Environmental Health MPH

The Environmental Health (EH) MPH program addresses environmental and occupational health concerns as they relate to public health in Minnesota, the United States and around the world. While completing program requirements, students have the opportunity to explore their own interests by choosing one of eight elective areas of emphasis in consultation with their academic advisor. Students must complete a minimum of 42 credits. To complete program requirements, students will choose electives, in consultation with their academic advisor, which may include credits towards a minor.

**PUBLIC HEALTH CORE REQUIREMENTS**

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>PubH 6020</td>
<td>Fundamentals of Social &amp; Behavioral Science (2 cr)</td>
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<tr>
<td>PubH 6102</td>
<td>Issues in Environmental &amp; Occ Health (2 cr)</td>
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<tr>
<td>PubH 6250</td>
<td>Foundations of Public Health (2 cr)</td>
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<tr>
<td>PubH 6320</td>
<td>Fundamentals of Epidemiology* (3 cr) or</td>
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<tr>
<td>PubH 6341</td>
<td>Epidemiologic Methods I* (3 cr)</td>
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<tr>
<td>PubH 6414</td>
<td>Biostatistical Literacy** (3 cr) or</td>
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<tr>
<td>PubH 6450</td>
<td>Biostatistics I* (4 cr)</td>
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<tr>
<td>PubH 6741</td>
<td>Ethics in Public Health: Professional Practice and Policy (1 cr)</td>
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<tr>
<td>PubH 6751</td>
<td>Principles of Management in Health Services Organizations (2 cr)</td>
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**Students who take PubH 6414 Biostatistical Literacy, must also take one of the following courses:**

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<tr>
<td>PubH 6107</td>
<td>Excel and Access in Public Health Settings (1 cr)</td>
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<tr>
<td>PubH 6123</td>
<td>Violence Prevention &amp; Control: Theory, Research, &amp; Application (2 cr)</td>
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<tr>
<td>PubH 6325</td>
<td>Data Processing with PC-SAS (1 cr)</td>
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<tr>
<td>PubH 6420</td>
<td>Introduction to SAS Programming (1 cr)</td>
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<td>PubH 6470</td>
<td>SAS Procedures and Data Analysis (3 cr)</td>
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<tr>
<td>PubH 6755</td>
<td>Planning &amp; Budgeting in Public Health (2 cr)</td>
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<tr>
<td>PubH 6813</td>
<td>Managing Electronic Health Information (2 cr)</td>
</tr>
<tr>
<td>PubH 6845</td>
<td>Using Demographic Data for Policy Analysis (3 cr)</td>
</tr>
<tr>
<td>PubH 7264</td>
<td>Visualizing Data in R (1 cr)</td>
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<tr>
<td>PubH 7461</td>
<td>Exploring and Visualizing Data in R (2 cr)</td>
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**ENVIRONMENTAL HEALTH REQUIREMENTS**

Students must take a minimum of 3 different courses which meet all five competency areas.

1. Evaluate hazards in various environments
   - PubH 6181 Surveillance of Foodborne Diseases & Food Safety Hazards (2 cr)
   - PubH 6120 Injury Prevention in the Workplace, Community, & Home (2 cr)
   - PubH 6140 Environmental & Occupational Epidemiology (2 cr)
   - PubH 6159 Principles of Toxicology I (2 cr)
   - PubH 6170 Introduction to Occupational Health & Safety (3 cr)

2. Analyze factors that influence the presence and magnitude of hazards
   - PubH 6140 Environmental & Occupational Epidemiology (2 cr)
   - PubH 6141 GIS & Spatial Analysis (3 cr)
   - PubH 6150 Interdisciplinary Eval of Occ Health & Safety Field Problems (3 cr)
   - PubH 6159 Principles of Toxicology I (2 cr)
   - PubH 6161 Regulatory Toxicology

3. Identify pathways of exposure to environmental hazards
   - PubH 6140 Environmental & Occupational Epidemiology (2 cr)
   - PubH 6141 GIS & Spatial Analysis (3 cr)
   - PubH 6159 Principles of Toxicology I (2 cr)
   - PubH 6181 Surveillance of Foodborne Diseases & Food Safety Hazards (2 cr)
   - PubH 6182 Emerging Infectious Diseases: Current Issues (3 cr)
   - PubH 6192 Measurement and Properties of Air Contaminants

4. Integrate exposure and health effects knowledge to investigate health risk and inequity
   - PubH 6112 Environmental Health Risk Assessment: Application to Human Health Risks from Exposure to Chemicals (2 cr)
   - PubH 6130 Occupational Medicine: Principles & Practice (2 cr)
   - PubH 6140 Environmental & Occupational Epidemiology (2 cr)
   - PubH 6141 GIS & Spatial Analysis (3 cr)
   - PubH 6159 Principles of Toxicology I (2 cr)
   - PubH 6181 Surveillance of Foodborne Diseases & Food Safety Hazards (2 cr)
   - PubH 6123 Violence Prevention & Control: Theory, Research, & Application (2 cr)

5. Propose risk management strategies, such as education, policy, and technology, directed toward environmental health stakeholders, including government, industry, and community groups
   - PubH 6112 Environmental Health Risk Assessment: Application to Human Health Risks from Exposure to Chemicals (2 cr)
   - PubH 6120 Injury Prevention in the Workplace, Community, & Home (2 cr)
   - PubH 6161 Regulatory Toxicology
   - PubH 6170 Introduction to Occupational Health & Safety (3 cr)
   - PubH 6174 Control of Workplace Exposure
   - PubH 6182 Emerging Infectious Diseases: Current Issues (3 cr)

**APPLIED PRACTICE EXPERIENCE**

PubH 7196 (1-5 cr)
INTEGRATIVE LEARNING EXPERIENCE

**PubH 7194 (1-5 cr)**

**AREAS OF EMPHASIS**

As part of elective courses, students may choose one of the following seven Emphasis Areas, in consultation with their academic advisor. Each emphasis area requires a minimum 24 credits of program specific required coursework.

