

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

Autumn 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](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/).

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

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

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 Monday, October 1st. Assignments will not be accepted after that date without confirmation that you have read the policy.

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

Class Structure

The course structure is outlined below. 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).

Week 1: Introduction to Environmental Health and Course Requirements

Week 2: Chemical Hazards and Case Study #1 (Mercury and Public Health)

Week 3: Chemical Hazards and Case Study #1 (Mercury and Public Health)

Week 4: Balancing Chemical and Biological Hazards and Case Study #2 (DDT/Malaria)

Week 5: Balancing Chemical and Biological Hazards and Case Study #2 (DDT/Malaria)

Week 6: Biological Hazards and Midterm Exam

Week 7: Physical Hazards and Case Study #3 (Cell Phones and Cancer)

Week 8: Guest Lecture and Thanksgiving Holiday

Week 9: Physical Hazards and Case Study #3 (Cell Phones and Cancer)

Week 10: Global Climate Change and Screen Time

Graded Assignments

In-class Participation (20%)

During the Tuesday and Thursday sessions, students will respond to questions in-class using Poll Everywhere (10%). Questions will be from the assigned news articles. 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 TAs with questions concerning Poll Everywhere.

During the Friday sessions, students will participate in group discussions (10%). (Students who are absent on Friday's without prior approval will not receive participation credit)

On Fridays during the 1st week of our Case Studies (see below), students will work in groups to discuss the EH issues related to the case study topic. Each student in the group is expected to participate in the discussions. Students who do not participate will not be given participation credit, even if they are present.

During week 2 of the Case Studies, students will continue to work in their groups to develop a presentation on the case study topic assigned to their group. Each student in the group is expected to participate in planning the presentation and is expected to participate at some time during the presentation and question and answer session on Friday of the 2nd week of the Case Study. Students who do not participate will not be given participation credit, even if they are present.

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 Requirements for Case Studies

- Sign up for group to read one of two opposing commentaries (A or B) on Case Study Topic
- Read chosen commentary and be ready to discuss it with your group on 1st Friday of Case Study
- After your group has been assigned an Environmental Health (EH) issue discussed in the commentaries during 1st Friday session, search PubMed and select a scientific research article from peer reviewed journal that provides data to support message of commentary regarding the EH issue
- Read and summarize your research article for your 2-page Case Study Report (instructions will be provided)
- Discuss your research article with your group during week 2 of the case study and work with your group to prepare 10 minute presentation to provide evidence from all of the research articles to support EH issue discussed in commentary
- On 2nd Friday of the Case Study, each group will give a 10 minute presentation (with visual aids) discussing the research articles that they have read that provide evidence in support of the EH issue discussed in their commentary. There will also be a question and answer session.
- Submit Case Study Report via website

Details for Case Studies

In general, case studies will be introduced on Tuesdays with background information provided regarding historic and current scientific evidence and public health policies related to the case study topics.

Two opposing commentaries on the scientific evidence and public health policies will be provided for each case study (Commentary A and Commentary B). Students will sign up to read either Commentary A or Commentary B by submitting their name for 1 of 4 groups listed on the class website (instructions for signing up will be provided in class). Two of the groups will read Commentary A and two groups Commentary B. It will be important for you to look over both of the commentaries and make your choice early since the commentaries present opposing arguments on the public health topics related to the case study. Whichever commentary you sign up to read will be the one you will be supporting during the assignment (more on that later).

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 to discuss the EH issues from either Commentary A or Commentary B. The EH topics discussed in the case studies will depend on the case. Groups will then record the 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. Each student in the group is expected to participate in the discussion. Students who do not participate will not be given credit, even if they are present.

At end of the discussion, 2 of the EH issues that were identified by the group discussions will be selected (by the instructor). A group representing Commentary A and another group representing Commentary B will be assigned to each of these two issues by the instructor. Opposing sides of the issue will be presented during class on Friday of the second week of the case study.

During week 2, each student will individually select a research article from the published literature that provides data to support the side of the EH issue described in the assigned Commentary (either A or B). Individuals will submit a PDF of the research article for approval by the instructor no later than 1 PM on Monday of the second week of the case study. Students within a group will have to coordinate their selection of articles so each member of a group chooses a different article. Articles will be reviewed and approved as they are received, so the sooner you submit your article, the sooner you can begin your 2nd week assignment.

