

# PUBLIC HEALTH - ENVIRONMENTAL HEALTH (PHEH)

Subject-area course lists indicate courses currently active for offering at the University of Louisville. Not all courses are scheduled in any given academic term. For class offerings in a specific semester, refer to the Schedule of Classes ([https://csprd.louisville.edu/ps/ps\\_class/EMPLOYEE/PSFT\\_CS/c/COMMUNITY\\_ACCESS.CLASS\\_SEARCH./x/?state=62dab551a0d600a5e8237359c50704e59007&duo\\_code=sjUx20STj21bJWVFuQ371YRiHmfpxqov](https://csprd.louisville.edu/ps/ps_class/EMPLOYEE/PSFT_CS/c/COMMUNITY_ACCESS.CLASS_SEARCH./x/?state=62dab551a0d600a5e8237359c50704e59007&duo_code=sjUx20STj21bJWVFuQ371YRiHmfpxqov))

500-level courses generally are included in both the undergraduate- and graduate-level course listings; however, specific course/section offerings may vary between semesters. Students are responsible for ensuring that they enroll in courses that are applicable to their particular academic programs.

## Course Fees

Some courses may carry fees beyond the standard tuition costs to cover additional support or materials. Program-, subject- and course-specific fee information can be found on the Office of the Bursar website (<https://louisville.edu/bursar/tuitionfee/university-fees/>).

### PHEH 500. Introduction to Environmental and Occupational Health Sciences 3 Units

**Prerequisite(s):** Enrollment in School of Public Health and Information Sciences.

**Description:** This course provides students with the basic concepts and principles of environmental health and occupational health including environmental agents in water, air and soil, such as chemicals, biological and physical agents, and other important factors that may constitute a risk to humans. It also provides an overview of the basic principles and methods of risk assessment and risk management. This course is designed for all public health practitioners and meets the core environmental health requirement for the MPH degree program. For class offerings for a specific term, refer to the Schedule of Classes (<http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>)

### PHEH 525. Biological Basis for Parasitic and Infectious Diseases 1 Unit

**Prerequisite(s):** PHEH 500 (or concurrently).  
**Description:** This course will provide an overview of key biological concepts related to the pathogenic responses of humans to infectious and parasitic agents. The central questions addressed by the course include: What strategies are used by different types of pathogens to interact with host cells and what physical/cellular barriers impact host infectious/parasite interactions; and how do host cells/organisms respond to different types of pathogens through innate and adaptive immune responses to infectious/parasitic diseases. For class offerings for a specific term, refer to the Schedule of Classes (<http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>)

### PHEH 526. Nutrition and Maternal and Child Health 3 Units

**Term Typically Offered:** Spring Only  
**Description:** This course covers the scientific foundations of human nutrition and digestion, methodologies for nutritional assessment in at-risk populations, and the impact of food scarcity/nutritional inadequacy on maternal/child.

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### PHEH 610. Occupational Health and Safety 3 Units

**Prerequisite(s):** PHEH 500 and enrollment in the School of Public Health and Information Sciences.

**Description:** This course will focus on the prevention of work-related injuries and illnesses as well as the management and control of work place hazards. Information on the identification of workplace hazards, governmental regulations and issues pertaining to specific industries, and safety management programs will also be presented. The course will also include discussion of principles of ergonomics, including the role of job design in maximizing productivity and injury prevention.

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### PHEH 620. Global Issues in Environmental and Occupational Health 3 Units

**Prerequisite(s):** PHEH 500 and enrollment in the School of Public Health and Information Sciences.

**Description:** This course will focus on the nature, impact and determinants of health problems among disadvantaged populations in developing countries.

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### PHEH 640. Environmental Risk Assessment 3 Units

**Prerequisite(s):** PHEH 500 and PHEP 501 (or equivalent courses); student must also be enrolled in the School of Public Health and Information Sciences.

**Description:** This course introduces students to the nomenclature, concepts, and basic skills of quantitative environmental risk assessment (QRA). The goal is to provide an understanding necessary to read and critically evaluate QRA. Emphasis is on the intellectual and conceptual basis of risk assessment, particularly its dependence on toxicology and epidemiology, rather than its mathematical constructs and statistical models. Specific cases consider the use of risk assessment for setting environmental exposure limits and quantifying the hazards of environmental exposures to chemicals in air and drinking water.

