

Course Syllabus

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Course Syllabus

Department of Environmental and Occupational Health Sciences

School of Public Health, University of Washington

ENVH 111

Exploring Environmental Health Connections

Winter 2018

3 credit hours

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://depts.washington.edu/uwdrs/). (<http://depts.washington.edu/uwdrs/>) 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 \(Links to an external site.\)](http://sph.washington.edu/students/academicintegrity/)[Links to an external site.](http://sph.washington.edu/students/academicintegrity/) (<http://sph.washington.edu/students/academicintegrity/>).

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.](http://www.washington.edu/cssc/) ([Links to an external site.](http://www.washington.edu/cssc/))[Links to an external site.](http://www.washington.edu/cssc/) (<http://www.washington.edu/cssc/>).

For this class, students must read the SPH Academic Integrity Policy below

<http://sph.washington.edu/students/academicintegrity/policy.asp> ([Links to an external site.](http://sph.washington.edu/students/academicintegrity/policy.asp))[Links to an external site.](http://sph.washington.edu/students/academicintegrity/policy.asp) (<http://sph.washington.edu/students/academicintegrity/policy.asp>) ([Links to an external site.](http://sph.washington.edu/students/academicintegrity/policy.asp))[Links to an external site.](http://sph.washington.edu/students/academicintegrity/policy.asp) (<http://sph.washington.edu/students/academicintegrity/policy.asp>)

Once you have finished reading the Academic Integrity Policy, please go to the url below and indicate that you have read the Policy. The deadline for reading the policy is Friday, October 6th. Assignments will not be accepted after that date without confirmation that you have read the policy.

Class Structure

Week 1	Introduction to Environmental Health, Course Requirements
Weeks 2 - 4	Chemical Hazards and Risks Case study topic: Mercury and Public Health
Weeks 5 and 6	Balancing Chemical and Biological Hazards and Risks Case study topic: DDT and Malaria
Week 7	Biological Hazards and Risks (Exam #1) Physical Hazards and Risks
Weeks 8 - 10	Case Study topic: Radiation from Cell Phones and Brain Cancer Exam #2

The course is structured into four modules (see above). We will begin the class with a general introduction to environmental health and a review of the course requirements. During weeks 2 through 4, we will discuss chemical hazards and risks with Friday sessions focused on our 1st case study on the topic of mercury and public health. For weeks 5 and 6, we will discuss balancing chemical and biological hazards and risks with Friday sessions focused on our 2nd case study on the topic of balancing the health risks from DDT and Malaria. During week 7, the 1st exam will be posted and there will not be a case study during this week. During weeks 8 through 10, we will discuss physical hazards and risks with Friday sessions during weeks 8 and 9 focused on our 3rd case study on the topic of radiation from cell phones and its possible link to brain cancer and other health effects.

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).

Graded Assignments

In-class Participation (10%)

During the Monday and Wednesday sessions, 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). 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 Tom or Kholood with any questions concerning Poll Everywhere.

Questions will also be included in the discussions of the case studies on Fridays. Most of these questions will be open ended to help lead the discussion of the case study.

Case Study Reports (30%)

As mentioned above, there will be 3 case studies, so 3 Case Study reports.

Case study #1: Mercury Exposure and Public Health

Case study #2: DDT and Malaria

Case study #3: Cell Phones and Brain Cancer

Summary of Steps for Each Case Study

Week 1

- 1) Sign up for commentary A or commentary B by 1 PM on Monday
- 2) Read commentary and note what EH issues are discussed, be ready to discuss those issues in your group and whole section
- 3) Groups will record top 2-3 EH issues they discussed on the board in class and will summarize in one sentence the bottom line message the commentary is trying to convey
- 4) At end of discussion, 2 to 3 EH issues will be selected (by the instructor) and groups will separately rank these issues for further research by the group
- 5) Instructor will review group rankings and assign EH topic to each group

Week 2

- 1) Each student in group will select research article from peer review journal on the assigned EH topic. Students will submit PDF of research article by 1 PM on Monday of week 2.

2) Students will submit a 1-2 page report (word document) on their research article by 1 PM on Thursday of week 2. The report will need to address a set of questions posed by the instructor for their topic.

