

Course Syllabus

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Course Syllabus

Department of Environmental and Occupational Health Sciences

School of Public Health, University of Washington

EN VH 111

Exploring Environmental Health Connections

Autumn 2017

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](http://sph.washington.edu/students/academicintegrity/) ([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

Thurs and Fri Introduction to Environmental Health, Course Requirements

Weeks 1 - 3 Chemical Hazards and Risks

Case study topic: Mercury and Public Health

Weeks 4 and 5 Balancing Chemical and Biological Hazards and Risks

Case study topic: DDT and Malaria

Weeks 6 - 8 Biological Hazards and Risks

Physical Hazards and Risks

Weeks 9 and 10

Case Study topic: Radiation from Cell Phones and Brain Cancer

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 1 through 3, 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 4 and 5, 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. For weeks 6 through 8, we will discuss other biological hazards and risks. The 1st exam will be posted during week 6 and will be due during week 7. There will not be a case study during these weeks. For weeks 9 and 10, we will discuss physical hazards and risks with Friday sessions focused on our 3rd 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).

Graded Assignments

In-class Participation (10%)

During the Tuesday and Thursday 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 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
- 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. Student will submit PDF of research article by 5pm on Tuesday of week 2.
- 2) Students will have time (~20 mins) to work in their groups on Tuesdays and Thursdays during week 2.
- 3) Student will submit a 1-2 page report (word document) on their research article by noon on Thursday of week 2. The report will need to address a set of questions posed by the instructor for their topic.

4) 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 5PM on Tuesday. The 1- 2 page report on the research article is due by noon 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 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.

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 Tuesdays and Thursdays 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 5 weeks of class. The second exam will cover material from weeks 6-10 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 Sep 29, 2017	 9/29 Read -Case Study Assignment Requirements (https://canvas.uw.edu/courses/1116966/assignments/3650868)	due by 11:30am
	 9/29 Read -Disability Notice (https://canvas.uw.edu/courses/1116966/assignments/3650869)	due by 11:30am
	 9/29 Read -Grading Policies (https://canvas.uw.edu/courses/1116966/assignments/3650870)	due by 11:30am
	 9/29 Read -In-Class Participation and Lecture Recordings (https://canvas.uw.edu/courses/1116966/assignments/3650871)	due by 11:30am
Tue Oct 3, 2017	 10/3 Sign up for Friday's Reading (https://canvas.uw.edu/courses/1116966/assignments/3905377)	due by 5pm
Thu Oct 5, 2017	 10/5 Reading -"Banned in Europe, Safe in the US"	due by 1:30pm

(<https://canvas.uw.edu/courses/1116966/assignments/3650857>)

 [**9/29 Read and Respond -SPH Academic Integrity Statement**](#)
(<https://canvas.uw.edu/courses/1116966/assignments/3650872>) due by 9am

Fri Oct 6, 2017

 [**10/6 Readings and Instructions for Environmental Epidemiology/Toxicology Discussions**](#)
(<https://canvas.uw.edu/courses/1116966/assignments/3650853>) due by 11:30am

 [**10/10 Last Day to Sign Up for Case Study #1**](#)
(<https://canvas.uw.edu/courses/1116966/assignments/3907524>) due by 12pm

Tue Oct 10, 2017

 [**10/6 First Day to Sign Up for Case Study #1**](#)
(<https://canvas.uw.edu/courses/1116966/assignments/3650867>) due by 12pm

 [**10/10 Reading -Case Study #1: "EPA committed to regulating mercury 17 years ago. Now it's having second thoughts'**](#)
(<https://canvas.uw.edu/courses/1116966/assignments/3650854>) due by 1:30pm

Thu Oct 12, 2017

 [**10/12 Reading -"Flint's lead-poisoned water had a 'horrifyingly large' effect on fetal deaths, study finds"**](#)
(<https://canvas.uw.edu/courses/1116966/assignments/3650860>) due by 1:30pm

Fri Oct 13, 2017

 [**10/13 Discussion of Commentaries for Case Study #1**](#)
(<https://canvas.uw.edu/courses/1116966/assignments/3650858>) due by 11:30am

 [**10/17 Reading -"The Role of Defeat Devices in Environmental Protection: Beyond The VW Scandal"**](#)
(<https://canvas.uw.edu/courses/1116966/assignments/3650861>) due by 1:30pm