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### PHEH 650. Advanced Topics in Environmental and Occupational Health 3 Units

**Prerequisite(s):** PHEH 500 and enrollment in the School of Public Health and Information Sciences.

**Description:** This course will build upon principles acquired in the introductory course by presenting advanced concepts on environmental and occupational health as novel factors that may constitute a risk to humans in developed and industrialized countries.

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- PHEH 651. Advanced Environmental Health Services** 3 Units  
**Prerequisite(s):** PHEH 500 and enrollment in the School of Public Health and Information Sciences.  
**Description:** This course is an in-depth examination of current topics in environmental health issues and practice and builds on principles presented in the prerequisite introductory course. Current topics within the broad category of environmental health will be explored with emphasis on environmental toxicology and nutrition. Specific topics include introduction to toxicological concepts, pulmonary toxicology, air pollution, susceptible populations, biosafety, public health nutrition including malnutrition and the environmental impact of agriculture. The course includes a traditional lecture format as well as in-class and online discussion groups for selected topics.  
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- PHEH 750. Seminar 1 in Environmental Health** 1 Unit  
**Grading Basis:** Pass/Fail  
**Prerequisite(s):** Enrollment in PhD in Public Health Sciences, Environmental Health Specialization Program in the School of Public Health and Information Sciences.  
**Description:** In a series of seminar courses over four semesters, doctoral students engage as junior peers with faculty to: 1) critically review the current environmental health literature, 2) develop skills in preparing and making oral and poster presentations, 3) prepare at least one publication quality manuscript, and 4) develop an NIH-formatted R01 style research proposal.  
For class offerings for a specific term, refer to the Schedule of Classes (<http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>)
- PHEH 751. Seminar 2 in Environmental Health** 1 Unit  
**Grading Basis:** Pass/Fail  
**Prerequisite(s):** PHEH 750 and enrollment in PhD in Public Health Sciences, Environmental Health Specialization program in the School of Public Health and Information Sciences.  
**Description:** In a series of seminar courses over four semesters, doctoral students engage as junior peers with faculty to: 1) critically review the current environmental health literature, 2) develop skills in preparing and making oral and poster presentations, 3) prepare at least one publication quality manuscript, and 4) develop an NIH-formatted R01 style research proposal.  
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- PHEH 752. Seminar 3 in Environmental Health** 1 Unit  
**Grading Basis:** Pass/Fail  
**Prerequisite(s):** PHEH 750, PHEH 751, and enrollment in PhD in Public Health Sciences, Environmental Health Specialization program in the School of Public Health and Information Sciences.  
**Description:** In a series of seminar courses over four semesters, doctoral students engage as junior peers with faculty to: 1) critically review the current environmental health literature, 2) develop skills in preparing and making oral and poster presentations, 3) prepare at least one publication quality manuscript, and 4) develop a NIH-formatted R01 style research proposal.  
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- PHEH 753. Independent Study in Environmental and Occupational Health** 1-6 Units  
**Prerequisite(s):** Enrollment in the PhD program in Public Health Sciences, Environmental Health Specialization in the School of Public Health and Information Sciences.  
**Description:** This course provides students with the opportunity to develop a research project or investigation of an environmental or occupational health topic under the supervision of a faculty mentor. The student identifies an academic advisor and develops a proposal that includes a detailed syllabus with methods to evaluate the proposed work and criteria for assigning a grade. Both student and advisor sign documents describing their respective duties, and the proposed study is to be completed within 90 days after approval of the proposal.  
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- PHEH 754. Seminar 4 in Environmental Health** 1 Unit  
**Grading Basis:** Pass/Fail  
**Prerequisite(s):** PHEH 750, PHEH 751, and PHEH 752 and enrollment in PhD in Public Health Sciences, Environmental Health Specialization program in the School of Public Health and Information Sciences.  
**Description:** In a series of seminar courses over four semesters, doctoral students engage as junior peers with faculty to: 1) critically review the current environmental health literature, 2) develop skills in preparing and making oral and poster presentations, 3) prepare at least one publication quality manuscript, and 4) develop a NIH-formatted R01 style research proposal.  
For class offerings for a specific term, refer to the Schedule of Classes (<http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>)