

**DEPARTMENT OF ENVIRONMENTAL AND OCCUPATIONAL HEALTH SCIENCES**  
**SCHOOL OF PUBLIC HEALTH, UNIVERSITY OF WASHINGTON**  
**ENVH 111**  
**Exploring Environmental Health Connections**  
**Winter 2017**  
**3 credit hours**

**Course Faculty**

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**Teaching Assistants**

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**COURSE DESCRIPTION**

This course serves as a portal through which students can learn about the complex and multi-disciplinary field of Environmental Health Sciences. The natural environment presents a rich variety of hazards to human health: chemical, physical and biological. To these, our species has added its own assortment of hazards; for example, synthetic pesticides, industrial pollution and toxic waste. Environmental Health Sciences is the study of the health consequences of human-environment interaction. It is an applied science, with an emphasis on prevention or intervention to eliminate or reduce human health risks.

The course will focus on major environmental health hazards and controversies, raising issues of science and policy through lectures and discussions. The course is structured in modules, with each module devoted to particular environmental health issues. Tuesday and Thursday class sessions will be lecture/class discussion format. Friday class sessions will be class discussions of controversial issues in Environmental Health Sciences

**LEARNING OBJECTIVES**

At the end of this course, students will be able to

1. Identify major current and historic environmental health hazards
2. Describe the various approaches to identifying and studying these hazards
3. Describe the various exposure pathways and routes of human exposure to environmental hazards
4. Describe the various approaches to link environmental exposures to human health effects
5. Describe the major agencies, programs, and organizations involved in environmental and occupational health protection.

6. Describe the major public health policies that have been established to protect humans from exposure to environmental and occupational hazards.

## DISABILITY NOTICE

**Access and Accommodations:** Your experience in this class is important to me. If you have already established accommodations with Disability Resources for Students (DRS), please communicate your approved accommodations to me at your earliest convenience so we can discuss your needs in this course.

If you have not yet established services through DRS, but have a temporary health condition or permanent disability that requires accommodations (conditions include but not limited to; mental health, attention-related, learning, vision, hearing, physical or health impacts), you are welcome to contact DRS at 206-543-8924 or [uwdrs@uw.edu](mailto:uwdrs@uw.edu) or [disability.uw.edu](http://disability.uw.edu). DRS offers resources and coordinates reasonable accommodations for students with disabilities and/or temporary health conditions. Reasonable accommodations are established through an interactive process between you, your instructor(s) and DRS. It is the policy and practice of the University of Washington to create inclusive and accessible learning environments consistent with federal and state law.

## ACADEMIC INTEGRITY STATEMENT

Students at the University of Washington (UW) are expected to maintain the highest standards of academic conduct, professional honesty, and personal integrity. The UW School of Public Health (SPH) is committed to upholding standards of academic integrity consistent with the academic and professional communities of which it is a part. Plagiarism, cheating, and other misconduct are serious violations of the University of Washington Student Conduct Code (WAC 478-120). We expect you to know and follow the university's policies on cheating and plagiarism, and the [SPH Academic Integrity Policy](#). Acknowledgement that you have read this is due via the class website by Friday, January 13<sup>th</sup>. Any suspected cases of academic misconduct will be handled according to University of Washington regulations. For more information, see the [University of Washington Community Standards and Student Conduct website](#).

## CLASS STRUCTURE

Weeks 1 and 2	Review course requirements; Introduction to Environmental Health
Weeks 3 and 4	Chemical Hazards and Risks – Case study topic: Mercury in Seafood
Weeks 5 and 6	Balancing Chemical and Biological Hazards and Risks– Case study topic: DDT and Malaria
Weeks 7 and 8	Biological Hazards and Risks– Case Study topic: Ebola and Public Health in the US
Weeks 9 and 10	Physical Hazards and Risks– Case Study topic: Radiation from Cell Phones and Brain Cancer

The course is structured into five modules (see above). We will begin the class with a general introduction to environmental health (weeks 1 and 2). During weeks 3 and 4, we will discuss chemical hazards and risks with Friday sessions focused on our 1<sup>st</sup> case study on the topic of mercury and seafood safety. For weeks 5 and 6, we will discuss balancing chemical and biological hazards and risks with Friday sessions focused on our 2<sup>nd</sup> case study on the topic of

balancing the health risks from DDT and Malaria. For weeks 7 and 8, we will discuss other biological hazards and risks with Friday sessions focused on our 3<sup>rd</sup> case study on the topic of Ebola. For weeks 9 and 10, we will discuss physical hazards and risks with Friday sessions focused on our 4<sup>th</sup> case study on the topic of radiation from cell phones and its possible link to brain cancer. All class lectures will be recorded using Panopto. Recordings of the lectures can be accessed through the class website (see Panopto Recordings on the left side-bar).

