

ENV H 503 A Sp 22: Adverse Health Effects Of Environmental And Occupational Toxicants

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Spring Quarter, 2022

Important note: Students are strongly encouraged to use the [Modules](#) page to plan for and review each lecture.

CONTACT INFORMATION

Course Director:

Instructor: [Julia Yue Cui, PhD, DABT] (*[she/her/hers]*), [Associate Professor], [DEOHS, UW]

Contact: [juliacui@uw.edu / Office: Roosevelt 204 / Tel: 206-616-4331]

Office hours: [by appointment]

Teaching Assistant & guest lecturer:

Elizabeth Rott

Email: elrott@uw.edu (<mailto:elrott@uw.edu>)

Confirmed Guest Lecturers:

Elaine Faustman <faustman@uw.edu (<mailto:faustman@uw.edu>)> Professor, DEOHS

Thomas Kensler <tkensler@fredhutch.org> Professor, Fred Hutch

Karen Levy <klevyx@uw.edu (<mailto:klevyx@uw.edu>)> Associate Professor, DEOHS

Edward Kelly <edkelly@uw.edu (<mailto:edkelly@uw.edu>)> Associate Professor, Pharmaceutics

Hao Wang <whyx2012@uw.edu (<mailto:whyx2012@uw.edu>)> Postdoctoral Fellow, DEOHS

Joe Lim <jjpl@uw.edu> MS in Environmental Toxicology and PhD student, DEOHS

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 \(DRS\)](https://depts.washington.edu/uwdrs/) (<https://depts.washington.edu/uwdrs/>) 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](https://www.washington.edu/coronavirus/vaccination-requirement/) (<https://www.washington.edu/coronavirus/vaccination-requirement/>) before arriving on campus. **Per President Cauce’s message March 8,** (https://www.washington.edu/coronavirus/2022/03/08/spring-quarter-classes-and-uw-mask-policies-message-to-uw-students/?utm_source=uwhp&utm_medium=tiles&utm_campaign=spring-quarter) 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](https://www.ehs.washington.edu/covid-19-prevention-and-response/face-covering-requirements?_ga=2.102791810.305611696.1646677337-2095419026.1632253748) (https://www.ehs.washington.edu/covid-19-prevention-and-response/face-covering-requirements?_ga=2.102791810.305611696.1646677337-2095419026.1632253748) 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](https://www.washington.edu/coronavirus/2022/03/08/spring-quarter-classes-and-uw-mask-policies-message-to-uw-students/?utm_source=uwhp&utm_medium=tiles&utm_campaign=spring-quarter) (https://www.washington.edu/coronavirus/2022/03/08/spring-quarter-classes-and-uw-mask-policies-message-to-uw-students/?utm_source=uwhp&utm_medium=tiles&utm_campaign=spring-quarter), 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 (<mailto: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.

COURSE DESCRIPTION

Module 0 (*Ease into the quarter - Monday March 28th*) is a *virtual module*. Please complete the following in your own time/location:

- Watch the [Eminent Toxicologist Lecture](#) by Dr. Michael Gallo entitled "From Murder to Mechanisms: 7000 Years of Toxicology's Evolution" and submit your answers to [2 multiple choice questions](#) (1 pt) based on this video content by [3:30pm Friday April 1st](#).
- Review the course syllabus by [3:30pm Friday April 1st](#), and bring any questions that you may have when we meet in-person on Friday April 1st.
- Complete and submit a [pre-class survey](#) by [3:30pm Friday April 1st](#). You will get full credit (1 pt total) for participation. We will review the overall survey statistics as a group in our next class.

Module 1 (*Introduction to adverse health effects of environmental & occupational toxicants*) - *Friday April 1st 3:30-4:50pm in SOCC 303*: this is *our first in-person class*. For all the following modules, per [UW Spring quarter teaching instructions](#) (https://www.washington.edu/coronavirus/2022/01/24/returning-to-largely-in-person-classes-and-experiences-jan-31-message-to-instructors-and-staff/?mkt_tok=MTMxLUFRTy0yMjUAAAGCLcXK99FVPyTbPgbS4cXGfwurRQDkmTRt1v-0ztiDQMPCRwSqqZmc98m7x8alMfYGntMehZj21CRMVU81YdBj3y1JjDE0PVqJ9VqH9lohc7AyF8), the expectation is that students will attend class in-person. Classes will take place in person on **Mondays** and **Fridays 3:30-4:50pm** in **SOCC 303**. Campus map can be found [here](#) (<https://www.washington.edu/maps/>).

