

DEPARTMENT OF ENVIRONMENTAL AND OCCUPATIONAL HEALTH SCIENCES
SCHOOL OF PUBLIC HEALTH, UNIVERSITY OF WASHINGTON
ENVH 111
Exploring Environmental Health Connections
Autumn 2016
3 credit hours

Course Faculty

Professor Thomas M. Burbacher, PhD
Environ. and Occ. Health Sciences (DEOHS)
Office Hours: By Appointment
Office: Health Sciences F561D
tmb@uw.edu

Teaching Assistants

Jacqueline Garrick, PhD Student
Toxicology, DEOHS
Office Hours: By Appointment
Office: Health Sciences F561D
jacqueg@uw.edu

Seth McGrew, MS Student
Environ. Health, DEOHS
Office Hours: By Appointment
Office: Health Sciences F561D
sgmcgrew@uw.edu

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 also 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 or 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, October 7th. 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

1 st two days class	Introduction to Environmental Health; Review course requirements
Weeks 1 and 2	Chemical Hazards – Case study topic: Mercury in Seafood
Weeks 3 and 4	Chemical Hazards – Case study topic: DDT and Malaria
Weeks 5 - 7	Biological Hazards – Case Study topic: Ebola and Public Health in the US
Week 8	One Health
Weeks 9 and 10	Physical Hazards – Case Study topic: Cell Phones and Cancer

The course is structured into four hazard modules (mercury, DDT, Ebola and cell phones). We will begin the class with a general introduction to environmental health. During weeks 1 and 2, we will work through an example hazard module focused on mercury in seafood. For weeks 3 and 4, the focus will be on the chemical hazard DDT and its use for combating malaria. For weeks 5 and 6, the focus will be on the biological hazard Ebola. Week 7 is a short week and will

focus on concept of One Health. For weeks 9 and 10, the focus will be on the physical hazard, cell phones and its possible link to cancer.

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 points for the questions.

Students will need to register their email and mobile phone number in order for their participation and 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) with any questions concerning Poll Everywhere.

Case Studies: There will be 4 case studies (see above). For each case study, the class will discuss the current government policies related to the environmental health issue (Instructor and TAs will lead these discussions). In addition, 2 opposing commentaries on the government 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). The case studies will be introduced on Tuesdays and the discussions will take place during our Friday sessions.

For the first week of the case study, students will read their assigned commentary and each student will write an individual summary of the commentary. Students should be ready to discuss their commentary in class during our 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 summaries are worth 50 points.

For the second week of the case study, students will work in groups to provide a more in-depth review and evaluation of the environmental health topics. Again, students should be prepared to discuss their evaluation in class during our Friday sessions. (Instructions for the group evaluation paper and a grading rubric are provided on the class website and will reviewed in class). The group evaluation papers are due before class on Friday (8am) on the date they are due. Group papers 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 group papers are worth 50 points.

The individual summaries of the commentaries and the group evaluation papers will be reviewed for plagiarism using VeriCite software. Instructions on how to use VeriCite will be provided in class and will be posted on the class website.

In addition to the above assignments, there will be two take-home exams during the quarter. The first take-home exam will be provided to students on November 8th and will be due by 10am on November 15th. The second take home exam will be provided to students on December 9th and will be due by 10am on December 15th. The second exam will only cover material in class since the first exam. 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 translated into 5 separate GPA scores. Your final GPA will be based on weighing the 5 individual GPA scores by the percentages listed below.

- | | |
|---|-----|
| 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 Evaluation Papers (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