3) Students will discuss what they learned from reading their article in their group and will answer some questions regarding the EH issue on the board to discuss with the entire section.

NOTE: Questions for report and discussion will be provided in advance

Further Instructions

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 opposing commentaries by submitting their name into 1 of 6 groups listed on the class website (instructions for signing up will be provided in class). For each of the 6 groups, 2 students will focus on one commentary (Commentary A) and 2 students will focus on the other commentary (Commentary B). If you have a strong preference for one commentary over the other, it will be wise to sign up for your preferred commentary early.

For the first week of the case study, students will read their chosen commentary and be ready to discuss the main points of the commentary in class during the Friday session. On Friday, students will work in their groups and report out to the entire class. At the end of the first Friday, groups will choose an environmental health (EH) topic discussed in the commentaries for further research during week 2 of the case study.

During week 2, each student will select a research article from the published literature to review and write a 1- 2 page report to share with other members of their group. Students within a group will have to coordinate their selection so each member of a group chooses a different article. Each student will submit a PDF of their chosen research article by 1 PM on Monday. The 1- 2 page report on the research article is due by 1 PM on Thursday. The report should be submitted as a word file with your First Name and Last Name for the name of the file (example: Burbacher Thomas.docx). Students will work with their groups to discuss the EH issues in the research articles and how the issues relate to the commentaries. Groups should be ready to discuss the issues addressed in the research articles and how the issues relate to the commentaries with the entire class during the 2nd Friday session.

All report submissions will be reviewed for plagiarism. 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.

The EH topics discussed in the case studies will depend on the case. More details regarding the requirements for the report are provided with the instructions for each case study on the Module page of the

class website under the assignment. A grading rubric is also provided on the Module page of the class website under the assignment.

Students will be given time to work in their groups on Mondays and Wednesdays during the second week of the case study.

Exams (60%)

There will be two take-home exams during the quarter. The first exam will cover material from the first 6 weeks of class. The second exam will cover material from weeks 7-10 of class. Each exam is worth 30% of your grade, so 60% total.

Grading

The total number of points awarded for each of the 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.

- Exam #1 30%
- Exam #2 30%
- Reports (3) 30%
- In-class Participation 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

Course Summary:

Date	Details	
Fri Jan 5, 2018	 1/5 Instructions for In-Class Participation (Poll Everywhere) and Lecture Recordings (Panopto) (https://canvas.uw.edu/courses/1128323/assignments/3967088)	due by 10:30am
	 1/5 Instructions for Searching for Scientific Articles Using PubMed (https://canvas.uw.edu/courses/1128323/assignments/4011943)	due by 10:30am
	 1/5 Read -Course Syllabus (https://canvas.uw.edu/courses/1128323/assignments/3967086)	due by 10:30am
	 1/5 Respond -SPH Academic Integrity Statement (https://canvas.uw.edu/courses/1128323/assignments/3967084)	due by 10:30am

