ENVIRONMENTAL & OCCUPATIONAL HEALTH SCIENCES
UNIVERSITY of WASHINGTON | SCHOOL OF PUBLIC HEALTH

ENVH 417A: Case Studies in Children's Environmental Health Disparities

Quarter: Spring 2022

Credits & Grading: 3 credits, graded
Time: Tuesdays & Thursdays, 2:30 to 3:50 PM, PDT

Location: HRC 145 (Hans Rosling Ctr for Population Health)

Instructor

Anne Riederer ScD, Clinical Associate Professor
Office: 4225 Roosevelt Way NE, #301-C
Email: anneried@uw.edu; **Pronouns:** she/her/hers
Office Hours: Tuesdays & Thursdays, 4:00-5:00 PM PDT, HRC Common Area (just ou
the classroom). Click **HERE** to sign up for a slot.

Teaching Assistant

Ashley Phillips, Teaching Assistant
Office: TBD
Email: aphi22@uw.edu; **Pronouns:** she/her/hers
Office Hours: TBD, or by appointment

Course Description

This course introduces students to the ways in which children are disproportionately affected by environmental health hazards. Through a series of engaging case studies, students learn the core scientific concepts of children's environmental health while exploring the social, cultural, regulatory, political, and economic factors that lead to children's health disparities.

Course Syllabus

Session-by-session topics, assignments, etc. can be accessed from the Modules page.

Syllabus Course Description

This course provides an in-depth introduction to the many ways in which children are disproportionately affected by environmental health hazards. Through real world case studies and knowledge-to-practice activities, students are introduced to the core concepts of children's environmental health in a multidisciplinary context, emphasizing the foundational scientific principles of exposure science, toxicology and epidemiology, as well as the social, cultural, regulatory, political, and economic factors driving disparities in children's exposures and health impacts. Activities and assignments give students opportunities to identify, evaluate, and synthesize scientific information related to children's environmental health, describe policy and regulatory approaches to reducing hazards, and recognize stakeholders' varied perspectives. Activities are also designed to develop proficiency in communicating with a variety of audiences about children's environmental health disparities and possible solutions.

Diversity Requirement

This course is an approved DIV course to fulfill the undergraduate diversity requirement.

Prerequisites: none

Required Textbook and Readings

Frumkin H (ed.). Environmental Health: from Global to Local, 3rd edition. John Wiley & Sons, Inc., San Francisco. This book is available as an e-book through the UW Libraries website (you will need to log in, using your UW credentials to access it).

Other readings are available as links in the course Canvas Modules.

Learning Objectives

Upon completing the course, students will be able to:

1. Describe the core concepts of environmental health (toxicity, exposure, susceptibility, risk, and prevention) and apply them in new contexts.

2. Identify the characteristics of children that make them uniquely vulnerable to environmental hazards and contribute to health disparities.

3. Describe the effects of certain key pollutants on children.

4. Locate, organize, and synthesize information about children's environmental health problems in the context of real world situations.

5. Characterize children's environmental health disparities nationally and globally in biological, cultural, political, socioeconomic, public health and health care contexts.

6. Describe regulatory, policy, and programmatic approaches to reducing children's exposures to environmental health hazards.

7. Effectively communicate about children's environmental health concepts to key audiences.

Council for Education of Public Health (CEPH) Competencies

This course covers the following CEPH (2021) domains and competencies:

D9. Public Health Bachelor's Degree Foundational Domains

5. the concepts of population health, and the basic processes, approaches and interventions that identify and address the major health-related needs and concerns of populations

6. the underlying science of human health and disease, including opportunities for promoting and protecting health across the life course

7. the socioeconomic, behavioral, biological, environmental, and other factors that impact human health and contribute to health disparities

11. basic concepts of public health-specific communication, including technical and professional writing and the use of mass media and electronic technology

D10. Public Health Bachelor's Degree Foundational Competencies

1. Communicate public health information, in both oral and written forms, through a variety of media and to diverse audiences

2. Locate, use, evaluate, and synthesize public health information

Course Format

This course features student-centered, active and investigative learning. Through case-based instructional strategies, students develop a framework for identifying and applying environmental health concepts to children's health and to the identification of susceptible populations and solutions. Class time contains a mix of didactics, discussions, student-led presentations, and group problem solving. A series of metacognitive activities are embedded throughout the course to help students take charge of their own thinking and learning.