## Assignments

**In-class Participation:** Students will respond to questions in-class using Poll Everywhere. Questions will be from the assigned readings. Some questions will be multiple choice and students will be asked to choose the correct answer. Other questions will be open ended for discussion (no correct answer). The point value for the questions will vary and will be posted with each question during class. If you are in class and answer the questions correctly, you will receive full credit. If you answer the questions incorrectly, you will receive half the credit. For questions without a correct answer, all students answering the question in class will receive full credit. If you are not in class to participate, you will not receive credit.

Students will need to register their email and mobile phone number in order for their class responses to be recorded via Poll Everywhere. Instructions on registering your Poll Everywhere account can be found on the class website. Please contact Jackie Garrick ([jacqueg@uw.edu](mailto:jacqueg@uw.edu)) with any questions concerning Poll Everywhere.

**Case Studies:** As mentioned above, case studies will be discussed during our Friday sessions. In general, case studies will be introduced on Mondays with background information provided regarding historic and current scientific evidence and public health policies related to the case study topic. In addition, 2 opposing commentaries on the scientific evidence and public health policies will be provided for each case study. Students will sign up to read 1 of the 2 commentaries by submitting their name into 1 of 6 groups listed on the class website (instructions for signing up are on the class website and will be reviewed in class). **For the first week of the case study, each student will read one of the two opposing commentaries and write an individual summary of the commentary.** Students should be ready to discuss their commentary in class during the Friday sessions. (Instructions for the summaries and a grading rubric are provided on the class website and will reviewed in class). The individual summaries are due before class on Friday (8am) on the date they are due. Summaries will be submitted via the class website by uploading a word document. The name of the word document should include your last name and your first name (Ex. Burbacher Tom.docx). The individual summaries are worth 50 points.

For the second week of the case study, students will work in groups using information from the 2 opposing commentaries and other sources to produce a new, balanced commentary on the scientific evidence and public health policies related to the case study topic. Students can choose to use the published research studies discussed in the opposing commentaries for the source of their scientific evidence for their commentary or they can conduct a literature search (eg. Pubmed) and select other research articles related to the topic (or a combination of both). Scientific evidence from at least 4 published research studies is required (so your commentary will have at least 4 references). Again, the purpose of the group assignment is to produce a new, balanced commentary on the issues related to the case study topic, so articles supporting

both sides of the issues should be discussed. Students should be prepared to discuss their new, balanced commentaries in class during our Friday sessions. (Instructions for the new, balanced group commentaries and a grading rubric are provided on the Module page of the class website under the assignment and will be reviewed in class). The new, balanced group commentaries are due before class on Friday (8am) on the date they are due. The commentaries will be submitted by one member of the group via the class website by uploading a word document. The name of the word document should include your group number (Ex. Group 1.docx). The new, balanced group commentaries are worth 50 points.

All submissions will be reviewed for plagiarism using open-source software. Late submissions will not be accepted and students will receive a 0 for the assignment. Students having trouble submitting their assignments should contact the instructor or one of the TAs for assistance prior to Friday's class to resolve the problem in time to meet the assignment deadline.

In addition to the above assignments, there will be two take-home exams during the quarter. The first exam will cover material from the first 5 weeks of class. The second exam will cover material from weeks 6-10 of class. The first exam will be available on February 3<sup>rd</sup> and is due on February 12<sup>th</sup>. The second exam will be available on March 10<sup>th</sup> and is due on March 17<sup>th</sup>. More details about the exams will be provided in class.

#### **GRADING ASSIGNMENTS**

The total number of points awarded for each of the 5 assignment types will be divided by the total number of points available (see below) to calculate a final % score for each assignment type. These % scores will then be weighed according to the percentages listed below to calculate a final % score for the class. This final % score will then be translated into your GPA score using the table below.

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|--|-----|
| 1) Exam #1 (Total 50 points)                         | 25% |
| 2) Exam #2 (Total 50 points)                         | 25% |
| 3) Individual Summaries (4 x 50 points = 200 points) | 20% |
| 4) Group Commentaries (4 x 50 points = 200 points)   | 20% |
| 5) In-class Responses                                | 10% |

#### **TRANSLATING YOUR TOTAL PERCENT SCORES TO GPA SCORES**

<u>GPA</u>	<u>Minimum % Correct</u>	<u>GPA</u>	<u>Minimum % Correct</u>
4.0	97	2.3	78
3.9	96	2.2	77
3.8	95	2.1	76
3.7	94	2	75
3.6	93	1.9	74
3.5	92	1.8	73
3.4	90	1.7	72
3.3	89	1.6	70
3.2	88	1.5	69
3.1	87	1.4	68
3	86	1.3	67

2.9	85	1.2	66
2.8	84	1.1	65
2.7	83	1	64
2.6	82	0.9	63
2.5	80	0.8	62
2.4	79	0.7	60
		0.0	<60