

ENV H 446/546 A Wi 21: Hazardous Waste And Public Health

[Jump to Today.](#)

 [Edit](#)

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

[\(https://deohs.washington.edu/\)](https://deohs.washington.edu/)

ENVH 446/546A: Hazardous Waste and Public Health

Quarter: Winter 2021

Credits & Grading: 3 credits, graded

Time: Mondays & Wednesday, 3:30 to 4:50 PM

Offered Remotely via Zoom: <https://washington.zoom.us/meeting/97365675839> 

[\(https://washington.zoom.us/meeting/97365675839\)](https://washington.zoom.us/meeting/97365675839)

Instructor:

John C. Kissel, Professor

Phone: 206-543-5111 (voicemail only, email preferred)

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

[\(mailto:tmb@uw.edu\)](mailto:tmb@uw.edu) **Office Hours:** By appointment

Course Description

Characterization of hazardous wastes and introduction to pertinent federal and state regulations. Discussion of significance of hazardous wastes and related facilities with respect to human and environmental health. Description of management options at post- and pre-generation stages. Supplemented with case studies.

Learning Objectives

At the end of this course, students enrolled in **ENV H 446** will be able to:

1. Define hazardous waste
2. Describe the primary provisions of RCRA and CERCLA
3. Demonstrate familiarity with current hazardous waste management issues and jargon
4. Recognize and interpret terminology used to quantitatively describe chemical exposure and risk

5. Interpret the physical-chemical properties of individual chemicals with respect to their impact on fate, transport and human exposure
6. Describe key epidemiological investigations of hazardous waste sites
7. State conditions under which exposure pathways are likely to be completed
8. Describe technological approaches to waste destruction and containment
9. Contrast pre-generation, pre-release, and post-release management options

In addition to the learning objectives above, students enrolled in **ENV H 546** will be able to:

10. Implement and interpret a simple fugacity based chemical fate model
11. Conduct a rudimentary intake fraction analysis for a model commercial compound

Course Textbook

There is no required textbook for this course. Notes, supplemental readings and other materials will be provided via Canvas.

Exams, Assignments and Grading (ENV H 446)

The final grade for students enrolled in ENV H 446 will be determined as follows:

- Problem sets #1-6 = 30%
- Participation = 10%
- Midterm Exam = 30%
- Final Exam = 30%

Exams, Assignments and Grading (ENV H 546)

The final grade for students enrolled in ENV H 546 will be determined as follows:

- Problem sets #1-6 = 20%
- Project #1 = 15%
- Project #2 = 15%
- Participation = 10%
- Midterm Exam = 20%
- Final Exam = 20%

Problem sets, midterm and final will be the same ones used in the companion undergraduate (446) section. Graduate (546) students will also be required to complete two linked group projects. The first, due at the midterm, will involve simulation of the transport and fate of a selection of target compounds with representative physical-chemical properties using a software package applicable to regulatory analysis of chemical waste impacts. The second project, due at the last day of class will be poster presentation of an exposure analysis for the target compounds investigated in the first project in the context of production, use and disposal of commercial products that contain them.

Class Schedule

A session-by-session schedule for the course can be found on [the Modules page](#).

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

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](https://www.washington.edu/studentconduct/) [\(https://www.washington.edu/studentconduct/\)](https://www.washington.edu/studentconduct/) (WAC 478-120). 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/) [\(https://sph.washington.edu/students/academic-integrity-policy/\)](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 website.

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.

Equity, Diversity, and Inclusion

Diverse backgrounds, embodiments and experiences are essential to the critical thinking endeavor at the heart of University education. In SPH, students 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.

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 \(mailto:dcinfo@uw.edu\)](mailto: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> [_ \(https://sph.washington.edu/about/diversity/bias-concerns\)](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

SPH Land Acknowledgment

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."

Course Summary:

Date	Details	Due
------	---------	-----