below is grounds for being placed on academic warning and/or being dismissed from the program.

In core courses, Master’s students must receive a ‘C’ or higher. A student who earns a grade below that threshold in a course listed as a core requirement must, at the next opportunity, make a second attempt to complete the core course by repeating the same course. A grade below the threshold on the second attempt may be grounds for dismissal and must be reported to the School’s Committee on Academic Standards. To remain in good academic standing, masters students must maintain a minimum grade point average of 2.75. If a student’s GPA falls below the threshold on the second attempt may be grounds for dismissal and must be reported to the School’s Committee on Academic Standards. School policy states that a Master’s student cannot graduate with a GPA lower than 2.75.

While students could opt to take a term(s) off, students are required to complete the degree within 4 years of their original start date. Failure to complete the degree within 4 years of the original start day could result in a non-conferral of the degree.

The goal of the MA in Public Health Biology program is to prepare students from diverse backgrounds to apply biological principles to public health issues, conceptualize research questions, interpret results and apply these skills in the context of human health. The specific educational objectives are as follows:
Objectives

Upon successful completion of the MA in Public Health Biology program, students will be able to:

1. Describe the molecular, cellular, immunological, and physiological bases of selected human diseases and conditions;
2. Describe biological principles that underlie the development of disease and its prevention, control and management;
3. Critically evaluate data described in scientific papers and integrate data from multiple papers into coherent theories about the regulation of complex biological processes and diseases;
4. Apply statistical principles to the analysis of biological data and apply findings to the understanding and treatment of human disease;
5. Compose, explain and defend a 20-30 page scholarly thesis that demonstrates a deep understanding of how biological principles and methods are used to understand, treat and/or prevent a particular condition of importance in the public health arena;
6. Communicate effectively with the general public, professionals and other stakeholders on issues related to immunology, biochemistry, molecular biology, environmental health sciences and public health.