

SYLLABUS
ENVH 512: Environmental and Occupational Health for
Public Health Practitioners
Online MPH Program, Winter 2021
3 credits

Instructor:

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Affiliate Instructor
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Office Hours: by appointment

Course Communication:

As this course is online, announcements from the instructor to students through the Canvas course website are time-sensitive. We request that you keep your canvas notification settings enabled for receiving announcements at “Notify me right away” or “Send daily summary.” Weekly digest settings are not recommended.

To view/change your settings, click “Account” in the upper left of your Canvas screen, then click on “Notifications”. There you can set the time frame for receiving announcements and other notifications/course information.

Synchronous Classes by Zoom (Thursdays 7-8pm):

Join from PC, Mac, Linux, iOS or Android: <https://washington.zoom.us/j/95401165819>

I. Course Description

The goals of this survey course are to introduce students in professional degree programs in Public Health to basic concepts from environmental and occupational health sciences, to the methods used to study the links between the environment and health, to the health impacts of various environmental exposures, and to the environmental public health approach to controlling or managing risks and promoting health. These concepts will be taught through cases using a problem-based learning (PBL) method.

Learning Objectives

By the end of this course you should be able to:

1. Define the concept of environmental and occupational public health and apply that concept to a variety of community settings. Be able to recognize environmental public health risk in communities and workplaces and to relate significance and context to those problems.
2. Describe the environmental and occupational public health system at the local, state and national level as it works to reduce exposures to agents in the

community's environment.

3. Apply the disease triangle of host, agent and environment, whose characteristics assist framing exposures and diseases, to environmental public health problems.
4. Define and characterize environmental and occupational public health problems resulting from exposures to physical, infectious, psychosocial, or toxic agents in the environment.
5. Determine characteristics of populations at greater risk for disease and injury causing agents in the community's environment.
6. Describe the exposure pathways for a hazard entering the human body and differentiate how risk can vary by pathway, agent, environment, and host susceptibility.
7. Describe the disciplines that assist to evaluate public health risk and envision the overall process of, and component steps, needed to conduct a health hazard assessment.
8. Explain the various approaches to preventing, controlling and mitigating environmental health risks to a community, especially those at most risk.
9. Demonstrate skills by creating effective communication pieces for the public, policy makers, elected officials, and other stakeholders about environmental public health risk and health risk assessments in disease and injury causation to ensure sound, risk based decisions are made and appropriate public health actions are taken.
10. Explain an ecological perspective on the connections among human health, animal health, and ecosystem health (i.e., One Health).

II. Class Time and Location

Problem-based learning sessions

Remote PBL sessions are scheduled on eight Thursdays (Jan. 7, Jan. 14, Jan. 21, Jan. 28, Feb. 4, Feb. 11, Feb. 18, Feb. 25) from 7-8pm, Pacific Time. Your assigned group will remain the same all quarter, and you will meet with your group through Zoom. Your instructor will join these sessions.

A. Class Format

Basics of Problem-Based Learning (PBL)

The class will use the principles of adult learning theory as expressed in problem-based learning. PBL uses small group dynamics (found in most workplace situations), a case based in the real world, an individual research phase, and a reiterative learning loop so that the learning can be applied back to the case. Students will read the case, make lists of what they know and what they need to learn, will research a resultant individual learning objective, synthesize the learning into a short written document which will be read by all in the group, and will have a second conversation about the case where they can explore case issues in a deeper fashion. During the quarter students will be expected to participate in class in the PBL process through discussion, to write 6 short (2-3 page) papers overall, to review papers written by other students in the group, and to complete 3 individual synthesis assignments.

