ENVIRONMENTAL HEALTH PhD

The Environmental Health (EH) PhD 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 the seven areas of emphasis. Students must complete a minimum of 48 credits. To complete program requirements, students will choose electives, in consultation with their academic advisor, which may include credits towards a minor.

**CORE REQUIREMENTS**

**PubH 6250** Foundations of Public Health (2 cr)
*Required for students who do not have an MPH or bachelor’s degree in Public Health from a CEPH-accredited school or program.

**PubH 6742** Ethics in Public Health (1 cr)

**PubH 8120** Occupational and Environmental Health Sciences Research Seminar (1 cr)

**THESIS CREDITS**

**PubH 8888** Thesis Credits (24 cr)

**ELECTIVES**

Students choose electives in consultation with their advisors. These elective courses may include courses from the following specialty areas. MCOHS trainees must work their advisors to choose electives that meet the requirements of their traineeships.

**ENVIRONMENTAL & OCCUPATIONAL EPIDEMIOLOGY**

**PubH 6140** Occupational and Environmental Epidemiology (2 cr)

**PubH 6150** Interdisciplinary Evaluation of Occupational Health & Safety Field Problems (3 cr)

**PubH 6170** Introduction to Occupational Health & Safety (3 cr)

**PubH 8341** Advanced Epidemiologic Methods: Concepts (3 cr)

**PubH 8342** Advanced Epidemiologic Methods: Applications (3 cr)

**PubH 8343** Synthesis & Application of Methods in Epi Research (4 cr)

**ENVIRONMENTAL CHEMISTRY**

**PubH 6190** Environmental Chemistry (3 cr)

**CEGE 5541** Environmental Water Chemistry (3 cr)

**CEGE 8542** Chemistry of Organic Pollutants in Env Systems (3 cr)

**EEB 5601** Limnology (3 cr)

**STAT 5021** Statistical Analysis (4 cr)

**ENVIRONMENTAL INFECTION DISEASES**

**PubH 6102** Issues in Environmental Health (2 cr)

**PubH 6181** Survelliance of Foodborne Diseases & Food Safety Hazards (2 cr)

**PubH 6182** Emerging Infectious Diseases: Current Issues (3 cr)

**PubH 6341** Epidemiologic Methods I (3 cr)

**PubH 6342** Epidemiologic Methods II (3 cr)

**PubH 6343** Epidemiologic Methods III (4 cr)

**PubH 6385** Epidemiology of Infectious Diseases (2 cr)

**PubH 6450** Biostatistics I (4 cr)

**PubH 6451** Biostatistics II (4 cr)

**VMED 5180** Ecology of Infectious Diseases (3 cr)

**ENVIRONMENTAL TOXICOLOGY**

**PubH 6112** Environmental Health Risk Assessment (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 6320** Fundamentals of Epidemiology (3 cr)

**PubH 6414** Biostatistical Literacy (3 cr)

**PubH 8160** Advanced Toxicology (2 cr)

**PubH 8161** Current Literature in Toxicology (1 cr)

**FOOD SAFETY**

**PubH 6102** Issues in Environmental Health (2 cr)

**PubH 6110** Foodborne Hazards (2 cr)

**PubH 6181** Surv of Foodborne Diseases & Food Safety Hazards (2 cr)

**PubH 6182** Emerging Infectious Diseases: Current Issues (3 cr)

**PubH 6183** Theory & Practice in Foodborne Disease Outbreak (1 cr)

**PubH 6341** Epidemiologic Methods I (3 cr)

**PubH 6342** Epidemiologic Methods II (3 cr)

**PubH 6343** Epidemiologic Methods III (4 cr)

**PubH 6385** Epidemiology & Control of Infectious Diseases (2 cr)

**PubH 6450** Biostatistics I (4 cr)

**PubH 6451** Biostatistics II (4 cr)

**PubH 7210** Global Food Systems (1 cr)

**FSCN 5131** Food Quality for Graduate Credit (3 cr)

**OCCUPATIONAL & ENVIRONMENTAL HEALTH NURSING**

**PubH 6102** Issues in Environmental Health (2 cr)
PubH 6130 Occupational Medicine: Principles and Practice (2 cr)
PubH 6140 Occupational & Environmental Epidemiology (2 cr)
PubH 6150 Interdisciplinary Evaluation of Occupational Health & Safety Field Problems (3 cr)
PubH 6170 Introduction to Occupational Health & Safety (3 cr)
PubH 6341 Epidemiologic Methods I (3 cr)
PubH 6342 Epidemiologic Methods II (3 cr)
PubH 6343 Epidemiologic Methods III (4 cr)
PubH 6450 Biostatistics I (4 cr)
PubH 6451 Biostatistics II (4 cr)
GRAD 8101 Teaching in Higher Education (3 cr)

**OCCUPATIONAL INJURY PREVENTION RESEARCH TRAINING**
PubH 6102 Issues in Environmental Health (2 cr)
PubH 6120 Injury Prev. in the Workplace, Community, & Home (2 cr)
PubH 6123 Violence Prev. & Control: Theory, Research & App. (2 cr)
PubH 6140 Occupational and Environmental Epidemiology (2 cr)
PubH 6150 Interdisciplinary Evaluation of Occupational Health & Safety Field Problems (3 cr)
PubH 6170 Introduction to Occupational Health & Safety (3 cr)
PubH 6341 Epidemiologic Methods I (3 cr)
PubH 6342 Epidemiologic Methods II (3 cr)
PubH 6343 Epidemiologic Methods III (3 cr)
PubH 6450 Biostatistics I (4 cr)
PubH 6451 Biostatistics II (4 cr)
PubH 8341 Advanced Epidemiologic Methods: Concepts (3 cr)
PubH 8342 Advanced Epidemiologic Methods: Applications (3 cr)
PubH 8343 Synthesis & Application of Methods in Epi Research (4 cr)
GRAD 8101 Teaching in Higher Education (3 cr)
IE 5511 Human Factors & Work Analysis (4 cr)

**INDUSTRIAL HYGIENE**
*These courses are only required for students who do not have a master’s degree from an ABET-accredited industrial hygiene program. Individual courses may be omitted in consultation with the advisor if comparable graduate level coursework can be demonstrated.*
PubH 6130 Occupational Medicine: Principles and Practice (2 cr)
PubH 6150 Interdisciplinary Evaluation of Occupational Health & Safety Field Problems (3 cr)
PubH 6159 Principles of Toxicology I (2 cr)
PubH 6170 Introduction to Occupational Health & Safety (2 cr)
PubH 6172 Industrial Hygiene Applications (2 cr)
PubH 6173 Exposure to Physical Agents (2 cr)
PubH 6174 Control of Workplace Exposure (3 cr)
PubH 6175 Environmental Measurements Laboratory (2 cr)
PubH 6192 Measurement & Properties of Air Contaminants (2 cr)
PubH 6193 Advanced Topics in Human Exposure Science (2 cr)