

ENV H 472: Environmental Risk and Society (3 credits) Autumn 2020

Instructors:

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(she/her/hers)

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(he/him/his)

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Class:

Held asynchronously through our Canvas page with some synchronous Zoom sessions (see schedule)

Office Hours:

Marissa (Wednesdays 10am-11am Pacific via Zoom)

Allen (Mondays 10am-11am Pacific via Zoom)

Textbook: You will NOT need to buy any textbook for this course. All readings will be provided as PDFs on the course webpage.

The University of Washington acknowledges that the land we gather on to learn, teach, and grow is the native land of the Coast Salish people, the land which touches the shared waters of all tribes and bands within the Suquamish, Tulalip, and Muckleshoot nations.

Overview

This course examines the development and uses of environmental risk analysis, particularly in regard to public health concerns. Environmental risk analysis is practiced within a context of social and cultural values, leading to differing perceptions, ranking of risks, and challenges in effective risk communication. Students will learn about the technical components of the risk assessment framework, discuss various strategies for risk communication and risk management, and apply what they have learned to a variety of case studies for environmental health risk, including consumer products, methylene chloride, lead, glyphosate, and others.

Learning Objectives

By the end of this course, students will be able to:

1. Describe the primary components of current risk assessment and risk management procedures used for environmental health hazard evaluation and resolution.
2. Explain how social and cultural values shape perceptions and communication of environmental risks.
3. Identify the key aspects of public participation processes aimed at resolving environmental risk conflicts.
4. Apply critical thinking to emerging issues in environmental risk.

5. Demonstrate “environmental literacy” through analysis of news media reports of environmental health risk issues.

6. Apply risk assessment principles to a specific environmental health risk controversy.

Courses in the Time of COVID

I understand that this course is being offered in a time of tremendous uncertainty, and I recognize that you (and I) may encounter unexpected challenges during this quarter. That includes challenges related to health and illness, technology, caregiving responsibilities, work responsibilities, and more.

My goal this quarter is to support you in doing the best work you can in light of the challenges you face. I understand that college students face tremendous pressure to work hard, get “good” grades, and be as “successful” as possible. That said, I encourage you to remember that your health and well-being are far more important than the work you do in this class or any class. And I encourage you to take the time you need to care for yourself and your loved ones.

If you are finding it difficult to balance your health and well-being with your work in this class, please let me know. It is ok to ask for help and to acknowledge when you are struggling, and I am happy to help connect you with resources and services through campus and also make accommodations to our course plan as needed. I am accessible by email, and I will do my best to respond to messages within 24 hrs.

I also ask that you be patient with me if the challenges of this quarter force me to make last-minute changes to the course plan. I will do my best to communicate any changes clearly, and make them with respect for the inconvenience, frustration, and confusion that change may cause.

Basic Needs

Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is urged to contact Juanita Ricks, Director for Student and Academic Services, jmricks@uw.edu, 206-616-3198.

Furthermore, please notify Dr. Baker about your concerns if you are comfortable in doing so. This will enable her to provide any resources that she may possess.

Course Format

This course will mostly be offered asynchronously, through our Canvas page. This means that all work for the course can be completed at a time and place of your choosing. All course materials and assignments will be posted on and accessible through Canvas. There will be two modules to complete each week. Each module will include reading and listening materials, short video lectures, engagement activities, and comprehension check quizzes.

We will hold FOUR synchronous Zoom sessions to discuss some examples of environmental risk assessment. I would like you to try to attend two of the four synchronously. You can attend all four if you would like. For any you do not attend synchronously, there will be an asynchronous module to work through. They will be held:

1. Monday Nov. 23: 10am-11:20am Pacific
2. Monday Nov. 30: 10am-11:20am Pacific
3. Wednesday Dec. 2: 10am-11:20am Pacific
4. Monday Dec. 7: 10am-11:20am Pacific

The Zoom link will be publicized on Canvas.

Grading and Self-Assessment

In this course, you have an opportunity to determine 50% of your final grade, and your graded course work will determine the other 50%. Thus, your grade will be half determined based on your own self-assessment of your learning and effort in the class, with the possibility of adjustments up or down from me.

During the quarter, you will be asked to complete two short self-reflection questionnaires. These questionnaires will include a series of questions about your work in the course. Specifically, you will be asked to:

- Talk about the work you have done in the course. E.g., How much effort did you commit to working through the modules, including the reading, the videos, the comprehension checks, and practice problems?
- Talk about your successes and struggles in the course. E.g., When did you feel most successful in the class? What challenges did you encounter with the concepts, the assignments, or the logistics of the course?
- Talk about opportunities for improvement. E.g., What steps could you take to deepen your understanding of course concepts or increase your engagement in the class?
- Propose the grade you feel you should receive in the course (up to that point), based on your: level of engagement; comprehension of the course material; quality of your daily reflective assignments; etc.
- Briefly explain why you would give yourself that grade.