If you are not able to attend a class and need accommodations, please do not hesitate to contact me (juliacui@uw.edu (<mailto:juliacui@uw.edu>)) if you need my further assistance. I will record all course presentations for students to review after each course session. Please refer to the [Modules](#) page for links to recorded sessions and other course materials.

COURSE OVERVIEW

Basic principles governing the effects of toxicants on biological systems. The focus is on human health impacts of toxicants in a public health context. This class is designed for all DEOHS graduate students including non-toxicology majors. Specifically, we will discuss fundamental cellular processes and core areas of environmental and occupational toxicological sciences, including dose response and toxicity testing, absorption, distribution, metabolism, and excretion of toxicants, mechanisms of toxication and detoxification, risk assessment, drug biotransformation, toxicokinetics, O'mics tools for environmental and occupational health sciences, microbial contaminants/enteric pathogens; and chemical carcinogenesis. With the information provided from this class, students will be able to have a good appreciation for how foreign agents, including therapeutic drugs, dietary factors, microbial pathogens, as well as environmental and occupational toxic agents, interact with cellular pathways to affect

toxicological outcomes. Guest lecturers will provide valuable input in the course to provide coverage of subject areas within their respective areas of expertise.

COURSE LEARNING OBJECTIVES

The learning objectives for this course are based on fundamental concepts in the science and practice of toxicology. After having taken this course students will be able to:

- Identify people and seminal events important in the history of toxicology, and the professional disciplines, job classifications and scientific fields occupied by toxicologists.
- Explain the principles of dose-response, including quantal vs. continuous measures of response and the descriptors used to define individual susceptibility to toxicants.
- Discuss the different types of testing paradigms used to evaluate the adverse health effects of toxicants, including tests for acute, subacute and chronic toxicity; the various biochemical and molecular assays used to investigate mechanisms by which they cause injury; and the ethical principles surrounding *in vitro* and *in vivo* testing.
- Describe biochemical mechanisms of toxicity.
- Explain risk assessment, and define the statutory authority governmental agencies use to control toxicant releases to the environment.
- Explain the concepts of absorption, distribution, metabolism and excretion, and their integral roles as determinants of adverse health outcomes caused by toxicant exposure.
- Explain the biochemical basis of toxicant biotransformation including the key xenobiotic biotransformation systems involved, phases of metabolism, and their consequences for toxicant disposition in the body.
- Discuss the impact of genetic variation, diet, age, gender, and infectious disease status on toxicant disposition and dose-response relationships.
- Categorize toxicant with respect to chemical class, mode of action, and potency.
- Identify signaling transduction pathways that govern the expression and activities of xenobiotic biotransformation related genes.
- Define basic principles of toxicokinetics.
- Discuss how O'mics tools can be applied to address important questions in environmental and occupational health sciences.
- Understand how microbial contaminants and enteric pathogens contributes to adverse health effects.
- Describe basic principles of genetic toxicity, different stages and key players of chemical carcinogenesis.

COURSE SESSION SCHEDULE

2022 Spring ENV H 503 Schedule

Class takes place on Mondays and Fridays 3:30 - 4:50 in South Campus Center (SoCC) 303