Course Requirements

Each student will be expected to:

• Prepare for each live class session by completing the items noted in the module for each session. This includes assigned readings, watching assigned videos, and completing related homeworks and quizzes.

• Participate actively in class discussions and activities.

• Engage in class-based report outs and roleplays for case studies.

• Work effectively as a team member for the group project, including negotiating a team contract, helping research and write a policy brief, and delivering a component of the group presentation.

• Complete the metacognitive activities (course entrance ticket, module exit tickets, end-of-course reflection) and submit on their due dates.

Preparing for class: Reading and viewing assignments for each class session will be available through the course Canvas Modules. These will include both *assigned and suggested readings and video materials*, such as scientific articles, reports and educational products from both governmental and non-governmental organizations, textbook chapters, online modules, and instructional videos.

Homework assignments: Each class session has *homework assignments* that are organized on Canvas under Modules. Homework assignments include short quizzes on the assigned readings/viewings described above. [There are also a few in class assignments.]

In-class activities: Students will work in small groups to discuss cases (scenarios of children's environmental health problems in communities) and consider relevant responses such as research studies, a project proposal, a public information product, or other relevant intervention strategies or policy change(s).

Midterm: The midterm exam is designed to reinforce students' knowledge and understanding of core concepts in children's environmental health, as well as the lead (Pb) and asthma case studies. The midterm counts for 15% of the overall course grade and will be held in class on *Thursday, May 5*. More details on the midterm can be found in the Midterm Module.

Metacognitive activities: Evidence shows that students learn better when they actively track and reflect on their own learning process. The *course entrance ticket* helps the instructors assess students' motivations and overall learning goals, while *module exit tickets* give students the chance to evaluate their own mastery of course content at key time points. The *end-of-course reflection* gives students the opportunity to collate and synthesize their entrance and exit tickets in a thoughtful reflection on their content mastery, its application to their life going forward, and any remaining curiosity/questions. Entrance and exit tickets will be graded credit/no credit, while the end-of-course reflection will be graded.

Group project: The group project on a selected children's environmental health problem will include: *a team contract, policy brief, and presentation*. Presentations will be conducted during the last sessions of the quarter (May 26, May 31 and June 2). Groups of approximately 5 students will be assigned by the instructor with an effort to include student diversity of academic programs/previous experience. Topics must be an area/issue of children's environmental health that was not the core focus of the course case studies. An example list of topics is provided in the

Group Project Module. Student groups may develop/choose their own topic not on the list with permission of the instructor. All groups must have different topics. Groups will submit their topic ideas in week 5.

Team contract: Public health is a highly collaborative field. Working successfully in a group takes skills, tools, and practice. The team contract gives students a chance to set clear expectations, deadlines, and rules of engagement for the group project, to help ensure a successful collaborative experience. The team contract template can be found in the Group Project Module. The contract must be negotiated and signed by each group member, and submitted by the due date. In the last week of the course, students will use their team's signed contract to reflect on the collaborative experience (peer evaluations).

Policy brief: The policy brief should be *2 pages max*. Guidance on writing an effective policy brief will be presented in class during Week 4. The brief should include the following components: Aim, Hook, Background Information, Supportive Data, Options/Recommendations. Draft submissions (draft outline, draft policy brief) give students the chance to receive timely and constructive feedback from the instructors. The draft submissions are required, but not graded (they will receive credit/no credit). Final policy briefs are due on the day of your group's final presentation. Final briefs are graded; a grading rubric will be provided.