Once the research article is approved, each student will read the article and write a 2-page report (word document) on their research article. The report will need to address a set of questions posed by the instructor for their topic (more on this in class). While students are working on their reports, they will also need to be meeting with their groups during the second week of the case study to prepare a presentation that provides support for their EH issue. Students will be given time in class on Tuesdays and Thursdays during week 2 of case study to prepare their presentation. Additional time outside of class will most likely be necessary.

On Friday during week 2 of the case study, each group will come to class ready to present compelling evidence from their research articles in support of their side of the EH issue. Each group will be given 10 minutes to present their case. The format for the presentations can vary, but must include visual aids (slides, poster, etc.). After the initial presentations, each group will respond to questions from the other side (or the rest of the class or instructors) during a question and answer period. Each student in the group is expected to participate at some time during the presentation and/or question and answer period. Students who do not participate will not be given credit, even if they are present. Since each presentation will take approximately 10 minutes and there will be 4 presentation (2 sides for each of the 2 EH issues), time will be tight to complete the assignment in the 50 minutes allotted for class. We will need to be organized and start on time in order to finish.

The written 2-page case study reports are due by 1PM on the Monday after the presentations. 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). All report submissions will be reviewed for plagiarism. Students having trouble submitting their assignments should contact the instructor or one of the TAs for assistance early to resolve the problem in time to meet the assignment deadline.

More details regarding the requirements for the written 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.

Exams (50%)

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 25% of your grade, so 50% total.

Grading

The total number of points awarded for each of the assignment types will be divided by the total number of points available 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 25%
- Exam #2 25%
- Reports (3) 30%
- In-class Participation 20% (10% Tuesdays and Thursdays, 10% Fridays)

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	
	 9/28 Read -Course Syllabus 9/28 Read -Course Syllabus	due by 10:30am
	 9/28 Read -Instructions for Poll Everywhere and Lecture Recordings (Panopto) 9/28 Read -Instructions for Poll Everywhere and Lecture Recordings (Panopto)	due by 10:30am
Fri Sep 28, 2018	 9/28 Read -Instructions for Searching for Scientific Articles Using PubMed 9/28 Read -Instructions for Searching for Scientific Articles Using PubMed	due by 10:30am
	 9/28 Respond -SPH Academic Integrity Statement 9/28 Respond -SPH Academic Integrity Statement	due by 10:30am
	 9/28 Read -Grading Policies 9/28 Read -Grading Policies	due by 10:30am

Date	Details	
Tue Oct 2, 2018	 10/2 Last day to Sign up for Friday (10/5) Discussions on Environmental Epidemiology/Toxicology Articles (Deadline today, 8 AM) (https://canvas.uw.edu/courses/1220628/assignments/4263474)	due by 8:00am
	 9/28 First day to Sign up for Friday (10/5) Discussions on Environmental Epidemiology/Toxicology Articles (Deadline 10/2, 8 AM) (https://canvas.uw.edu/courses/1220628/assignments/4263469)	due by 8:00am
	 10/2 No Reading for Today (https://canvas.uw.edu/courses/1220628/assignments/4263475)	due by 10:30pm
Thu Oct 4, 2018	 10/4 Reading for Today -"Banned in Europe, Safe in the US" (https://canvas.uw.edu/courses/1220628/assignments/4263453)	due by 10:30am
Fri Oct 5, 2018	 10/5 Discussion of Environmental Epidemiology/Toxicology Articles (https://canvas.uw.edu/courses/1220628/assignments/4263454)	due by 10:30am
Tue Oct 9, 2018	 10/5 First Day to Sign Up for Case Study #1 (Deadline 10/9, 8 AM) (https://canvas.uw.edu/courses/1220628/assignments/4263455)	due by 8:00am
	 10/9 Last Day to Sign Up for Case Study #1 (8 AM) (https://canvas.uw.edu/courses/1220628/assignments/4263457)	due by 8:00am
	 10/9 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/1220628/assignments/4263458)	due by 10:30am
Thu Oct 11, 2018	 10/11 Reading for Today -"Flint's lead-poisoned water had a 'horrifyingly large' effect on fetal deaths, study finds" (https://canvas.uw.edu/courses/1220628/assignments/4263477)	due by 10:30am
Fri Oct 12, 2018	 10/12 Discussion of Commentaries for Case Study #1 (https://canvas.uw.edu/courses/1220628/assignments/4263459)	due by 10:30am
	 10/12 General Instructions for Case Studies (https://canvas.uw.edu/courses/1220628/assignments/4380871)	due by 10:30am
Mon Oct 15, 2018	 10/12 First Day to Submit PDF of Chosen Research Article for Case Study #1 (Deadline 10/15, 1 PM) (https://canvas.uw.edu/courses/1220628/assignments/4263460)	due by 1pm
	 10/15 Last Day to Submit PDF of Chosen Research Article for Case Study #1 (1 PM) (https://canvas.uw.edu/courses/1220628/assignments/4263461)	due by 1pm