Date	Topic	Speaker	Chapters in textbook
03/28	Ease into the quarter (Virtual module)	Eminent Toxicologist lecture - Michael Galo	https://canvas.uw.edu/courses/1547466/quizzes/1632709
04/01	Introduction & history	Julia Yue Cui	Unit 1, Chapter 1
*04/04	Principles of toxic response	Julia Yue Cui	Unit I, Chapter 2
04/08	Mechanisms of toxicity I	Julia Yue Cui	Unit I, Chapter 3
*04/11	Mechanisms of toxicity II	Julia Yue Cui	Unit I, Chapter 3
04/15	Mechanisms of toxicity III	Julia Yue Cui	Unit I, Chapter 3
*04/18	Mechanisms of toxicity IV	Julia Yue Cui	Unit I, Chapter 3
04/22	Risk Assessment	Elaine Faustman	Unit I Chapter 4
04/25	MIDTERM EXAM		
04/29	ADME I	Julia Yue Cui	Unit II, Chapter 5
*05/02	ADME II	Julia Yue Cui	Unit II, Chapter 5
05/06	Biotransformation I	Hao Wang	Unit II, Chapter 6
*05/09	Biotransformation II	Hao Wang	Unit II, Chapter 6
05/13	Microbial pathogens	Karen Levy	N/A
*05/16	Chemical carcinogenesis	Thomas Kensler	Unit III, Chapters 8-9
05/20	O'mics research & environmental health	Elizabeth Rott	N/A
*05/23	Toxicokinetics	Edward Kelly	Unit II, Chapter 7
05/27	Nuclear receptors	Joe Lim	N/A
06/03	Case Studies: Man-made Disasters Impacting the 21 st Century		
06/09	FINAL EXAM		

*Poll Everywhere quiz covering the previous week's lecture materials

INTENDED STUDENT AUDIENCE

The ENVH 503 serves as one of the core course curriculums for graduate students in the Department of Environmental and Occupational Health Sciences. It is also appropriate for senior undergraduate students or graduate students from other allied biomedical science departments, e.g. Pharmacology, School of Pharmacy, Chemistry, Molecular & Cellular Biology, Genome Sciences, Epidemiology, Fisheries etc., who are interested in gaining a basic understanding of toxicology and environmental & occupational health sciences. Prerequisites for this class include a year of undergraduate general biology, two quarters of chemistry, and/or biochemistry.

COUNCIL FOR EDUCATION OF PUBLIC HEALTH (CEPH) COMPETENCIES

n/a

REQUIRED TEXTBOOKS & READINGS

- **Required Reading:** [Handout materials](#) will be provided for most classes and are the focus of class material.
- **Reference textbook for ENVH 503:** [Casarett & Doull's Toxicology, The Basic Science of Poisons 9th Edition \(2019\)](#) (<https://accesspharmacy-mhmedical-com.offcampus.lib.washington.edu/book.aspx?bookid=2462>)

This textbook is also available as an eBook and can be accessed from UW Libraries

Search <http://www.lib.washington.edu/> (<http://www.lib.washington.edu/>) (need to type the textbook information in the search box). Direct access: [Content available: McGraw-Hill's](#)

[AccessPharmacy view license terms \(https://accesspharmacy-mhmedical-com.offcampus.lib.washington.edu/book.aspx?bookid=2462\)](https://accesspharmacy-mhmedical-com.offcampus.lib.washington.edu/book.aspx?bookid=2462)

If you wish to purchase a hard copy as a reference (optional), it can be obtained from various resources such as www.amazon.com (<http://www.amazon.com>).

Students are strongly encouraged to read the corresponding book chapters for each class.

GRADING

The final grade for this class will include the following components (total: 100 points):