When assigning final grades, I will strive to honor your assessment of your own performance and progress in this course. However, I reserve the right to alter your proposed grade as appropriate, based on my own evaluation of your performance and progress in the course as a whole. If such an alteration seems warranted, I will contact you to set up a meeting to discuss your work in the course.

Assignments, Examinations, Grading

Student mastery of material will be assessed a variety of ways over the course of the quarter, and will be interspersed in the online modules. The point allocations for this course are below. Please keep in mind that assignments and their point allocation are subject to change at instructor discretion throughout the quarter. There is no final exam in this course.

Point Allocation

Category	Subcategory (date available)	Points
Homework	HW #1 (9/30)	25
	HW #2 (10/12)	25
	HW #3 (10/19)	25
	HW #4 (10/26)	25
Midterm	Take home Midterm (11/4)	50
Projects/Exercises	Risk Perception Exercise (10/5)	10
	Risk Communication Exercise (10/26)	10
	Mapping Risk Exercise (11/9)	10
	Reading Risk in the Media (11/18)	10
	Reflecting on Risk (12/9)	10
Online Modules	16 Modules x 5 points/module	80
Synchronous Sessions	First Discussion Session	10
	Second Discussion Session	10
Self-Assessment	Your assessment of your grade	300
Total		600

Homework

In the first half of the course, you will be given 4 homework assignments to complete outside of class. You will be given one week to work on each assignment, and while you are encouraged to work in groups with your classmates, and seek help from the instructor and TA as needed, each student must turn in their own, unique homework assignment. The topics for the assignments will be (roughly) as follows:

Homework 1: What is Risk, and how did the field of risk assessment emerge?

Homework 2: The role of Hazard Identification and Toxicology in the Risk Assessment framework

Homework 3: The role Dose-response and Exposure Assessment in the Risk Assessment framework

Homework 4: Risk Communication

It is estimated that each homework assignment should take you less than three hours to complete. If it is taking you more than three hours, please contact your instructor or TA. You will receive feedback on your assignments through Canvas, from either your instructor or TA.

You may have an opportunity to re-submit your homework if you believe that the grade you received does not reflect your mastery of the topic.

Midterm

We will have a midterm in this course that will be open for one week, and will be submitted on Canvas. You are welcome to work on this midterm with your classmates, but each student must submit their own, and can only submit it once. If you would like a group of classmates to work with but cannot find one on your own, please reach out to the instructor and/or TA so we can help you find a study group. The midterm will be a mix of applied problems, short answer, vocabulary terms, and longer questions. It is worth 50 points. You will be given an opportunity after you get your midterm returned to reflect on the midterm and any material you may have not mastered in order to earn back some of the points you lost.

Online Modules

Each module for this course will have quiz questions and comprehension check questions which will total to 5 points. You will be asked to take this quiz for all 19 modules, including the synchronous modules. Your three lowest scores will be dropped.

Projects/Exercises

Five of our modules will involve you completing an exercise or short project. You will be guided through the exercises as you work through the module, and will need to upload a product at the end. Each of these will be worth 10 points, and will be graded based on effort.

Synchronous Sessions

There are four sessions that will feature synchronous discussion of an environmental health risk, based on a short reading. You are asked to attend two synchronous sessions (via Zoom) over the course of the quarter, out of a possible four. These will be discussion-based, around contemporary Risk topics. For all of these sessions (even the ones you attend synchronously), you will be asked to work through a short module online with associated quiz. If you would like to attend all four sessions synchronously, that is acceptable and encouraged.

Readings

Any required readings for this course will be provided as a PDF on the Canvas webpage, or as a link to a publicly-accessible webpage.

Late Assignment Policy

I have set target completion dates for all modules/exercises/homework that are at least one week after it has been posted on Canvas. In order to keep up with the course, it is important that you try to meet these deadlines. However, if you need an extension for any reason, please contact the instructor to discuss your options.

Final grades are due December 22 at 5pm, so in order to get your final grade on time, all work will need to be to the instructor by December 21 at 5pm. Otherwise, we will need to discuss options that could result in a delayed grade.

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.

Multi-cultural Inclusion Commitment

The UW School of Public Health seeks to ensure all students are fully included in each course. We strive to overcome systemic racism by creating an environment that reflects community and mutual caring, while we ally with others in combating all forms of social oppression. This is a work in progress, as transformation is rarely a fully-completed project. In this course, we will look for opportunities to improve our performance as we seek to break down institutional racism. This can include course readings, class interactions, faculty performance, and/or the institutional environment. We encourage students to talk to your faculty member, the program director, and/or submit your comments in the course evaluation form.

Academic Integrity

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](#). 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](#).