Date	Details	
Thu Oct 18, 2018	 10/18 Reading for Today -"The Role of Defeat Devices in Environmental Protection: Beyond The VW Scandal" (https://canvas.uw.edu/courses/1220628/assignments/4263468)	due by 10:30am
Fri Oct 19, 2018	 10/19 Presentations of Support for EH Issues for Case Study #1 (https://canvas.uw.edu/courses/1220628/assignments/4263464)	due by 10:30am
Mon Oct 22, 2018	 10/22 Instructions for Submitting Report for Case Study #1 (Deadline 1 PM) (https://canvas.uw.edu/courses/1220628/assignments/4263463)	due by 1pm
	 10/22 Instructions for Writing Report for Case Study #1 (https://canvas.uw.edu/courses/1220628/assignments/4381790)	due by 1:00pm
	 10/19 First Day to Sign Up for Case Study #2 (Deadline 10/23, 8 AM) (https://canvas.uw.edu/courses/1220628/assignments/4263465)	due by 8:00am
Tue Oct 23, 2018	 10/23 Reading for Today -Case Study #2: "WHO Backs Use of DDT Against Malaria" (https://canvas.uw.edu/courses/1220628/assignments/4263467)	due by 10:30am
	 10/23 Last Day to Sign Up for Case Study #2 (1 PM) (https://canvas.uw.edu/courses/1220628/assignments/4263466)	due by 1:00pm
Thu Oct 25, 2018	 10/25 Reading for Today "This smoke is not for the birds — but Mishka the asthmatic otter is doing fine" (https://canvas.uw.edu/courses/1220628/assignments/4381935)	due by 10:30am
Fri Oct 26, 2018	 10/26 General Instructions for Discussion of Commentaries for Case Study #2 (https://canvas.uw.edu/courses/1220628/assignments/4263488)	due by 10:30am
Mon Oct 29, 2018	 10/26 First Day to Submit PDF for Chosen Research Article for Case Study #2 (Deadline 10/29, 1 PM) (https://canvas.uw.edu/courses/1220628/assignments/4263489)	due by 1pm
	 10/29 Last Day to Submit PDF for Chosen Research Article for Case Study #2 (1 PM) (https://canvas.uw.edu/courses/1220628/assignments/4263490)	due by 1pm
Tue Oct 30, 2018	 10/30 Reading for Today -Documents That Changed the World: John Snow's Cholera Map, 1853 (https://canvas.uw.edu/courses/1220628/assignments/4263491)	due by 10:30am
Thu Nov 1, 2018	 11/1 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/1220628/assignments/4263492)	due by 10:30am