- Module 0: Watch the Eminent Toxicologist Lecture video and answer 2 questions: 1 pt (you will receive 0.5 pt per question for correct answers and 0.2 participation points per question for incorrect answers).
- Module 0: Pre-class survey: 1 pt (full participation points for all completed answers)
- 7 short Poll Everywhere quizzes (2 points each): 14 points (5 questions per quiz [0.4 pts for each correct answer]; you will receive partial participation points [0.2 pts] for incorrect answers. All quizzes starts promptly at 3:30pm on Mondays, and will be based on the previous week's two lectures. The first quiz takes place on Monday April 4th and is based on the 04/01 lecture only. No poll quizzes on 04/25 (Block I Exam) or 05/30 (UW Holiday). The 05/02 poll quiz is based on the 04/29 lecture only.
 - Information on how to use Poll Everywhere can be found here: <https://itconnect.uw.edu/learn/tools/polleverywhere/> (<https://itconnect.uw.edu/learn/tools/polleverywhere/>) (<https://itconnect.uw.edu/learn/tools/canvas/canvas-help-for-instructors/assignments-grading/pe-support-info/>) Poll Everywhere login Option 1: Use your laptop to login: <https://www.polleverywhere.com/> (<https://www.polleverywhere.com/>) (choose **UW Single logon authentication option in order to get credits for the quiz**)
 - Poll Everywhere login Option 2 (recommended): Download Poll Everywhere app for your smart phone and login using UW email address (choose **UW Single logon authentication option**)
 - Device access: If you are unable to bring a device to every class you can visit the **STF Equipment Loan Program**: <https://stlp.uw.edu/> (<https://stlp.uw.edu/>)
- Mid-term Exam (30 points) - This will be administered in the format of a Canvas quiz, including a mixture of multiple choice questions, matching tests, and essay questions.
- ***Case Studies: "Man-made Disasters of the 21st Century"** (24 points) *This will be carried out in group presentations format - contact me (juliacui@uw.edu (<mailto:juliacui@uw.edu>)) if you are not able to attend classes in person for an alternative assignment. Please see the detailed instructions of this assignment below.

*More information on Case Studies: "Man-made Disasters impacting the 21st Century":

You do the teaching this time!

Each student will be able to choose to participate in 1 of the 6 research topics and work as a team to perform literature search and develop a 8 min PPT presentation to address the following 4 key points using the knowledge you have learned from this class:

- Research on the topic that you have selected. Identify the key toxic agent(s) involved in this historical incidence, and its impact on public health
- How does this toxicant enter the body and reach the target organs, and what are the mechanisms of toxicity?
- How does the body detoxify/eliminate this toxicant (if possible), and are there any antidotes available? What are the therapeutic management options or preventive measures that one could take to mitigate the toxicity or reduce the exposure risks?
- What has happened since this man-made disaster occurred? How does this incidence affect our society's response and policy-making about environmental health hazards?
- How is this toxic agent(s) impact your household, neighborhood community, or the State of Washington?
- As an environmental & occupational health scientist, what do you think is the best solution to this man-made disaster?

Students from each group will take turns to present their PPT slides in class (8 min presentation + 5 min Q&A).

Recommended numbers of slides: 10-15, including a title slide with all presenters' names, a conclusion slide, and a slide on references cited).

Suggestions on credible sources: primary literature (e.g. [PubMed](https://pubmed.ncbi.nlm.nih.gov/) [_\(https://pubmed.ncbi.nlm.nih.gov/\)_](https://pubmed.ncbi.nlm.nih.gov/), [Web of Science](https://www.webofscience.com/wos/woscc/basic-search) [_\(https://www.webofscience.com/wos/woscc/basic-search\)_](https://www.webofscience.com/wos/woscc/basic-search), [UW Libraries](https://www.lib.washington.edu/) [_\(https://www.lib.washington.edu/\)_](https://www.lib.washington.edu/)), general search engines (e.g. [google](https://www.google.com/)), [_\(https://www.google.com/\)_](https://www.google.com/) high quality news sources (e.g. [New York Times](https://www.nytimes.com/) [_\(https://www.nytimes.com/\)_](https://www.nytimes.com/), [BBC](https://www.bbc.com/) [_\(https://www.bbc.com/\)_](https://www.bbc.com/), [CNN](https://www.cnn.com/) [_\(https://www.cnn.com/\)_](https://www.cnn.com/), etc.).

Grading rubric for the group presentations (24 points):

- Clarity in delivering the presentation (3 pts)
- Focus and scope (being able to address all the key points) (4 pts)
- Content (evidence of critical thinking and accurate evaluation of the topic) (8 pts)
- Research (sources effectively and accurately support the statements) (3 pts)
- Q&A (being able to address the questions from the audience accurately and thoroughly) (3 pts)
- Audience participation (each group will be randomly assigned as the designated audience to 2 presentations, and will need to ask at least 1 question per presentation (3 pts)
- This will be graded as a group assignment

Please [sign up](#) (first come, first serve) and choose your topics by **May 16th 11:59pm**.