Tue Oct 17, 2017

 [**10/17 Submit PDF for Chosen Research Article for Case Study #1 by 5PM Today**](#)
(<https://canvas.uw.edu/courses/1116966/assignments/3902854>) due by 5pm

Thu Oct 19, 2017

 [**10/19 Submit Report on Chosen Research Article for Case Study #1 by Midnight Tonight**](#)
(<https://canvas.uw.edu/courses/1116966/assignments/3902491>) due by 11:59pm

Fri Oct 20, 2017

 [**10/20 Discussion of EH Issues for Case Study #1**](#)
(<https://canvas.uw.edu/courses/1116966/assignments/3650862>) due by 11:30am

Tue Oct 24, 2017

 [**10/24 Reading -Case Study #2: "WHO Backs Use of DDT Against Malaria"**](#)
(<https://canvas.uw.edu/courses/1116966/assignments/3650866>) due by 1:30pm

Wed Oct 25, 2017

 [**10/20 First Day to Sign Up for Case Study #2**](#)
(<https://canvas.uw.edu/courses/1116966/assignments/3650863>) due by 12pm

 [**10/24 Last Day to Sign Up for Case Study #2**](#)

Thu Oct 26, 2017	<p> <u>10/26 Reading -Breathing Death</u> (https://canvas.uw.edu/courses/1116966/assignments/3878152)</p>	due by 1:30pm
Fri Oct 27, 2017	<p> <u>10/27 Discussion of Commentaries for Case Study #2</u> (https://canvas.uw.edu/courses/1116966/assignments/3650894)</p>	due by 11:30am
	<p> <u>10/31 Reading -Documents That Changed the World: John Snow's Cholera Map, 1853</u> (https://canvas.uw.edu/courses/1116966/assignments/3650897)</p>	due by 1:30pm
Tue Oct 31, 2017	<p> <u>10/27 First Day to Submit PDF for Chosen Research Article for Case Study #2</u> (https://canvas.uw.edu/courses/1116966/assignments/3933448)</p>	due by 5pm
	<p> <u>10/31 Last Day to Submit PDF for Chosen Research Article for Case Study #2 by 5PM Today</u> (https://canvas.uw.edu/courses/1116966/assignments/3902856)</p>	due by 5pm
Thu Nov 2, 2017	<p> <u>11/2 Guest Speaker, Liz Dykstra: Reading -How a wildlife biologist became a plague-chaser in the American Southwest</u> (https://canvas.uw.edu/courses/1116966/assignments/3902344)</p>	due by 1:30pm
Fri Nov 3, 2017	<p> <u>11/3 Discussion of EH Issues for Case #2</u> (https://canvas.uw.edu/courses/1116966/assignments/3902345)</p>	due by 11:30am
Tue Nov 7, 2017	<p> <u>11/7 Reading -"A CEO just got 28 years in prison after 9 people died from his salmonella-tainted peanuts"</u> (https://canvas.uw.edu/courses/1116966/assignments/3907737)</p>	due by 1:30pm
Thu Nov 9, 2017	<p> <u>11/9 Guest Speaker, James Rasmussen: Reading -Duwamish "Seattle's River"</u> (https://canvas.uw.edu/courses/1116966/assignments/3902356)</p>	due by 1:30pm
Fri Nov 10, 2017	<p> <u>11/10 Submit Report on Chosen Research Article for Case Study #2 by Midnight Tonight</u> (https://canvas.uw.edu/courses/1116966/assignments/3902527)</p>	due by 11:59pm
Tue Nov 14, 2017	<p> <u>11/14 Guest Speaker, Rebekah Petroff: Reading -Eradicating Guinea Worm</u> (https://canvas.uw.edu/courses/1116966/assignments/3902358)</p>	due by 1:30pm
Thu Nov 16, 2017	<p> <u>11/16 Guest Speaker, Kholood Altassan: Reading - Governments can no longer ignore war's impact on people and planet</u> (https://canvas.uw.edu/courses/1116966/assignments/3650903)</p>	due by 1:30pm