Mon Jan 8, 2018	 1/8 No Reading for Today (https://canvas.uw.edu/courses/1128323/assignments/4038904)	due by 10:30am
	 1/5 First day to Sign up for Friday (Jan. 12th) Discussions on Environmental Epidemiology/Toxicology Articles (Deadline 1/8, 5 PM) (https://canvas.uw.edu/courses/1128323/assignments/4027129)	due by 5pm
	 1/8 Last day to Sign up for Friday (Jan. 12th) Discussions on Environmental Epidemiology/Toxicology Articles (Deadline today, 5 PM) (https://canvas.uw.edu/courses/1128323/assignments/3967056)	due by 5pm
Wed Jan 10, 2018	 1/10 Reading for Today -"Banned in Europe, Safe in the US" (https://canvas.uw.edu/courses/1128323/assignments/3967057)	due by 10:30am
Fri Jan 12, 2018	 1/12 Instructions for Case Study #1: Mercury Exposure and Pubic Health (https://canvas.uw.edu/courses/1128323/assignments/4018902)	due by 10:30am
	 1/12 Discussion of Environmental Epidemiology/Toxicology Articles (https://canvas.uw.edu/courses/1128323/assignments/3967059)	due by 10:30am
Mon Jan 15, 2018	 1/12 First Day to Sign Up for Case Study #1 (Deadline 1/15, 1 PM) (https://canvas.uw.edu/courses/1128323/assignments/3967058)	due by 1pm
	 1/15 Last Day to Sign Up for Case Study #1 (1 PM) (https://canvas.uw.edu/courses/1128323/assignments/3967040)	due by 1pm
Wed Jan 17, 2018	 1/17 Reading for Today -Case Study #1: "EPA committed to regulating mercury 17 years ago. Now it's having second thoughts" (https://canvas.uw.edu/courses/1128323/assignments/3967041)	due by 10:30am
Fri Jan 19, 2018	 1/19 Discussion of Commentaries for Case Study #1 (https://canvas.uw.edu/courses/1128323/assignments/3967043)	due by 10:30am
Mon Jan 22, 2018	 1/19 First Day to Submit PDF of Chosen Research Article for Case Study #1 (Deadline 1/22, 1 PM) (https://canvas.uw.edu/courses/1128323/assignments/3967045)	due by 1pm
	 1/22 Last Day to Submit PDF of Chosen Research Article for Case Study #1 (1 PM) (https://canvas.uw.edu/courses/1128323/assignments/4011910)	due by 1pm
Wed Jan 24, 2018	 1/24 Reading for Today -Breathing Death (https://canvas.uw.edu/courses/1128323/assignments/3967051)	due by 10:30am
Thu Jan 25, 2018	 1/25 Instructions for Report for Case Study #1 (https://canvas.uw.edu/courses/1128323/assignments/3967046)	due by 1pm

Fri Jan 26, 2018	 1/26 Discussion of EH Issues for Case Study #1 (https://canvas.uw.edu/courses/1128323/assignments/3967047)	due by 10:30am
Mon Jan 29, 2018	 1/29 Reading for Today -Case Study #2: "WHO Backs Use of DDT Against Malaria" (https://canvas.uw.edu/courses/1128323/assignments/3967050)	due by 10:30am
	 1/26 First Day to Sign Up for Case Study #2 (Deadline 1/29, 1 PM) (https://canvas.uw.edu/courses/1128323/assignments/3967048)	due by 1pm
	 1/29 Last Day to Sign Up for Case Study #2 (1 PM) (https://canvas.uw.edu/courses/1128323/assignments/3967049)	due by 1pm
Wed Jan 31, 2018	 1/31 Reading for Today -"The Role of Defeat Devices in Environmental Protection: Beyond The VW Scandal" (https://canvas.uw.edu/courses/1128323/assignments/3967044)	due by 10:30am
Fri Feb 2, 2018	 2/2 Discussion of Commentaries for Case Study #2 (https://canvas.uw.edu/courses/1128323/assignments/3967052)	due by 10:30am
Mon Feb 5, 2018	 2/5 Reading for Today -Documents That Changed the World: John Snow's Cholera Map, 1853 (https://canvas.uw.edu/courses/1128323/assignments/3967055)	due by 10:30am
	 2/2 First Day to Submit PDF for Chosen Research Article for Case Study #2 (Deadline 2/5, 1 PM) (https://canvas.uw.edu/courses/1128323/assignments/3967053)	due by 1pm
	 2/5 Last Day to Submit PDF for Chosen Research Article for Case Study #2 (1 PM) (https://canvas.uw.edu/courses/1128323/assignments/3967054)	due by 1pm
Wed Feb 7, 2018	 2/7 Reading for Today -"A CEO just got 28 years in prison after 9 people died from his salmonella-tainted peanuts" (https://canvas.uw.edu/courses/1128323/assignments/3967073)	due by 10:30am
Thu Feb 8, 2018	 2/8 Instructions for Report for Case Study #2 (https://canvas.uw.edu/courses/1128323/assignments/4022586)	due by 1pm
Fri Feb 9, 2018	 2/9 Discussion of EH Issues for Case #2 (https://canvas.uw.edu/courses/1128323/assignments/3967071)	due by 10:30am
	 dfdf (https://canvas.uw.edu/courses/1128323/assignments/3967072)	due by 1pm
Mon Feb 12, 2018	 2/12 Guest Speaker, Liz Dykstra: Reading -How a wildlife biologist became a plague-chaser in the American Southwest (https://canvas.uw.edu/courses/1128323/assignments/3967069)	due by 10:30am