- Final Exam (30 points) - This will be administered in the format of a Canvas quiz, including a mixture of multiple choice questions, matching tests, and essay questions.

Grading criteria

Grades will be converted into a 4.0 scale based on the calculations [here](#).

- EXTRA CREDITS (10 points, optional, due June 8th 11:59pm): written reflection essay centering around the movie *Erin Brokovich*.
 - Watch **Erin Brokovich** [here \(https://digitalcampus.swankmp.net/uwashington303229/watch/B58DF9D563314DDC?referrer=direct\)](https://digitalcampus.swankmp.net/uwashington303229/watch/B58DF9D563314DDC?referrer=direct).
 - What is the key toxicant that impacts the public health in this movie, how does it enter the body, and what's the mechanism of toxicity?
 - Take a moment to reflect on your own experiences, and identify one that has influenced your position on a related environmental health issue (such as, but not limited to: water pollution, environmental justice, etc). Elaborate on how that experience supports your position and whether or not it contradicts scientific evidence (150-300 words, 12 point font, 1.5 spacing). To find scientific evidence, use one source from Web of Science: <http://webofknowledge.com/WOS> (<http://webofknowledge.com/WOS>) or PubMed: <https://www.ncbi.nlm.nih.gov/pubmed/> (<https://www.ncbi.nlm.nih.gov/pubmed/>).
 - Grading rubric for the extra credit reflection essay (10 points):
 - Clarity in writing (2 pts)
 - Focus and scope (2 pts)
 - Content (evidence of critical thinking and accurate evaluation of the topic) (4 pts)
 - Research (sources effectively and accurately support the statements) (2 pts)

Absence Policy

While attendance at all discussion sessions is required, we understand that extenuating circumstances may arise. Valid excuses for missing class include a) participation in an official school activity (e.g., athletic event) or b) illness with valid doctor's note. All other situations will be handled on a case-by-case basis. If the absence is planned, a written notice (via email) must be submitted to the instructors no less than one week prior to the discussion session (earlier is better). If the absence is unforeseen, a written explanation must be submitted within one week of returning to school.

Late Assignment Policy

We expect that all assignments be turned in by the deadline indicated on the course website. If an assignment is turned in late, it is subject to a 10% per day grade reduction (e.g., the score on a 3-day-late assignment will be reduced by 30%). If the assignment is late due to an unforeseen emergency, an explanation is required in writing (via email), and will be considered on a case-by-case basis.

Communication skills

Communication through writing and speaking is an important transferable skill for all career pathways. Establishing a strong foundation in communication skills will help you be successful throughout your future course work and career. Therefore, this course includes assignments with the goal to help you identify areas of strength and improvement in your communication. If you feel that you could benefit from additional opportunities to improve your writing skills in particular, a list of resources at the UW and others accessible online can be found on the SPH website

at <https://sph.washington.edu/sites/default/files/inline-files/Writing-Resources-4.3.19.pdf>
(<https://sph.washington.edu/sites/default/files/inline-files/Writing-Resources-4.3.19.pdf>).

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 \(WAC 478-121\)](https://apps.leg.wa.gov/WAC/default.aspx?cite=478-121) (<https://apps.leg.wa.gov/WAC/default.aspx?cite=478-121>). We expect you to know and follow the university's policies on cheating and plagiarism, and the [SPH Academic Integrity Policy](https://sph.washington.edu/students/academic-integrity-policy) (<https://sph.washington.edu/students/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](https://www.washington.edu/cssc/) (<https://www.washington.edu/cssc/>).

