EOH 2013: Environmental Health and Disease.
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Email for office visit appointments
Teaching Assistant: Antonella Marrocco anm240@pitt.edu
Location and time: Spring term: Lecture Tuesday 5:00-6:20
Location and time: Spring term: Lecture Tuesday 5:00-6:20 G23 Parran. The course also requires approximately 1.0 hour per week of online group discussion and/or exams.

Course Description: This is the Graduate School of Public Health core curriculum course in Environmental and Occupational Health. The World Health Organization defines environmental health as “those aspects of human health, including qualities of life that are determined by physical, biological, social, and psychosocial factors in the environment.” The discipline of environmental and occupational health refers to the “theory and practice of assessing, correcting, controlling, and preventing those factors in the environment that can adversely affect the health of present and future generations.” This course is designed to introduce the students to basic concepts of public health focusing on chemical and physical environmental factors. It is also designed to integrate with concepts from other disciplines of public health to present an ecological approach to resolving environmental and occupational health problems.

Course Rationale: The chemical, physical, and built environments greatly impact public health. There are daily reports of environmental and occupational catastrophes, toxic exposures, and policy decisions. This course is designed to introduce the students to the essential tools used in evaluating, responding to, and reducing risk from chemical and environmental hazards, as well as increase awareness of current issues and practice in environmental and occupational health.

Course Objectives: The objectives of the course are to combine didactic teaching, case studies, and problem sets to help students:

- Define environment and the requirements for a healthy environment.
- Identify sources of environmental hazards to human health.
- Explain issues related to measurement of environmental quality, identification of environmental hazards, individual exposures, and risk characterization.
- Identify populations most susceptible to environmental hazards.
- Identify sources of disparity in environmental and occupational health and explain reasons for these inequalities.
- Explain the roles of responsible government agencies and identify important laws that regulate and protect environmental quality and health.
- Explain the role of agencies and parties responsible for cleaning the environment.
- Apply approaches for preventing or remediating environmental hazards.
- Apply approaches to protecting populations from environmental hazards.
- Resolve issues of environmental health promotion.

The course provides for MPH core competency in the following areas:

- Explaining public health history, philosophy and values.
- Explaining the role of quantitative and qualitative methods and sciences in describing and assessing a population’s health.
- Ability to list major causes and trends of morbidity and mortality in the US or other global communities.
- Discussing the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.
- Explaining the critical importance of evidence in advancing public health knowledge.
- Explaining biological and genetic factors that affect a population’s health.
- Explaining behavioral and psychological factors that affect a population’s health.
• Explaining the social, political and economic determinants of health and how they contribute to population health and health inequities.
• Explaining how globalization affects global burdens of disease.
• Providing an ecological perspective on the connections among human health, animal health and ecosystem health.
• Explaining effects of environmental factors on a population’s health.

Course Structure: The course is designed to have 1.5 classroom hours and approximately 0.5 additional hours of online instruction each week. Tuesday evening classroom lectures present essential vocabulary, current concepts, and current events in environmental and occupational health. Online content includes reading case reports or current cutting edge literature to learn application and practice. Online small group discussions of questions or cases related to the class lectures and outside reading will constitute 0.5 hours of credit.

Text: The recommended text for the course is *Essentials of Environmental Health*, second edition, Robert H. Friis, Jones and Bartlett 2012. The text is only recommended and not required as it is dated and there should be many used copies out there for purchase. New books should be available in the Medical School bookstore and a copy of the book is on reserve in the library. Supplemental materials and required readings will be posted on the course website.

Blackboard: [http://courseweb.pitt.edu](http://courseweb.pitt.edu) The Blackboard courseweb site contains announcements, lecture notes, required reading, and online questions. The website has a grade book for monitoring progress and performance throughout the semester. The evaluation/student survey tool provides informal, anonymous assessment of the course. Student feedback is essential for insuring that the course delivers material effectively and that the content is appropriate, targeted at the correct level, and evolves to benefit the current and future classes.

Grading: Letter grades (A, B, C, D, F) are based on performance on biweekly online quizzes (50%) and participation in online discussions (50%). Optional midterm and cumulative final are offered for those who need to or wish to improve their quiz grade.