Presentation of the topic and your policy brief: Your group will make a 15 minutes max presentation (10-12 slides) with each group member covering a specific part of the content (the problem you are addressing/relevant background, information and data supporting the problem and need for action, a suggested action/recommended policy or program). Your audience will then have an opportunity to ask questions about your issue and action/policy/program (5 minutes).

Student Evaluation

Course grades are based on:

30% Quizzes/homework assignments* (*lowest grade will be dropped)

15% Midterm exam

15% In class participation in discussions and activities

35% Group project:

4% Team contract

15% Policy brief

15% Oral presentation

1% Peer evaluation

5% End-of-course reflection

Grade Scale

Grade	Score	Scale
A	95-100	3.9-4.0
A-	88-94	3.5-3.8
B+	83-87	3.2-3.4
B	79-82	2.9-3.1
B-	75-78	2.5-2.8
C+	72-74	2.2-2.4
C	69-71	1.9-2.1
C-	65-68	1.5-1.8
D+	62-64	1.2-1.4
D	59-61	0.9-1.1
D-	57-58	0.7-0.8
E	0-56	0.0

Late Assignment Policy

The late policy is enforced to ensure fairness among students and depends on the assignment type:

Quizzes/homeworks: There are a number of low stakes, untimed, open-book quizzes in this course that are designed to help you engage with the material before class, so we can have a productive and meaningful time together in class. The quizzes are generally available on Canvas a few days before class and are due 15 minutes before class begins. Please do your best to complete these on-time-- we know life gets busy, so you will not be penalized for a late submission up to one week. Quizzes not completed after one week past the due date will automatically be given a grade of 0, unless you make specific arrangements with the instructors before the due date.

Group project: Group work is challenging but necessary in an interdisciplinary field like public health. The rewards are higher quality deliverables and working relationships that expand our individual capabilities. Working well in a team means planning and staging intermediate work products and sticking to negotiated internal deadlines so that the final products can be submitted on time. Although the draft outline and draft policy brief are not graded, late submissions will be

taken into account in the final policy brief grade. 5% will be deducted from the final policy brief grade for each day (24 hour period) past the deadline for the draft outline. Similarly, 5% will be deducted from the final policy brief grade for each day past the deadline for the draft policy brief. For the final policy brief and presentation, 10% will be deducted from the final grade for each day past the deadline, up to one week. Final policy briefs and presentations will not be accepted beyond one week past the due date, except in exceptional circumstances.

Exceptional circumstances: In the event of illness, emergency, a death in the family or other serious circumstances, please contact the instructors to make alternative arrangements for completing the coursework.

Writing Resources

All written assignments for this class must be high quality, well researched, well organized, and well written. Use plain language instead of jargon. The instructors will consider the clarity of writing when grading assignments. Writing is an important transferable skill for all career pathways. Establishing a strong foundation in writing skills will help you be successful throughout your future course work and career. This course includes written assignments with the goal to helping you identify areas of strength and improvement in writing. However, if you feel that you could benefit from additional opportunities to improve your writing skills, please explore this list of writing support resources at the UW and others accessible online (https://sph.washington.edu/sites/default/files/2020-09/Writing-Resources-9.24.20.pdf) and on the University Libraries website.

Course & Live Session Outline (by content & dates; see related Modules pages for details)

Week 1

Tuesday, March 29 - Module: Welcome/introductions

Thursday, March 31 - Module: Frameworks for thinking about environmental health disparities

Weeks 2 & 3 - Module: Core Concepts in Children's Environmental Health

Tuesday, April 5 - Core concepts 1

Thursday, April 7 - Core concepts 2

Tuesday, April 12 - Core concepts 3 & Exposure Smackdown!