Diversity and Inclusion

The UW School of Public Health seeks to ensure all students are fully included in each course. We strive to create an environment that reflects community and mutual caring. Diverse backgrounds, embodiments, and experiences are essential to the critical thinking endeavor at the heart of university education. Therefore, I expect you to follow the UW Student Conduct Code in your interactions with your colleagues and me in this course by respecting the many social and cultural differences among us, which may include, but are not limited to: age, cultural background, disability, ethnicity, family status, gender identity and presentation, citizenship and immigration status, national origin, race, religious and political beliefs, sex, sexual orientation, socioeconomic status, and veteran status. Please talk with me right away if you experience disrespect in this class, and I will work to address it in an educational manner. [DCinfo@uw.edu \(mailto:DCinfo@uw.edu\)](mailto:DCinfo@uw.edu) is a resource for students with classroom climate concerns.

Access and Accommodations

Your experience in this class is important to me. 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 have already established accommodations with Disability Resources for Students (DRS), please activate your accommodations via myDRS so we can discuss how they will be implemented 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), contact DRS directly to set up an Access Plan. DRS facilitates the interactive process that establishes reasonable accommodations. Contact DRS at disability.uw.edu [\(https://depts.washington.edu/uwdrs/\)](https://depts.washington.edu/uwdrs/).

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 \(https://registrar.washington.edu/staffandfaculty/religious-accommodations-policy/\)](https://registrar.washington.edu/staffandfaculty/religious-accommodations-policy/) [\(https://registrar.washington.edu/staffandfaculty/religious-accommodations-policy/\)](https://registrar.washington.edu/staffandfaculty/religious-accommodations-policy/). Accommodations must be requested within the first two weeks of this course using the [Religious Accommodations Request form \(https://registrar.washington.edu/students/religious-accommodations-request/\)](https://registrar.washington.edu/students/religious-accommodations-request/) [\(https://registrar.washington.edu/students/religious-accommodations-request/\)](https://registrar.washington.edu/students/religious-accommodations-request/).

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:

1. To 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. To 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. To 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

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.

The following guidelines can add to the richness of our discussion:

- We assume that persons are always doing the best that they can, including the persons in this learning environment.

- We acknowledge that systematic oppression exists based on privileged positions and specific to race, gender, class, religion, sexual orientation, and other social variables and identities.
- We posit that assigning blame to persons in socially marginal positions is counter-productive to our practice. We can learn much about the dominant culture by looking at how it constructs the lives of those on its social margins.
- While we may question or take issue with another class member's ideology, we will not demean, devalue, or attempt to humiliate another person based on her/his experiences, value system, or construction of meaning.
- We have a professional obligation to actively challenge myths and stereotypes about our own groups and other groups so we can break down the walls that prohibit group cooperation and growth.
[Adapted from Lynn Weber Cannon (1990). Fostering positive race, class and gender dynamics in the classroom. *Women Studies Quarterly*, 1 & 2, 126-134.]

We are a learning community. As such, we are expected to engage with difference. Part of functioning as a learning community is to engage in dialogue in respectful ways that supports learning for all of us and that holds us accountable to each other. Our learning community asks us to trust and take risks in being vulnerable.

Here are some guidelines that we try to use in our learning process:

- LISTEN WELL and be present to each member of our group and class.
- Assume that I might miss things others see and see things others miss.
- Raise my views in such a way that I encourage others to raise theirs.
- Inquire into others' views while inviting them to inquire into mine.
- Extend the same listening to others I would wish them to extend to me.
- Surface my feelings in such a way that I make it easier for others to surface theirs.
- Regard my views as a perspective onto the world, not the world itself.
- Beware of either-or thinking.
- Beware of my assumptions of others and their motivations.
- Test my assumptions about how and why people say or do things.
- Be authentic in my engagement with all members of our class.

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](https://sph.washington.edu/students/student-concern-policy) [_\(https://sph.washington.edu/students/student-concern-policy\)_](https://sph.washington.edu/students/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 (<mailto:dcinfo@uw.edu>) for immediate follow up. Bias concerns can be anonymously and confidentially reported via the online form found here: <https://sph.washington.edu/about/diversity/bias-concerns> (<https://sph.washington.edu/about/diversity/bias-concerns>). Data is 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.