During the first week of a new PBL case, students, with the assistance of faculty facilitators, will read, examine, and dissect the new case and develop learning objects to further the group's understanding of the case background/foundational material. The group will then assign each individual a learning objective (LO) to research in depth and contribute to the group's collective knowledge. By the following Tuesday, each individual will report back to the group information pertaining to their assigned learning objective (LOs) for the case. This research will be posted to Canvas by Tuesday at 11:59pm PST. During the second week of a PBL case, and during the Thursday night group session, groups will discuss what they already know, identify key issues and hypotheses ("what we think,") and information needed to understand and work through the issues of the case, based on preliminary individual LO research. A second day of the case will be read, LOs created and assigned to individuals to conduct additional research. LO research is posted on Canvas the following Tuesday (see above). In addition to the student's own syntheses, they can also post links to articles, web sites, and other data resources.

During the third and final session for each case, students review the case, discuss and teach one another about the learning objectives, and apply information to address the problems raised in the case. At the end of this session students will be given an individual assignment to synthesize what has been learned in the case; this assignment will be due the following Tuesday by 11:59pm PST.

A timeline of assignments can be found below in the course schedule.

Winter 2021
ENVH 512 Course Schedule

WEEK 1	Jan. 4-10
Tuesday, Jan. 5	<ul style="list-style-type: none"> ● Introductory reading on Canvas <ul style="list-style-type: none"> ○ Problem-Based Learning (PBL) ○ Environmental and Occupational Health ● Complete IPE eLearning module: http://links.asu.edu/fm1 ● Complete Week 1 Discussion
Thursday, Jan. 7 Webinar 7-8pm	<ul style="list-style-type: none"> ● Course Introduction ● Diacetyl Introduction ● Diacetyl LO Development (must get instructor approval)
WEEK 2	Jan. 11-17
Tuesday, Jan. 12	Diacetyl LOs due 11:59pm
Thursday, Jan. 14 Webinar 7-8pm	Diacetyl LO Discussion Diacetyl Synthesis Assignment Discussion
WEEK 3	Jan. 18-24
Tuesday, Jan. 19	Diacetyl Synthesis Assignment due 11:59pm
Thursday, Jan. 21 Webinar 7-8pm	Vibrio Introduction Vibrio LO Development (must get instructor approval)
WEEK 4	Jan. 25-31
Tuesday, Jan. 26	Vibrio LOs due 11:59pm
Thursday, Jan. 28 Webinar 7-8pm	Vibrio LO Discussion Vibrio Synthesis Assignment Discussion
WEEK 5	Feb. 1-7
Tuesday, Feb. 2	Vibrio Synthesis Assignment due 11:59pm
Thursday, Feb. 4 Webinar 7-8pm	Climate Change Introduction Climate Change LO Development (must get instructor approval)
WEEK 6	Feb. 8-14
Tuesday, Feb. 9	Climate Change LOs due 11:59pm
Thursday, Feb. 11 Webinar 7-8pm	Climate Change LO Discussion Climate Change Synthesis Assignment Discussion

WEEK 7	Feb. 15-21
Tuesday, Feb. 16	Climate Change Synthesis Assignment due 11:59pm
Thursday, Feb. 18 Webinar 7-8pm	Water Quality Introduction Water Quality LO Development (must get instructor approval)
WEEK 8	Feb. 22-28
Tuesday, Feb. 23	Water Quality LOs due 11:59pm
Thursday, Feb. 25 Webinar 7-8pm	Water Quality LO Discussion Water Quality Synthesis Assignment Discussion
WEEK 9	Mar. 1-7
Tuesday, Mar. 2	Water Quality Synthesis Assignment due 11:59pm
Thursday, Mar. 4 (no webinar)	*No scheduled Zoom session* Independent LO Development (must get instructor approval)
WEEK 10	Mar. 8-14
Tuesday, Mar. 9	Independent Synthesis Assignment due 11:59pm
Thursday, Mar. 11 (no webinar)	Course Evaluations

B. Expectations of Students

Students are expected to connect during the remote group sessions and participate fully in the problem-based learning process. They will explore a variety of information sources, including books, journals, and reports, and they will contact experts, faculty, and individuals to learn more about issues. **They are expected to evaluate, summarize, and appropriately cite sources for the information they find, and to post what they have learned from their aspect of the case on Canvas by 11:59pm (PST) the Tuesday before the next scheduled Thursday webinar session.** Before each webinar session, they are to review and consider the various materials posted by the other members of the group. Students are expected to share responsibility for preparing materials to present to their groups so that shared learning can occur, and they are expected to share equally in this workload of learning about how to solve problems.