Thursday, April 14 - Core concepts - epigenetics and intergenerational inheritance

Week 3 - Module: Group Project

Thursday, April 14 - Group topic brainstorm

Week 4 - Module: Case Study - Lead and Children

Tuesday, April 19 - Lead and children 1

Thursday, April 21 - Lead and children 2

Week 5 - Module: Group Project

Tuesday, April 26 - Constructing a policy brief; negotiating the group contract

Weeks 5 & 6 - Module: Case Study - Air Pollution and Asthma

Thursday, April 28 - Air pollution and asthma 1

Tuesday, May 3 - Air pollution and asthma 2

Week 6 - Module: Midterm Exam

Thursday, May 5 - Midterm (in class)

Week 7 - Module: Group Project

Tuesday, May 10 - Policy brief workshop (workshopping the outline)

Weeks 7 & 8 - Module: Case Study - Pesticides and Children

Thursday, May 12 - Pesticides and children 1

Tuesday, May 17 - Pesticides and children 2

Week 8 - Module: Group Project

Thursday, May 19 - Communicating science and risk - presentations

Week 9 - Module: Case Study - Special Topics

Tuesday, May 24 - Children at work, children in urban informal settlements

Weeks 9 & 10 – Module: Group Project

Thursday, May 26 – Final presentations

Tuesday, May 31 – Final presentations

Thursday, June 2 – Final presentations

Week 11 - FINALS WEEK (no final exam; finish your end-of-course reflection and peer evaluations)

Land Acknowledgement

The University of Washington acknowledges the Coast Salish people of this land, the land which touches the shared waters of all tribes and bands within the Duwamish, Suquamish, Tulalip and Muckleshoot nations.

COVID-Related Expectations

Per UW policy, this class will be conducted in person. You should only register for this class if you can attend in person, or if you meet the criteria for an accommodation from Disability Resources for Students (DRS) or a special arrangement approved by the SPH Office of the Dean that allows you to take the course remotely.
• Please contact UW Disability Resources for Students (DRS) directly if you feel you may be eligible for an accommodation based on your status as an immunocompromised individual or based on other diagnosed physical or mental health conditions that might prevent you from being able to take classes in-person.
• If you are a student enrolled in a program in SPH, and you are either living with an individual who is immunocompromised, OR you are unable to obtain a visa to travel to the US, you may be eligible for a "special arrangement" that will allow you to take this course remotely. To further clarify, immunocompromised refers to individuals with no/critically weakened immune response to the vaccines. Immune compromised is not the same as underlying health concerns which may lead to a more severe response to COVID. Requests for special arrangements to take the class remotely should have been submitted to and approved by the Students and Academic Services team in the Office of the Dean before the beginning of the quarter.

All UW students are expected to complete their vaccine attestation before arriving on campus. Per President Cauce's message March 8, following changes to state and local health policies, masks will become optional inside most University facilities starting March 28, the first day of spring quarter. Masks will continue to be required in clinical and other health-care settings and on public transportation, including UW shuttles. We strongly recommend wearing masks indoors during the first two weeks of spring quarter. Please monitor yourself daily for symptoms and stay home if you are sick. It's also strongly recommended to get tested after travel. Refer to the UW Face Covering Policy for the latest guidance and follow the campus-wide face-covering policy at all times. You are expected to follow state, local, and UW COVID-19 policies and recommendations. If you feel ill or exhibit possible COVID symptoms, you should not come to class. If you need to temporarily quarantine or isolate per CDC guidance and/or campus policy, you are responsible for notifying your instructors as soon as possible by email. If you receive a positive COVID-19 test result, you must report to campus Environmental Health & Safety (EH&S) by emailing covidehc@uw.edu or calling 206-616-3344.

Please check your email daily BEFORE coming to class. If we need to conduct class remotely because the instructor or a guest speaker is complying with UW policies and unable to attend in person, we will send all registered students an email with a Zoom link for remote instruction.

