Syllabus: PHS 650 Principles of Environmental Health for Public Health Practice
Spring, 2012

Course number: PHS 650:063
Credits: 3 credit lecture and discussion course

Discussion Director: Lori (Dolores) Severtson  djsevert@wisc.edu
Discussion TA: Christina Kantor  cekantor@wisc.edu
Lecture Director: Marty Kanarek  mkanarek@wisc.edu

Lectures: Tuesday and Thursday, 1:00-2:15  Room: G5/119 CSC
Discussion Sections: Wednesdays (Section 001): 2:45 – 3:45 PM  Room: CSC G5/152
Thursdays (Section 002): 5:00 – 6:00 PM  Room: WARF 758
Office Hours: By appointment. Please call or email.

Course educational objectives*

- Describe the evolution of environmental health and how history shapes current practice in this area.
- Describe the major categories of environmental health determinants that impact population health.
- Explain the general mechanisms of toxicity in eliciting a toxic response to various environmental exposures.
- Describe genetic, physiologic, and psychosocial factors that affect susceptibility to adverse health outcomes following exposure to environmental hazards.
- Explain current environmental risk assessment methods.
- Describe federal and state regulatory programs, guidelines and authorities that control and manage environmental health issues.
- Describe approaches for assessing, preventing, and managing environmental hazards that pose risks to human health and safety.
- Identify stakeholders that have a vested interest in how environmental health risks are managed, and provide a rational for these interests.
- Identify how human factors such as perceived risk, values, politics, ethics and philosophical ideology influence the used to manage environmental health risks.
- Define environmental justice, and explain its history and principles.
- Describe the roles of risk communication in environmental health.


Course Textbook: Essentials of Environmental Health, 2nd Ed. Robert Friis, APHA Press, Jones and Bartlett Learning, 2012

Additional Readings:
Textbook readings are required (see course schedule below). Other required readings for the course will be posted on Learn@UW 2 weeks prior to the assigned reading date.
**Exams:**
Two multiple choice exams will be given during the semester based on lectures and readings.

- **Exam 1** – Thursday March 15, 1-2:15, in HSLC 1345
- **Exam 2** – Thursday May 10, 1-2:15, Room # pending

**Group Paper and Presentation:** (See “Final Project” document for more detail)

1. **Topic identification/selection:** Each student will be asked in the first week of class to identify two environmental health/policy topics or areas of interest. (See below for further detail on choosing a topic.) These topics will help discussion leaders to assign students to small groups for the paper assignment.

2. **Paper:** The paper will be written in 4 sections, sections are due over the course of the semester. Each group member will be the first author on one section of the paper. Other students will be co-authors.
   1) Assessment and Prioritization
   2) Human Dimension
   3) Management and Mitigation Strategies
   4) Executive Summary and Recommendations – with a 10 minute presentation.

3. **Presentations** – For the first three sections of the paper, the first author will be prepared to provide a 4-5 minute overview of the key elements related to that section of their paper.

**Grades:**

- **Exams = 58%, Discussion = 42%** (Paper 40% Participation in Discussion 2%)
  1) Lecture Exams: 29% for each
  2) Paper section (first author) = 10* points for the first draft, 15* points final paper
  3) Contributing to paper sections (3 supporting authors) = 15* points (5 points for each section) (including literature review for each section, providing comments on each draft, peer review of group participation)
  4) Assignment details will be posted on L@UW by the first week of class.
* Points are based on a group of 4 students. Adjustments will be made for groups with more or less students

