

Public Health-related Majors

Bachelor of Science (BS) in Environmental Health

This major has 13 required courses, 1 required one-credit lab, and 4 pre-requisite courses. It is a Bachelor of Science and the major satisfies the Natural Science requirement of the Rochester Curriculum.

Key goals for this major:

- Understand how anthropogenic and environmental factors contribute to human exposure to environmental toxins and pathogens.
- Integrate multiple disciplines to enhance understanding of environmental health exposures and their consequences, and to support appropriate analysis and problem solving.
- Appreciate the social, economic, and cultural contributors to the creation and resolution of environmental health problems.

Requirements of the Major:

A. Pre-Requisite Courses:

BIOL 110	Perspectives of Biology I (or BIOL 112 'Perspectives in Biology I') <u>Prerequisites:</u> Completion or concurrent enrollment in CHEM 131 or equivalent
BIOL 111	Perspectives of Biology II (or BIOL 113 'Perspectives in Biology II') <u>Prerequisites:</u> none for BIOL 111
CHEM 131	Chemical Concepts, Systems, and Practices I <u>Prerequisites:</u> high school chemistry course
CHEM 132	Chemical Concepts, Systems, and Practices II <u>Prerequisites:</u> CHEM 131 or equivalent

B. Public Health Common Core (5 courses):

PHLT 101	Introduction to Public Health I
PHLT 102	Introduction to Public Health II <u>Prerequisites:</u> PHLT 101
PHLT 103	Concepts of Epidemiology
STAT 212	Appl. Statistics I
*PHIL 228 (PHIL 228W) or PHIL 225	Public Health Ethics (228) or Ethical Decisions in Medicine (225) <u>Prerequisites:</u> 1 in PHIL or permission of instructor

C. Specific Core Requirements (5 courses + 1 lab):

EESC 103	Introduction to Environmental Science
PHLT 201W	Environmental Health <i>Prerequisites:</i> BIOL 110/112; CHEM 131; PHLT 103; or permission of instructor
CHEM 203	Organic Chemistry I <i>Prerequisites:</i> CHEM 131 & CHEM 132 or equivalent
CHEM 207	Organic Chemistry I: Lab (1 credit) <i>Prerequisites:</i> CHEM 131 & CHEM 132 or equivalent
CHEM 204	Organic Chemistry II <i>Prerequisites:</i> CHEM 203 & CHEM 207 or equivalent
BIOL 198	Principles of Genetics (or BIOL 190 'Genetics and the Human Genome') <i>Prerequisites:</i> BIOL 110/112; CHEM 203 concurrently

D. Electives (3 courses – 2 courses must come from Group I. & 1 course must come from Group II.):

I. Biology and Health Sciences

BIOLOGY

BIOL 202	Molecular Biology <i>Prerequisites:</i> BIOL 190/198; BIOL 250L
BIOL 208	Introduction to Programming for Biology <i>*Not open to first-year students</i> <i>Prerequisites:</i> Past or concurrent enrollment in BIOL 190 or BIOL 198, or instructor permission
BIOL 210*	Cell Biology <i>Prerequisites:</i> BIOL 110/112; BIOL 111/113; BIOL 250L and BIOL 190 or BIO 198 are strongly recommended
BIOL 222*	Biology of Aging <i>Prerequisites:</i> BIOL 190/198; BIOL 202 recommended
BIOL 250	Introduction to Biochemistry <i>Prerequisites:</i> BIOL 110/112; BIOL 190/198; CHEM 203; CHEM 204 (may be taken concurrently) strongly recommended

MICROBIOLOGY

MBI 220	Introduction to Microbiology <u>Prerequisites:</u> BIOL 110/112; BIOL 111/113; BIOL 198; CHEM 203 or equivalent
MBI 221 (W)	Microbiology Lab <u>Prerequisites:</u> MBI 220 concurrently or previous
MBI 414	Mechanisms of Microbial Pathogenesis <u>Prerequisites:</u> MBI 220 & 221

EPIDEMIOLOGY

PM 415U	Principles of Epidemiology <u>Prerequisites:</u> PHLT 103
PM 470U (W) (H)	Environmental and Occupational Epidemiology <u>Prerequisites:</u> PM 415U

II. Environment and Sustainability

ECON 238*	Environmental Economics <u>Prerequisites:</u> ECON 108; ECON 207
PHLT 232	Environmental Health Policy* <u>Prerequisites:</u> PHLT 101 or PHLT 116; PHLT 102 *Not open to freshmen
PSCI 243*	Environmental Politics
PSCI 247*	Green Markets: Environmental Opportunities & Pitfalls
PHIL 230 (W)	Environmental Justice <u>Prerequisites:</u> 1 previous in PHIL
EESC 230W (H)	Sustainable Systems <u>Prerequisites:</u> EESC 103 or permission of instructor
BIOL 104	Ecosystem Conservation and Human Society
CHE 150	Green Engineering for a Sustainable Environment

E. Upper-Level Writing Requirement:

Students will be required to register for two upper-level writing courses within this major. The courses designated with (W) have writing requirements that would satisfy the Rochester Curriculum's upper-level writing requirement. Students would register for the "W" section.

Courses that appear with an asterisk () after the course number are not available as upper-level writing courses for environmental health majors. Registration in any "W" BIO course requires permission of the instructor. For each PM (W) course there will be a cap of five students.*

Honors Program:

Students will be invited by the Office for Public Health-Related programs to apply to the research honors program. Invitations are based on a 3.60 grade-point average in the five Public Health-related General Core Courses (all five courses need to have been completed by the end of junior year) and on progress toward finishing requirements for the major. Students who receive an invitation will need to formally apply to Public Health-Related programs to enroll in the honors program.

To graduate with honors in Environmental Health, students must complete the major; complete at least one advanced course designated with (H); complete ten credits hours over and above the credits required for the major (Students must successfully complete 3 credit hours of PHLT 389 'Public Health Honors Seminar.' Students must also successfully complete 7 credit hours of PHLT 393 'Public Health Honors Research' with an approved faculty advisor); have a cumulative grade-point average of at least a 3.60 in the major; and, complete a distinguished research paper under the direction of a faculty advisor. The thesis must be of at least A-quality. Students will not receive honors for a thesis that does not meet this minimum standard.

Distinction Program:

This major will offer a distinction program in which the terms "distinction", "high distinction", and "highest distinction" will reflect the quality of performance in the major. A GPA of at least 3.40 will qualify for "distinction," a GPA of at least 3.60 will qualify for "high distinction"; and a GPA of at least 3.80 will qualify for "highest distinction."

For Double Majors:

Due to the interdisciplinary nature of the Public Health-Related programs, no more than two courses may overlap between a public health major and another major. Pre-requisite courses and the introductory STAT course are not included in the overlap.

Note: Students may choose to major, or to minor, or to complete a cluster within the Public Health-Related programs, but they cannot do more than one.

Transfer Credit:

Students are permitted (with the approval of their public health faculty advisor) to use up to *two* transfer courses towards their public health program.