Inclusion & Diversity

Diverse backgrounds, embodiments and experiences are essential to the critical thinking endeavor at the heart of university education. In SPH, we are expected to:

1. Respect individual differences, which may include, but are not limited to, age, cultural background, disability, ethnicity, family status, gender, immigration status, national origin, race, religion, sex, sexual orientation, socioeconomic status and veteran status.

2. Engage respectfully in the discussion of diverse worldviews and ideologies embedded in course readings, presentations and artifacts, including those course materials that are at odds with personal beliefs and values.

3. Encourage students with concerns about classroom climate to talk to their instructor, adviser, a member of the departmental or SPH EDI Committee, the Assistant Dean for EDI, or the program's director.

Classroom Climate

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 with concerns about classroom climate to talk to your instructor, your advisor, a member of the departmental or SPH Diversity Committee and/or the program director. Victoria Gardner, Assistant Dean for Equity, Diversity and Inclusion (vg@uw.edu) is also a resource for students with classroom climate concerns.

We are co-creators of our learning environment. It is our collective responsibility to develop a supportive learning environment for everyone. Listening with respect and an open mind, striving to understand others' views, and articulating your own point of view will help foster the creation of this environment. We engage our differences with the intent to build community, not to put down the other and distance our self from the other. Being mindful to not monopolize discussion and/or interrupt others will also help foster a dialogic environment.

Pronouns

We share our pronouns because we strive to cultivate an inclusive environment where people of all genders feel safe and respected. We cannot assume we know someone's gender just by looking at them. So we invite everyone to share their pronouns.

Bias Concerns

The Office of the Dean has a [student concern policy](#), a faculty concern policy and standard HR procedures for staff concerns. Our 2018 climate survey states that most people in SPH do not report bias incidents because they do not know where to go. Students are encouraged to report any incidents of bias to someone they feel comfortable with, including instructors, advisers or department staff. They can email dcinfo@uw.edu for immediate follow up. Bias concerns can be anonymously and confidentially reported at this link https://sph.washington.edu/about/diversity/bias-concerns. Data are collected by the Assistant Dean for EDI and the Director of Program Operations for Student and Academic Services and tracked for resolution and areas are identified for further training.

Access and Accommodations

Your experience in this class is important to us. 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 are 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.

Religious Accommodations

Washington state law requires that UW develop a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities. The UW's policy, including more information about how to request an accommodation, is available at [Religious Accommodations Policy](#). Accommodations must be requested within the first two weeks of this course using [the Religious Accommodations Request 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 478-121). 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](#).

SimCheck plagiarism detection software is activated for all assignments submitted in this course. If you are unsure about what constitutes plagiarism and what does not, we encourage you to take advantage of the services offered at the [Odegaard Writing and Research Center](#).

Safety

Call SafeCampus at 206-685-7233 anytime – no matter where you work or study – to anonymously discuss safety and well-being concerns for yourself or others. SafeCampus's team of caring professionals will provide individualized support, while discussing short- and long-term solutions and connecting you with additional resources when requested.

Sexual Harassment

Sexual harassment is a form of harassment based on the recipient's sex that is characterized by:

1. Unwelcome sexual advances, requests for sexual favors, or other verbal or physical conduct of a sexual nature by a person who has authority over the recipient when:

o   submission to such conduct is an implicit or explicit condition of the individual's employment, academic status, or ability to use university facilities and services, or
o   submission to or rejection of the conduct affects tangible aspects of the individual's employment, academic status, or use of university facilities.

2. Unwelcome and unsolicited language or conduct that creates an intimidating, hostile, or offensive working or learning environment, or has the purpose or effect of unreasonably interfering with an individual's academic or work performance.

If you believe that you are being harassed, or have observed harassment, you can report it to SPH using the [bias concerns link](#). The University also has designated offices to help you: [SafeCampus](#); [Office of the Ombud](#); [Title IX Investigation Office](#); and [University Complaint Investigation and Resolution Office](#).