Format for the Learning Objectives (LOs):

1. Your work should include a header which has the case number, day number, date, your name, and question or learning objective addressed. The format should be in 12 pt. font, one inch margins all around, double spaced. The total length shall be three pages maximum (excluding graphs/charts).
2. The body of work will begin with a short one paragraph abstract/summary.

3. The remainder of the work can be presented in a few ways, based on how you would like to do it. It can be written in paragraph form, summarized in bullets, or you could create an outline of the topic/information you found. You don't need to write this up as a formal research paper, but make sure you convey the important information and be thorough.
4. The body of work posted shall be in your own words and thoughts, and not the pasting of material obtained elsewhere. It shall be referenced appropriately. Please review the following resources to assist you in correctly citing your work.
5. You must provide a bibliography of at least three sources for every LO.
6. At the end of the document, **you need to link your research back to the case.** (This is typically easiest to do by having a "Back to the Case Section" and writing a few sentences linking it back to the case.)
7. End with one or two thoughtful questions: What would you like to know more about regarding your topic? What would you like to discuss with your group on the phone call?

Problem-based learning shifts control and power in the classroom from the teacher to students working in small groups. The real work of learning occurs in the group setting, where faculty acts as facilitators rather than teachers. Every group member shares responsibility for reaching the learning objectives, both individually and as a group. When a student misses a PBL session, part of the thinking that is needed to work the case will be missing. Discussion won't be as rich, and the group may be stretched too thin to address the learning objectives effectively.

For this reason, students *should* attend *all* PBL webinar sessions unless faced with illness or emergency. If at all possible, share the reasons in advance with course facilitators. Those who miss class will nonetheless be expected to review the list of learning issues or objectives from the missed day, contact classmates to confirm their role in working them, and post work in Canvas in time for discussion. In other words, students should prepare to undertake the same level of effort outside of 'class' that they would have if they had attended the PBL webinar session.

C. Evaluation and Grading

Grading will be conducted as follows:

- Participation in group process (15%)
 - Satisfactory: constructive, active, and thoughtful
 - Satisfactory plus: probes, helps, clarifies, extends discussion
- Case Learning Objective (LO) synthesis (20%)
 - Satisfactory: solid grasp of content, meets case learning goals, demonstrates basic understanding of LO
 - Satisfactory plus: integrates objectives, demonstrates critical thinking of key concepts, extends overall learning
- Quality of posted work (35%)
 - Satisfactory: complete, clear, accurate, in own words, appropriate attribution and citation
 - Satisfactory plus: compares and contrasts, assimilates, synthesizes and evaluates the quality and authority of the sources cited
- Skills related to gathering and evaluating information (15%)
 - Satisfactory: uses appropriate, mixed sources—more than one source per learning issue
 - Satisfactory plus: finds definitive sources, posts and annotates key resources/URLs
- Presentation skills — oral, written, visual (15%)
 - Satisfactory: clear, organized, neatly written or compiled
 - Satisfactory plus: makes exceptional effort to communicate effectively through organizing, formatting, or emphasizing information presented

LATE POLICY:

Late assignments will be accepted, but you will typically lose at least 10% of the assignment points for each day it is late. The instructor reserves the right to make exceptions to this policy for specific circumstances.

Please note that turning in group work late will also negatively impact your group, so you need to communicate with your group if you know you will be turning in an assignment late.