Wed Feb 14, 2018	 2/14 Guest Speaker, Rebekah Petroff: Reading -Eradicating Guinea Worm (https://canvas.uw.edu/courses/1128323/assignments/3967061)	due by 10:30am
	 2/14 Reading for Today -"Flint's lead-poisoned water had a 'horrifyingly large' effect on fetal deaths, study finds" (https://canvas.uw.edu/courses/1128323/assignments/3967042)	due by 10:30am
Fri Feb 16, 2018	 2/16 Submit Exam #1 Here by 9 AM Today (Discussion in class today) (https://canvas.uw.edu/courses/1128323/assignments/3967064)	due by 9am
Mon Feb 19, 2018	 2/16 First Day to Sign Up for Case Study #3 (Deadline 2/19, 1 PM) (https://canvas.uw.edu/courses/1128323/assignments/3967063)	due by 1pm
	 2/19 Last Day to Sign Up for Case Study #3 (1 PM) (https://canvas.uw.edu/courses/1128323/assignments/4022804)	due by 1pm
Wed Feb 21, 2018	 2/21 NTP Study Information (https://canvas.uw.edu/courses/1128323/assignments/3967067)	due by 10:30am
	 2/21 Reading for Today -Does Cell Phone Use Cause Brain Cancer? What the New Study Means For You (https://canvas.uw.edu/courses/1128323/assignments/3967068)	due by 10:30am
Fri Feb 23, 2018	 2/23 Discussion of Commentaries for Case Study #3 (https://canvas.uw.edu/courses/1128323/assignments/3967076)	due by 10:30am
Mon Feb 26, 2018	 2/26 Reading for Today -" A Strategy for Saving Lives: The National Radon Action Plan" (https://canvas.uw.edu/courses/1128323/assignments/3967070)	due by 10:30am
	 2/23 First Day to Submit PDF for Chosen Research Article for Case Study #3 (Deadline 2/26, 1 PM) (https://canvas.uw.edu/courses/1128323/assignments/3967077)	due by 1pm
	 2/26 Last Day to Submit PDF for Chosen Research Article for Case Study #3 (1 PM) (https://canvas.uw.edu/courses/1128323/assignments/3967078)	due by 1pm
Wed Feb 28, 2018	 2/28 Guest Speaker, Kholood Altassan: Reading - Governments can no longer ignore war's impact on people and planet (https://canvas.uw.edu/courses/1128323/assignments/3967062)	due by 10:30am
Thu Mar 1, 2018	 3/1 Instructions for Submitting Report for Case Study #3 (https://canvas.uw.edu/courses/1128323/assignments/3967081)	due by 1pm
Fri Mar 2, 2018	 3/2 Discussion of Studies for Case Study #3 (https://canvas.uw.edu/courses/1128323/assignments/3967082)	due by 10:30am

Mon Mar 5, 2018

 [3/5 Guest Speaker, Tania Bush Isaksen: Reading -TBD](https://canvas.uw.edu/courses/1128323/assignments/3967079)
(<https://canvas.uw.edu/courses/1128323/assignments/3967079>)

due by 10:30am

Wed Mar 7, 2018

 [3/7 Reading -"New Screen Time Rules for Kids, by Doctors"](https://canvas.uw.edu/courses/1128323/assignments/3967080)
(<https://canvas.uw.edu/courses/1128323/assignments/3967080>)

due by 10:30am

Fri Mar 9, 2018

 [3/9 Exam #2 -Take-Home Exam Posted 1 PM \(Due 3/15, 1 PM\)](https://canvas.uw.edu/courses/1128323/assignments/3967083)
(<https://canvas.uw.edu/courses/1128323/assignments/3967083>)

due by 1pm

Thu Mar 15, 2018

 [3/15 Submit Exam #2 Here by 1 PM on Thursday, March 15th](https://canvas.uw.edu/courses/1128323/assignments/4011661)
(<https://canvas.uw.edu/courses/1128323/assignments/4011661>)

due by 1pm