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](https://sph.washington.edu/about/diversity/bias-concerns) (<https://sph.washington.edu/about/diversity/bias-concerns>). The University also has designated offices to help you: [SafeCampus](https://www.washington.edu/safecampus/) (<https://www.washington.edu/safecampus/>); [Office of the Ombud](https://www.washington.edu/ombud/) (<https://www.washington.edu/ombud/>); [Title IX Investigation Office](https://www.washington.edu/titleix/report/) (<https://www.washington.edu/titleix/report/>); and [University Complaint Investigation and Resolution Office](https://www.washington.edu/compliance/uciro/) (<https://www.washington.edu/compliance/uciro/>).

Course Summary:

Date	Details	Due
Fri Apr 1, 2022	 ENV H 503 A Sp 22: Adverse Health Effects Of Environmental And Occupational Toxicants https://canvas.uw.edu/calendar?event_id=2724558&include_contexts=course_1547466	3:30pm to 5pm
	 Initial Course Survey (1 pt) https://canvas.uw.edu/courses/1547466/assignments/7162852	due by 3:30pm

Date	Details	Due
	 Watch the Eminent Toxicologist Lecture and answer 2 questions (1 pt) (https://canvas.uw.edu/courses/1547466/assignments/7162752)	due by 3:30pm
	 Pre-class reading: milestones in Toxicology	to do: 3:30pm
Mon Apr 4, 2022	 ENV H 503 A Sp 22: Adverse Health Effects Of Environmental And Occupational Toxicants (https://canvas.uw.edu/calendar?event_id=2724559&include_contexts=course_1547466)	3:30pm to 5pm
Fri Apr 8, 2022	 ENV H 503 A Sp 22: Adverse Health Effects Of Environmental And Occupational Toxicants (https://canvas.uw.edu/calendar?event_id=2724560&include_contexts=course_1547466)	3:30pm to 5pm
Mon Apr 11, 2022	 ENV H 503 A Sp 22: Adverse Health Effects Of Environmental And Occupational Toxicants (https://canvas.uw.edu/calendar?event_id=2724561&include_contexts=course_1547466)	3:30pm to 5pm
	 Pre-class reading: Dr. and Dr. Miller	to do: 3:30pm
Fri Apr 15, 2022	 ENV H 503 A Sp 22: Adverse Health Effects Of Environmental And Occupational Toxicants (https://canvas.uw.edu/calendar?event_id=2724562&include_contexts=course_1547466)	3:30pm to 5pm
Mon Apr 18, 2022	 ENV H 503 A Sp 22: Adverse Health Effects Of Environmental And Occupational Toxicants (https://canvas.uw.edu/calendar?event_id=2724563&include_contexts=course_1547466)	3:30pm to 5pm

Date	Details	Due
Fri Apr 22, 2022	 ENV H 503 A Sp 22: Adverse Health Effects Of Environmental And Occupational Toxicants (https://canvas.uw.edu/calendar?event_id=2724564&include_contexts=course_1547466)	3:30pm to 5pm
Mon Apr 25, 2022	 ENV H 503 A Sp 22: Adverse Health Effects Of Environmental And Occupational Toxicants (https://canvas.uw.edu/calendar?event_id=2724565&include_contexts=course_1547466)	3:30pm to 5pm
	 MIDTERM EXAM (3:30-4:50; extended time for UW-approved special accommodations only) (https://canvas.uw.edu/courses/1547466/assignments/7136806)	due by 5:30pm
Fri Apr 29, 2022	 ENV H 503 A Sp 22: Adverse Health Effects Of Environmental And Occupational Toxicants (https://canvas.uw.edu/calendar?event_id=2724566&include_contexts=course_1547466)	3:30pm to 5pm
Mon May 2, 2022	 ENV H 503 A Sp 22: Adverse Health Effects Of Environmental And Occupational Toxicants (https://canvas.uw.edu/calendar?event_id=2724567&include_contexts=course_1547466)	3:30pm to 5pm
Fri May 6, 2022	 ENV H 503 A Sp 22: Adverse Health Effects Of Environmental And Occupational Toxicants (https://canvas.uw.edu/calendar?event_id=2724568&include_contexts=course_1547466)	3:30pm to 5pm
Mon May 9, 2022	 ENV H 503 A Sp 22: Adverse Health Effects Of Environmental And Occupational Toxicants (https://canvas.uw.edu/calendar?event_id=2724569&include_contexts=course_1547466)	3:30pm to 5pm