Schedule

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<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Chapter</th>
<th>Lecturer</th>
<th>Assignments</th>
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<td>1/9</td>
<td>Introduction to environmental and occupational health</td>
<td>1</td>
<td>Barchowsky</td>
<td>DB1</td>
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<tr>
<td>2</td>
<td>1/16</td>
<td>Principles of Toxicology</td>
<td>3*</td>
<td>Fabisiak</td>
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<td>3</td>
<td>1/23</td>
<td>Routes of exposure, gene/environment interactions, and individual susceptibility</td>
<td>3*</td>
<td>Fabisiak</td>
<td>DB2, Q1</td>
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<td>4</td>
<td>1/30</td>
<td>Environmental contaminants, stressors, and radiation</td>
<td>5-8*</td>
<td>Barchowsky</td>
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<td>5</td>
<td>2/6</td>
<td>Environmental exposures and modifiers of effects</td>
<td>2-3</td>
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<td>DB3, Q2</td>
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<td>6</td>
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<td>Risk Assessment, Risk management, Government oversight</td>
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<td>2/20</td>
<td>Sustainable Energy and Environmental Health</td>
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<td>Global health resources and climate change</td>
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<td>3/6</td>
<td><strong>Spring Recess</strong></td>
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10 3/13 Life cycle analysis, sustainable design in the built environment, and public health 1 Bilec DB5, (midterm, optional)

11 3/20 Occupational health and injuries 13-14* Barchowsky Q4

12 3/27 Indoor/Outdoor air quality and disease promotion 10* Leikauf DB6

13 4/3 Water cycle, quality, and health 9* Barchowsky Q5

14 4/10 Food safety and security 11 Barchowsky DB7

15 4/17 Waste management (environmental and societal problems) 12 Barchowsky Q6

16 4/23 Final (optional)*

* note that this course will not focus on specific toxicants. However, these lectures will refer to various organic compounds, infectious agents, or metals. Clarification of the action of these hazards can be found in chapters 5-8 of the text.

DB = discussion board Q = quiz

**Academic Integrity:** Students in this course will be expected to comply with the University of Pittsburgh’s Policy on Academic Integrity. Any student suspected of violating this obligation for any reason during the semester will be required to participate in the procedural process, initiated at the instructor level, as outlined in the University Guidelines on Academic Integrity. This may include, but is not limited to, the confiscation of the examination of any individual suspected of violating University Policy.

All individuals (students, faculty, post-doctoral researchers, and staff) at Pitt Public Health abide by the University’s policy on academic integrity. In accordance with this policy, the school maintains an outline of the procedural sequence of events to occur when violations of academic integrity are brought to the attention of administrative leaders. The full policy is available in the Academic Handbook.

To ensure the free and open discussion of ideas, students may not record classroom lectures, discussion and/or activities without the advance written permission of the instructor, and any such recording properly approved in advance can be used solely for the student’s own private use.

**Plagiarism (University policy):** Each student is expected to do her/his own work in class and online. Credit for ideas that are not your own must be given to their originator. Plagiarism is a violation of not only your own intellectual integrity, but also the rights of others to be recognized for their contributions. Plagiarism is a violation of University policies and will not be tolerated. Any work that is not your own will receive a failing grade and may result in suspension from the University.

A student has an obligation to exhibit honesty and to respect the ethical standards of the profession in carrying out his or her academic assignments. Without limiting the application of this principle, a student may be found to have violated this obligation if he or she:

- Presents as one’s own, for academic evaluation, the ideas, representations, or words of another person or persons without customary and proper acknowledgment of sources.

- Submits the work of another person in a manner which represents the work to be one’s own.

Source: [http://www.bc.pitt.edu/policies/policy/02/02-03-02.html](http://www.bc.pitt.edu/policies/policy/02/02-03-02.html)
To avoid plagiarism, you must give “customary and proper acknowledgment of sources” by appropriately and clearly identifying which thoughts are yours and which are others, and appropriately citing your sources.

**Copyright Notice:** The materials provided in the course and on courseweb may be protected by copyright. United States copyright law, 17 USC § 101, et seq., in addition to University policy and procedures, prohibit unauthorized duplication or retransmission of course materials. See Library of Congress Copyright Office and the University Copyright Policy.

**Students with Disabilities:** If you have a disability that requires special testing accommodations or other classroom modifications, you need to notify both the instructor and Disability Resources and Services no later than the second week of the term. You may be asked to provide documentation of your disability to determine the appropriateness of accommodations. To notify Disability Resources and Services, call (412) 648-7890 (Voice or TTD) to schedule an appointment. The Disability Resources and Services office is located in 140 William Pitt Union on the Oakland campus.

**Accessibility**

Blackboard is ADA Compliant and has fully implemented the final accessibility standards for electronic and information technology covered by Section 508 of the Rehabilitation Act Amendments of 1998. Please note that, due to the flexibility provided in this product, it is possible for some material to inadvertently fall outside of these guidelines.

**Diversity Statement**

The University of Pittsburgh Graduate School of Public Health supports learning environments that are inclusive and respectful of all individuals. Every member of our community is expected to be respectful of the individual perspectives, experiences, behaviors, worldviews, and backgrounds of others.