D. Textbooks and Resources

As is our policy for PBL, we do not assign readings or textbooks. Optional resource materials for this block may be found on:

The Centers for Disease Control and Prevention website at <http://www.cdc.gov/DiseasesConditions/>
 The Washington State Department of Health <http://www.doh.wa.gov/>
 Public Health Seattle and King County <http://www.kingcounty.gov/healthservices/health.aspx>
 The National Library of Medicine – Medline Plus <http://www.nlm.nih.gov/medlineplus/environmentalhealth.html>
 National Climate Assessment at <http://nca2014.globalchange.gov/>
 The Intergovernmental Panel on Climate Change at <http://www.ipcc.ch/>
 The United States Environmental Protection Agency: Ground Water and Drinking Water at <http://water.epa.gov/drink/>
 National Institute for Occupational Safety and Health at <http://www.cdc.gov/niosh/>
 Occupational Safety & Health Administration at <https://www.osha.gov/>
 Washington State Department of Labor and Industries at <http://www.lni.wa.gov/>
 Frumkin, H. (2016). Environmental health : From global to local (Third ed.). San Francisco, CA: Jossey-Bass, A Wiley Brand. (available as e-text from UW library or in hardcopy).

E. 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](#).

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.

F. Access and Accommodations

Your experience in this class is important to us, and it is the policy and practice of the University of Washington to create inclusive and accessible learning environments consistent with federal and state law. If you experience barriers based on a disability or temporary health condition, please seek a meeting with DRS to discuss and address them. If you have already established accommodations with DRS, please communicate your approved accommodations to your instructor at your earliest convenience so we can discuss your needs in this course.

Disability Resources for Students (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. If you have not yet established services through DRS, but have a temporary health condition or permanent disability that requires accommodations (this can 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

G. Anti-Racism Commitment

The faculty of the School of Public Health commit to facilitating student learning that occurs in an inclusive, anti-racist environment. We view our courses and co-curricular activities as opportunities to demonstrate program-wide efforts to challenge systemic racism within a caring community. We also seek alliances with other individuals and organizations involved in combating all forms of social oppression. We acknowledge that programmatic transformation requires sustained effort and periodic self-reflection, thus, our movement forward on a continuum of anti-racism is a work in progress that requires feedback from all community members. We invite all members of our community to identify opportunities to improve our performance in this regard, including case revisions, classroom interactions, faculty facilitation, and the institutional environment. You may offer feedback through your course facilitator, faculty advisor, the program director, and/or anonymous comments in course evaluation forms.

H. Department of Health Services Grading Policy

Numerical Grade Interpretive Statement

4.0	Excellent and exceptional work for a graduate student. Work at this level is unusually thorough, well-reasoned, methodologically sophisticated, and well-written. Work is of good professional quality, shows an incisive understanding of health services-related issues and demonstrates clear recognition of appropriate analytical approaches to address health problems and questions.
3.7	Strong work for a graduate student. Work at this level shows some signs of creativity, is thorough and well-reasoned, indicates strong understanding of appropriate methodological or analytical approaches, and demonstrates clear recognition and good understanding of salient health services-related issues and problems.
3.5	Competent and sound work for a graduate student; well-reasoned and thorough, methodologically sound, but not especially creative or insightful or technically sophisticated; shows adequate understanding of health services-related issues and problems, although that understanding may be somewhat incomplete. This is the graduate student grade that indicates neither unusual strength nor exceptional weakness.
3.3	Adequate work for a graduate student even though some weaknesses are evident. Moderately thorough and well-reasoned, but some indication that understanding of the important issues is less than complete and perhaps inadequate in other respects as well. Methodological or analytical approaches used are generally adequate but have one or more weaknesses or limitations.
3.0	Borderline work for a graduate student; barely meets the minimal expectations for a graduate student in the course; understanding of salient issues is incomplete, methodological or analytical work performed in the course is minimally adequate. Overall performance, if consistent in graduate courses, would barely suffice to sustain graduate status in "good standing."
2.7	Deficient work for a graduate student; does not meet the minimal expectations for a graduate student in the course. Work is inadequately developed or flawed by numerous errors and misunderstanding of important issues. Methodological or analytical work performed is weak and fails to demonstrate knowledge or technical competence expected of graduate students.