**Letter grades will be assigned as follows:** 
*Note: MPH Students must earn a B in all core courses*

- A: ≥93 points
- AB: 88-92 points
- B: 83-88 points
- BC: 78-82 points
- C: 73-78 points
- D: 65-72 points
- F: 0-64 points
<table>
<thead>
<tr>
<th>Day</th>
<th>Date</th>
<th>Lecture Topic (Lecturer, Dept.)</th>
<th>Textbook Chapters</th>
<th>Discussion* Assignment</th>
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<tbody>
<tr>
<td>Tu</td>
<td>Jan 24</td>
<td>Course Intro, Public Health &amp; Epidemiology</td>
<td>1,2</td>
<td>EPA website – 5 steps of health risk assessment: <a href="http://www.epa.gov/risk_assessment/health-risk.htm">http://www.epa.gov/risk_assessment/health-risk.htm</a> 2 EH topics of interest submitted in class</td>
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<td>TH</td>
<td>Jan 26</td>
<td>Toxicology and Risk assessment</td>
<td>3</td>
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<td>Tu</td>
<td>Jan 31</td>
<td>Asbestos</td>
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<td>Groups assigned. 15 min group work time.</td>
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<td>TH</td>
<td>Feb 2</td>
<td>Population (Raymo, Sociology)</td>
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<td>Tu</td>
<td>Feb 7</td>
<td>Infectious Disease (Sethi, PHS)</td>
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<td>TH</td>
<td>Feb 9</td>
<td>Non-Infectious Disease</td>
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<td>Tu</td>
<td>Feb 14</td>
<td>Ambient Air Pollution</td>
<td>10</td>
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<tr>
<td>TH</td>
<td>Feb 16</td>
<td>Indoor Air Pollution</td>
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<tr>
<td>Tu</td>
<td>Feb 21</td>
<td>Emergency Response (Nehls-Lowe, DHS)</td>
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<td>Assessment paper draft due</td>
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<td>TH</td>
<td>Feb 23</td>
<td>Persistent Organic Pollutants (Anderson, DHS)</td>
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<td>Tu</td>
<td>Feb 28</td>
<td>Water Supply (Thompson, Biol Sys Eng.)</td>
<td>9</td>
<td>Assessment paper due, summary presentations and discussion</td>
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<td>Th</td>
<td>Mar 1</td>
<td>Wastewater Treatment (McMahon, Civ/Env Eng)</td>
<td>9</td>
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<td>Tu</td>
<td>Mar 6</td>
<td>Lead (Stanton, State Lab of Hygiene)</td>
<td>6</td>
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<td>Th</td>
<td>Mar 8</td>
<td>Foodborne Illness I (Wong, Food Res. Inst.)</td>
<td>11</td>
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<tr>
<td>Tu</td>
<td>Mar 13</td>
<td>Foodborne Illness II (Wong, Food Res. Inst.)</td>
<td>11</td>
<td>Human dimension draft due</td>
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<td>Th</td>
<td>Mar 15</td>
<td>Exam I</td>
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<td>Tu</td>
<td>Mar 20</td>
<td>Climate Change (Patz, PHS/Nelson)</td>
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<td>Human dimension final paper due, summary presentations and discussion</td>
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<td>Th</td>
<td>Mar 22</td>
<td>Pesticides I (Pellitteri, Plant Path)</td>
<td>7</td>
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*Assigned Readings will be posted online two weeks prior
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<tr>
<td>Tu</td>
<td>Mar 27</td>
<td>Pesticides II (Pellitteri, Plant Path)</td>
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<td>Th</td>
<td>Mar 29</td>
<td>Biomonitoring (Werner, DHS)</td>
<td>13</td>
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<td>Tu</td>
<td>Apr 10</td>
<td>Mercury</td>
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<td>Th</td>
<td>Apr 12</td>
<td>Solid Waste (O’Leary, Eng. Prof Dev.)</td>
<td>12</td>
<td>Risk Management draft due</td>
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<tr>
<td>Tu</td>
<td>Apr 17</td>
<td>Radiation I (DeLuca, Health Physics)</td>
<td>8</td>
<td>Risk Management final paper due, summary presentations and discussion</td>
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<td>Th</td>
<td>Apr 19</td>
<td>Radiation II (DeLuca, Health Physics)</td>
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<td>Tu</td>
<td>Apr 24</td>
<td>Risk Communication (Severtson, Nursing)</td>
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<td>Th</td>
<td>Apr 26</td>
<td>Urban Design (Dennis, Landscape Arch.)</td>
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<td>Tu</td>
<td>May 1</td>
<td>Regulation, Policy (L. Eagan, DNR)</td>
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<td>Executive Summary and Recommendations draft due</td>
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<td>Th</td>
<td>May 3</td>
<td>Industrial Ecology (P. Eagan, Engineering)</td>
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<td>Tu</td>
<td>May 8</td>
<td>Environmental Justice (Senier, Family Med, Sociol)</td>
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<td>Final Presentations</td>
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<td>Th</td>
<td>May 10</td>
<td>1335 HSLC Exam II</td>
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<tr>
<td>Tu</td>
<td>May 17</td>
<td>No classes – Exam Week</td>
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<td>Executive Summary and Recommendations paper due</td>
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*Assigned Readings will be posted online two weeks prior

**Attendance Policy:**
Students are expected to attend all group discussion sections. All absences must be cleared before class by sending an email to the small group faculty leader (Lori Severtson: djsevert@wisc.edu). Excused absences with credit will be considered on a case-by-case basis and will generally only be offered in situations of personal illness, serious family emergency, observance of religious holidays, scholarly activities (e.g., attendance at a scientific meeting), or other exceptional circumstances.

**Honesty and Integrity**
All students in the course are expected to follow the following guidelines for academic honesty and integrity as outlined by MPH Associate Director Barb Duerst: The MPH Program and the MPH Student Organization adopted an MPH Code of Conduct for in September, 2009. The MPH Code of Conduct states: “Master of Public Health students shall demonstrate honesty and integrity as shown by their challenging of themselves in academic pursuits; honesty in research and IRB applications—including honesty in interpretation of data, commitment to an unbiased interpretation of academic and professional endeavors; and the need to document research activities, protect patient confidentiality and HIPPA regulations. Students shall follow-through and pull their weight in group activities and understand where collaboration among students is or is not allowed; not plagiarize
others or past work (self-plagiarism), cheat, or purposefully undermine the work of others; and avoid conflicts of interest for the duration of their time in the program. As a professional, honesty and integrity also extends to personal behavior in life outside of the academic setting by realizing that students are representatives of the MPH program, UW-Madison, and the public health profession as a whole. “

Plagiarism is an act that is taken very seriously on this campus, in this program, and within this course. Important information about the definition of plagiarism and how to avoid it can be found on the Writing Center web site (http://www.wisc.edu/writing/Handbook/QuotingSources.html).

Information on what the university’s rules are regarding plagiarism can also be found on http://www.wisc.edu/students/saja/misconduct/misconduct.html.

Please take the time to examine these resources and familiarize yourself with the information available in order to avoid any problems with the assignments in this course.