Plagiarism (which is using someone else's work, answers, phrases or sentences and calling them your own) is often misunderstood and careful attention should be paid to avoid plagiarism in the course. Students are expected to reference all work and give appropriate attribution for all materials cited, including any reference to websites or articles. More info at: <http://depts.washington.edu/grading/conduct/index.html>. In addition, we recommend the following online tools to help you avoid plagiarism:

1. The University has a license agreement with **VeriCite**, an educational tool that helps prevent or identify plagiarism from Internet resources. VeriCite is activated on all of your writing assignments. As soon as you submit your assignment, you can view the originality report. The report will include a score which will indicate the amount of original text in your work and whether all material that you quoted, paraphrased, summarized, or used from another source is appropriately referenced. Please use this tool and resubmit your assignment if you are not happy with the VeriCite score. We will scrutinize scores with >20% similarity to other sources including other assignment submissions.
2. Watch "Getting Real About Plagiarism," the 7-part video by Assistant Professor of English, Leisha Stolt, at Ivy Tech Community College, available at https://www.youtube.com/watch?v=mOGJ_bErMRC
3. Read the Purdue University Online Writing Lab website to learn more about "Avoiding plagiarism."
 - a. Overview and Contradictions: <http://owl.english.purdue.edu/owl/resource/589/1/>
 - b. Is it Plagiarism Yet?: <http://owl.english.purdue.edu/owl/resource/589/02/>
 - c. Safe Practices: <http://owl.english.purdue.edu/owl/resource/589/03/>
4. Take the "Plagiarism Self Test," by Western Carolina University: <http://www.wcu.edu/11869.asp>
5. Use the UW Writing Center and Librarians as tools for improving your writing and finding peer-reviewed resources for your written assignments.

Writing Center one-on-one tutoring: <http://depts.washington.edu/owrc/signup.php>

Librarian appointment scheduler: <http://lib.washington.libcal.com/booking/owrc>

In addition, for English as a Second Language students, the UW Bothell Writing Center has created an online resource for writing (ESL Student Handbook), with a special section addressing Academic Integrity and Plagiarism: <http://www.bothell.washington.edu/wacc/for-students/eslhandbook>

Below is the tentative course schedule for the quarter. Schedule subject to change at instructor's discretion.

Date Module Posted	Module Topic	Module Reading	Out of Class Assignments	Target date for module completion
Week 1				
1: Wed 9/30	Course and instructor introductions What is an EH Risk?	Read prologue to "Calculated Risks" by Rodricks, pp. 1-10	Problem Set #1 assigned	10/7
Week 2				
2: Mon 10/5	EXERCISE: Risk Perception	Slovic "Risk Perception and Affect"		10/12
3: Wed 10/7	Overview of Risk Assessment framework	Rodricks Ch. 7, pp. 202-214		10/14
Week 3				
4: Mon 10/12	Hazard Identification/Toxicity Testing/	Rodricks pp. 65-71 + ToxTutor pages	Problem Set #1 due Problem Set #2 assigned	10/19
5: Wed 10/14	Dose-Response Assessment (for non-carcinogens)	Rodricks pp. 72-75 + ToxTutor pages		10/21
Week 4				
6: Mon 10/19	Exposure Assessment	Exposure Assessment Terms + ToxTutor Pages	Problem Set #3 assigned	10/26
7: Wed 10/21	Risk Assessment Framework Review and Application	Cohen Hubel et al.	Problem Set #2 due	10/28
Week 5				
8: Mon 10/26	EXERCISE: Risk Communication	Reading TBA	Problem Set #4 assigned	11/2
9: Wed 10/28	Risk Management 1: The role of government and industry (Last Module covered on Midterm)	Rodricks pp. 282-293, 304-311	Problem Set #3 due	11/4
Week 6				
10: Mon 11/2	Risk Management 2: Other ways to manage risk -Proposition 65 -IARC	Reading TBA		11/9
11: Wed 11/4	Mid Term Released		Problem Set #4 due	11/10 at 11:59pm
Week 7				
12: Mon 11/9	EXERCISE: Mapping Environmental Health Risk	Reading TBA		11/16
Wed 11/11	No New Module Posted—Veteran's Day			

Date Module Posted	Module Topic	Module Reading	Out of Class Assignments	Target date for module completion
Week 8				
13: Mon 11/16	Risk Management trade-offs Glyphosate	Reading TBA		11/23
14: Wed 11/18	EXERCISE: Risk & The Media	Reading TBA	Midterms Returned	11/25
Week 9				
15: Mon 11/23 10-11:20am	Case Study 1: Silica	ALSO OFFERED SYNCHRONOUS: READING TBA		If asynchronous: 11/30
Wed 11/25	No New Module Posted—Day Before Thanksgiving			
Week 10				
16: Mon 11/30 10-11:20am	Case Study 2: COVID-19	ALSO OFFERED SYNCHRONOUS: READING TBA	Optional Midterm response due	If asynchronous: 12/7
17: Wed 12/2 10-11:20am	Case Study 3: Methylene Chloride	ALSO OFFERED SYNCHRONOUS: READING TBA		If asynchronous: 12/9
Week 11				
18: Mon 12/7 10-11:20am	Case Study 4: Personal Consumer Products	ALSO OFFERED SYNCHRONOUS: READING TBA		If asynchronous: 12/14
19: Wed 12/9	EXERCISE: Reflecting on Risk	Reading TBA		12/16
Finals Week				
Wed 12/16	Final self-assessment due			
No final in this class—enjoy your Winter break!				