**GENERAL**

This Emphasis Area provides the most flexibility for students to explore their own interests, by choosing courses from the numerous elective options.

**ENVIRONMENTAL INFECTIOUS DISEASES**

- **PubH 6180** Ecology of Infectious Diseases (3 cr)
- **PubH 6181** Surveillance of Foodborne Diseases & Food Safety Hazards (2 cr)
- **PubH 6182** Emerging Infectious Diseases: Current Issues (3 cr)
- **PubH 6385** Epidemiology of Infectious Diseases (2 cr)

**ENVIRONMENTAL & OCCUPATIONAL EPIDEMIOLOGY**

*PubH 6450 & PubH 6341 required.

- **PubH 6140** Environmental & Occupational Epidemiology (2 cr)
- **PubH 6150** Interdisciplinary Eval of Occupational Health & Safety Field Problems (3 cr)
- **PubH 6170** Introduction to Occupational Health & Safety (3 cr)
- **PubH 6342** Epidemiologic Methods II (3 cr)
- **PubH 6451** Biostatistics II (4 cr)

**FOOD SAFETY**

*PubH 7210 must be taken twice, for a total of 1 credit

- **PubH 6181** Surveillance Foodborne Diseases & Food Safety Hazards (2 cr)
- **PubH 6182** Emerging Infectious Diseases: Current Issues (3 cr)
- **PubH 6183** Theory & Practice of Outbreak Investigations (1 cr)
- **PubH 6385** Epidemiology of Infectious Diseases (2 cr)
- **PubH 7210** Global Food Systems (0.5 cr)
- **FSCN 5131** Food Quality (3 cr)

**GLOBAL ENVIRONMENTAL HEALTH**

- **PubH 6108** Foundations of Global Health (2 cr)
- **PubH 6131** Working in Global Health (2 cr)
- **PubH 6132** Air, Water and Health (2 cr)
- **PubH 6134** Sustainable Development in Global Public Health (2 cr)
- **PubH 6182** Emerging Infectious Disease: Issues, Policies, & Controversies (3 cr)

**INJURY & VIOLENCE EPIDEMIOLOGY & PREVENTION**

*PubH 6450 & PubH 6341 required.

- **PubH 6120** Injury Prevention in the Workplace, Community, & Home (2 cr)
- **PubH 6123** Violence Prevention & Control: Theory, Research & Application (2 cr)
- **PubH 6150** Interdisciplinary Eval of Occupational Health & Safety Field Problems (3 cr)
- **PubH 6170** Introduction to Occupational Health & Safety (3 cr)
- **PubH 6342** Epidemiologic Methods II (3 cr)
- **PubH 8120** Occupational Health and Safety Research Seminar (1 cr)

**OCCUPATIONAL & ENVIRONMENTAL HEALTH NURSING**

- **PubH 6120** Injury Prevention in the Workplace, Community, & Home (2 cr)
- **PubH 6130** Occupational Medicine: Principles & Practice (2 cr)
- **PubH 6150** Interdisciplinary Eval of Occupational Health & Safety Field Problems (3 cr)
- **PubH 6151** Occupational & Environmental Health Nursing Seminar (1 cr)
- **PubH 6170** Introduction to Occupational Health & Safety (3 cr)

**OCCUPATIONAL & ENVIRONMENTAL MEDICINE**

*Highly recommended

- **PubH 6120** Injury Prevention in the Workplace, Community and Home (2 cr) OR
- **PubH 6123** Violence Prevention & Control: Theory, Research, & Application
- **PubH 6140** Occupational & Environmental Epidemiology (2 cr) OR
- **PubH 6159** Principles of Toxicology I (2 cr)
- **PubH 6130** Occupational Medicine: Principles & Practice (3 cr)
- **PubH 6150** Interdisciplinary Eval of Occupational Health & Safety Field Problems (3 cr)
- **PubH 6170** Introduction to Occupational Health & Safety (3 cr)
- **PubH 8120** Occupational Safety and Health Research Seminar (1 cr)

**REGULATORY TOXICOLOGY & RISK ASSESSMENT**

- **PubH 6112** Environmental Health Risk Assessment: Applications to Human Health Risks from Exposure to Chemicals (2 cr)
- **PubH 6159** Principles of Toxicology I (2 cr)
- **PubH 6160** Principles of Toxicology II (3 cr)
- **PubH 6161** Regulatory Toxicology (2 cr)
- **PubH 8161** Current Literature in Toxicology (1 cr)