Date	Details	Due
Fri May 13, 2022	 ENV H 503 A Sp 22: Adverse Health Effects Of Environmental And Occupational Toxicants (https://canvas.uw.edu/calendar?event_id=2724570&include_contexts=course_1547466)	3:30pm to 5pm
Mon May 16, 2022	 ENV H 503 A Sp 22: Adverse Health Effects Of Environmental And Occupational Toxicants (https://canvas.uw.edu/calendar?event_id=2724571&include_contexts=course_1547466)	3:30pm to 5pm
	 Sign up for group presentations by 05/16 11:59pm	to do: 11:59pm
Fri May 20, 2022	 ENV H 503 A Sp 22: Adverse Health Effects Of Environmental And Occupational Toxicants (https://canvas.uw.edu/calendar?event_id=2724572&include_contexts=course_1547466)	3:30pm to 5pm
Mon May 23, 2022	 ENV H 503 A Sp 22: Adverse Health Effects Of Environmental And Occupational Toxicants (https://canvas.uw.edu/calendar?event_id=2724573&include_contexts=course_1547466)	3:30pm to 5pm
Fri May 27, 2022	 ENV H 503 A Sp 22: Adverse Health Effects Of Environmental And Occupational Toxicants (https://canvas.uw.edu/calendar?event_id=2724574&include_contexts=course_1547466)	3:30pm to 5pm
Mon May 30, 2022	 ENV H 503 A Sp 22: Adverse Health Effects Of Environmental And Occupational Toxicants (https://canvas.uw.edu/calendar?event_id=2724575&include_contexts=course_1547466)	3:30pm to 5pm
Fri Jun 3, 2022	 ENV H 503 A Sp 22: Adverse Health Effects Of Environmental And Occupational Toxicants (https://canvas.uw.edu/calendar?event_id=2724576&include_contexts=course_1547466)	3:30pm to 5pm

Date	Details	Due
Mon Jun 6, 2022	 Case Study: Man-made Disasters Impacting the 21st Century	to do: 3:30pm
	 FINAL EXAM (3:30-4:50; extended time for UW-approved special accommodations only). (https://canvas.uw.edu/courses/1547466/assignments/7136805)	due by 5:30pm
	 2020 Poll everywhere pre-class survey (https://canvas.uw.edu/courses/1547466/assignments/7136809)	
	 2022 poll intro (https://canvas.uw.edu/courses/1547466/assignments/7327617)	
	 Additional resources for Lecture 2: Dr. Curtis Klaassen's Eminent Toxicology Lecture (https://canvas.uw.edu/courses/1547466/assignments/7136810)	
	 Biotransformation (https://canvas.uw.edu/courses/1547466/assignments/7136811)	
	 Case Study: Man-made Disasters Impacting the 21st Century (https://canvas.uw.edu/courses/1547466/assignments/7136812)	
	 Chemical carcinogenesis and toxicokinetics (https://canvas.uw.edu/courses/1547466/assignments/7136813)	
	 Lecture 1 History of Toxicology Poll quiz (https://canvas.uw.edu/courses/1547466/assignments/7136814)	
	 Poll Everywhere quiz Mechanisms III and Risk Assessment (https://canvas.uw.edu/courses/1547466/assignments/7136817)	

Date	Details	Due
	 Poll everywhere quiz Principles and Mechanisms I (https://canvas.uw.edu/courses/1547466/assignments/7136818)	
	 Poll Everywhere Quiz: ADME I and ADME II (https://canvas.uw.edu/courses/1547466/assignments/7136816)	
	 Poll Everywhere Test (https://canvas.uw.edu/courses/1547466/assignments/7362982)	
	 Polleverywhere: Metabolomics and genotoxicity (https://canvas.uw.edu/courses/1547466/assignments/7136815)	
	 Toxicogenomics/epigenomics (https://canvas.uw.edu/courses/1547466/assignments/7136819)	