- Fri Nov 17, 2017
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-  [11/17 Submit Exam #1 by 8AM \(Discussion in class today\)](https://canvas.uw.edu/courses/1116966/assignments/3881227) due by 8am
(<https://canvas.uw.edu/courses/1116966/assignments/3881227>)
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-  [11/3 Exam #1 -Take-Home Exam Posted by 3pm \(Due 11/17, 8am\)](https://canvas.uw.edu/courses/1116966/assignments/3650900) due by 8am
(<https://canvas.uw.edu/courses/1116966/assignments/3650900>)
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- Tue Nov 21, 2017
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-  [11/17 First Day to Sign Up for Case Study #3](https://canvas.uw.edu/courses/1116966/assignments/3650890) due by 12pm
(<https://canvas.uw.edu/courses/1116966/assignments/3650890>)
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-  [11/21 Last Day to Sign Up for Case Study #3](https://canvas.uw.edu/courses/1116966/assignments/3650892) due by 12pm
(<https://canvas.uw.edu/courses/1116966/assignments/3650892>)
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-  [11/21 Guest Speaker, Marguerite Pappaioanou: Reading - "Washington's wildfires gave this sea otter asthma. Now she's learning to use an inhaler"](https://canvas.uw.edu/courses/1116966/assignments/3650882) due by 1:30pm
(<https://canvas.uw.edu/courses/1116966/assignments/3650882>)
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- Tue Nov 28, 2017
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-  [11/28 Reading -Does Cell Phone Use Cause Brain Cancer? What the New Study Means For You](https://canvas.uw.edu/courses/1116966/assignments/3650893) due by 1:30pm
(<https://canvas.uw.edu/courses/1116966/assignments/3650893>)
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- Thu Nov 30, 2017
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-  [11/30 Reading -" A Strategy for Saving Lives: The National Radon Action Plan"](https://canvas.uw.edu/courses/1116966/assignments/3902372) due by 1:30pm
(<https://canvas.uw.edu/courses/1116966/assignments/3902372>)
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- Fri Dec 1, 2017
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-  [12/1 Discussion of Commentaries for Case Study #3](https://canvas.uw.edu/courses/1116966/assignments/3650905) due by 11:30am
(<https://canvas.uw.edu/courses/1116966/assignments/3650905>)
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-  [12/5 Reading -"Will Global Warming Heat Us Beyond Our Physical Limits?](https://canvas.uw.edu/courses/1116966/assignments/3650906) due by 1:30pm
(<https://canvas.uw.edu/courses/1116966/assignments/3650906>)
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- Tue Dec 5, 2017
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-  [12/1 First Day to Submit PDF for Chosen Research Article for Case Study #3](https://canvas.uw.edu/courses/1116966/assignments/3948531) due by 5pm
(<https://canvas.uw.edu/courses/1116966/assignments/3948531>)
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-  [12/5 Last Day to Submit PDF for Chosen Research Article for Case Study #3 by 5PM Today](https://canvas.uw.edu/courses/1116966/assignments/3902855) due by 5pm
(<https://canvas.uw.edu/courses/1116966/assignments/3902855>)
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- Thu Dec 7, 2017
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-  [12/7 Submit Report on Chosen Research Article for Case Study #3 by Noon Today](https://canvas.uw.edu/courses/1116966/assignments/3902528) due by 12pm
(<https://canvas.uw.edu/courses/1116966/assignments/3902528>)
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-  [12/7 Reading -"New Screen Time Rules for Kids, by Doctors"](https://canvas.uw.edu/courses/1116966/assignments/3650907) due by 1:30pm
(<https://canvas.uw.edu/courses/1116966/assignments/3650907>)
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- Fri Dec 8, 2017
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-  [12/8 Discussion of EH Issues for Case Study #3](https://canvas.uw.edu/courses/1116966/assignments/3650898) due by 11:30am
(<https://canvas.uw.edu/courses/1116966/assignments/3650898>)

Fri Dec 15, 2017

 [**12/8 Exam #2 -Take-Home Exam Posted at 3pm**](https://canvas.uw.edu/courses/1116966/assignments/3902549)
[\(https://canvas.uw.edu/courses/1116966/assignments/3902549\)](https://canvas.uw.edu/courses/1116966/assignments/3902549)

due by 12pm

 [**11/28 NTP Study Information**](https://canvas.uw.edu/courses/1116966/assignments/3964437)
[\(https://canvas.uw.edu/courses/1116966/assignments/3964437\)](https://canvas.uw.edu/courses/1116966/assignments/3964437)

 [**12/1 Case Study #3 Report Instructions**](https://canvas.uw.edu/courses/1116966/assignments/3952617)
[\(https://canvas.uw.edu/courses/1116966/assignments/3952617\)](https://canvas.uw.edu/courses/1116966/assignments/3952617)