Date	Details	
Fri Nov 2, 2018	 11/2 Presentations of Support for EH Issues for Case #2 (https://canvas.uw.edu/courses/1220628/assignments/4263494)	due by 10:30am
Mon Nov 5, 2018	 11/5 Instructions for Submitting Report for Case Study #2 (Deadline 1 PM) (https://canvas.uw.edu/courses/1220628/assignments/4263493)	due by 1pm
	 11/5 Instructions for Writing Report for Case Study #2 (https://canvas.uw.edu/courses/1220628/assignments/4381816)	due by 1:00pm
Tue Nov 6, 2018	 11/6 First Day to Sign Up for Case Study #3 (Deadline 11/13, 8 AM) (https://canvas.uw.edu/courses/1220628/assignments/4263478)	due by 8:00am
	 11/6 Reading for Today "Statement from Jeffrey Shuren, M.D., J.D., Director of the FDA's Center for Devices and Radiological Health on the National Toxicology Program's report on radiofrequency energy exposure" (https://canvas.uw.edu/courses/1220628/assignments/4263482)	due by 10:30am
Thu Nov 8, 2018	 11/8 Guest Speaker, Liz Dykstra: Reading for Today -How a wildlife biologist became a plague-chaser in the American Southwest (https://canvas.uw.edu/courses/1220628/assignments/4263476)	due by 10:30am
Fri Nov 9, 2018	 11/9 Submit Exam #1 Here by 9 AM Today (Discussion in class today) (https://canvas.uw.edu/courses/1220628/assignments/4263479)	due by 9am
	 11/2 Exam #1 Posted Today (https://canvas.uw.edu/courses/1220628/assignments/4432689)	due by 9:00am
Tue Nov 13, 2018	 11/13 Last Day to Sign Up for Case Study #3 (8 AM) (https://canvas.uw.edu/courses/1220628/assignments/4263480)	due by 8:00am
	 11/13 Guest Speaker, Rebekah Petroff: Readings for Today - Guinea Worm (https://canvas.uw.edu/courses/1220628/assignments/4381936)	due by 10:30am
Thu Nov 15, 2018	 11/15 Guest Speaker, Trevor Peckham: Reading TBD (https://canvas.uw.edu/courses/1220628/assignments/4381937)	due by 10:30am
Fri Nov 16, 2018	 11/16 Discussion of Commentaries for Case Study #3 (https://canvas.uw.edu/courses/1220628/assignments/4263483)	due by 10:30am

Date	Details	
Mon Nov 19, 2018	 11/16 First Day to Submit PDF for Chosen Research Article for Case Study #3 (Deadline 11/19, 1 PM) (https://canvas.uw.edu/courses/1220628/assignments/4263484)	due by 1pm
	 11/19 Last Day to Submit PDF for Chosen Research Article for Case Study #3 (1 PM) (https://canvas.uw.edu/courses/1220628/assignments/4359305)	due by 1pm
Tue Nov 20, 2018	 11/20 Guest Speaker, James Rasmussen: Reading -TBD (https://canvas.uw.edu/courses/1220628/assignments/4381946)	due by 10:30am
Tue Nov 27, 2018	 11/27 Reading for Today -Breathing Death (https://canvas.uw.edu/courses/1220628/assignments/4263462)	due by 10:30am
Thu Nov 29, 2018	 11/29 Reading for Today -" A Strategy for Saving Lives: The National Radon Action Plan" (https://canvas.uw.edu/courses/1220628/assignments/4263486)	due by 10:30am
Fri Nov 30, 2018	 11/30 Presentaions of Support for EH Issues for Case Study #3 (https://canvas.uw.edu/courses/1220628/assignments/4263497)	due by 10:30am
Mon Dec 3, 2018	 12/3 Instructions for Submitting Report for Case Study #3 (Deadline 1 PM) (https://canvas.uw.edu/courses/1220628/assignments/4263496)	due by 1pm
	 11/16 Instructions for Writing Report for Case Study #3 (https://canvas.uw.edu/courses/1220628/assignments/4381828)	due by 1:00pm
Tue Dec 4, 2018	 12/4 Guest Speaker, Tania Bush Isaksen: Reading - "If you live in Florida, doctors say climate change is already affecting your health" (https://canvas.uw.edu/courses/1220628/assignments/4263498)	due by 10:30am
Thu Dec 6, 2018	 12/6 Reading -"New Screen Time Rules for Kids, by Doctors" (https://canvas.uw.edu/courses/1220628/assignments/4263499)	due by 10:30am
Fri Dec 7, 2018	 12/7 Class review and discussion of Take-Home Exam #2 (Due 12/13, 1 PM) (https://canvas.uw.edu/courses/1220628/assignments/4263500)	due by 10:30am
Thu Dec 13, 2018	 12/7 Submit Exam #2 Here by 1 PM, 12/13/18 (https://canvas.uw.edu/courses/1220628/assignments/4263495)	due by 1pm
	 12/7 EXAM #2 Posted Today (https://canvas.uw.edu/courses/1220628/assignments/4432868)	due by 1:00pm