



ENVH 445 - Course Syllabus
**Integrated Solid Waste Management &
Environmental Public Health**
Spring Quarter 2023
(3 Credits)

Course Meeting Times and Locations

When: Fridays, 1:30 - 4:20 p.m.
Room: SOCC 303

This course is taught on Coast Salish land - the land which touches the shared waters of all tribes and bands within the Duwamish, Suquamish, Tulalip and Muckleshoot nations.

Washington State is [home](#) to 29 federally recognized and five unrecognized tribes. We commit to demonstrating our collective humility and respect for the original caretakers of the land upon which the UW School of Public Health sits.

Course Instructor

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E-Mail: tania@uw.edu (Best way to contact)
Office Hours: By appointment.

Course Description

This course focuses on the domestic solid waste management system and its impacts on environmental public health, broadly. More specifically, this class will examine community and occupational health, environmental, and economic impacts associated with, as well as material conservation aspects of, solid waste management. Topical areas will include amounts and sources of solid wastes, waste reduction and recycling (including composting), methods of storage, transportation and final disposal, integrated waste management, identification of present problems and future needs. Group problem-based learning will dig deeper into specific solid waste streams to define a problem, identify solutions, and communicate to a chosen group of stakeholders.

Course Learning Objectives

It is intended that at the completion of this course, each student should be able to:

1. **Identify** common community and occupational health hazards and concerns related to solid waste and sustainable materials management.



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2. **Discuss** the environmental public health regulatory, planning, technical, and economic principles that influence the solid waste management system - nationally and within Washington State.
3. **Describe** appropriate methods and technology used during various points of the solid waste management system to minimize impacts to community and occupational health from solid waste.
4. **Analyze** one solid waste stream in depth and **create** a communication product that describes processes, challenges, and solutions to a lay audience (group project.)
5. **Analyze** one solid waste problem or event that has produced significant waste; **Explain** its impact on community/occupational health and environment; and **Propose** solutions based on what is known about the challenges/barriers (individual project.)

Skills Development

- Problem-Based Learning
- Facilitation/leadership
- Knowledge integration
- Systems thinking
- Written & oral communication

Class Format

This course is built around problem-based learning pedagogy.

In addition to a mix of lectures, guest speakers, and field trips, each week students will work in teams to examine an aspect related to their group's solid waste disposal topic/challenge; discuss what they know or have learned during their independent research; and identify information needed to understand and propose solutions for their solid waste topic. Students work independently on self-assigned "learning objective" research and come prepared to class to inform the rest of their team of their findings. This type of learning is an iterative process, with each class building on knowledge acquired through previous sessions.

Note about attendance: 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 meeting, part of the thinking that is needed to work the problem will be missing. Discussion won't be as rich, and the group may be stretched too thin to address the learning objectives effectively.



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For this reason, students are strongly encouraged to attend all the scheduled class time unless faced with illness or a true emergency. Those who miss meetings 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 class session.

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>

Course Requirements

1. **Group Project/Assessment:** Students will be working in one of 3-4 teams focused on a specific solid waste stream (e.g. plastics, food, electronic, etc.) While each student will be individually responsible (and graded) for learning objectives that contribute to the group's understanding of their waste stream, each team will be expected to produce a communication product- see additional details below. The communication product's group grade will be worth **~55 pts.**
2. **Participation/Individual Assignments:** Students are expected to attend class having read and prepared for the day. Questions and comments on the subject matter are encouraged. In addition to participating in group discussions, there are three individually-assigned learning objectives (30 pts/each) associated with the group project. These assessments will be listed on the Canvas website in each applicable class/module, as well as introduced during class (**~90 pts**).
3. **Field Trips:** In the past this course has enjoyed several field trips to various local solid waste facilities. These field trips were put on hold the last couple years (due to COVID) and some facilities are no longer offering tours OR are slow to re-engage. Every effort will be made to arrange at least 2 local field trips. They will be scheduled during class time.
4. **Individual Project:** Each student will produce a ~5 page (single-spaced including pictures/graphics/references @ 12 pt. font) report on a solid waste/enviro. public health-related topic of their choice (see end of syllabus for suggested topic list).



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Students will concisely present their findings via a ~5 min powerpoint on **Friday, June 2nd, 2023. [100 related pts total]**

Note: All written assignments must be submitted electronically through Canvas.

Group Project Details

During the first week of the course, the class will be divided into 3-4 groups that will analyze a current solid waste disposal challenge. Each group will be responsible for preparing a communication piece (YouTube, infographic etc), to a lay audience, the importance of their topic with respect to public health. The group project should:

- Be based on information gathered by the group from peer reviewed literature; government, NGO and other websites; and the popular press;
- Present the group's topic-related facts, conclusions, and recommendations to a lay audience; and
- Consist of a communication piece (Infographic or short ~ 2-3 min. video) that is tasteful and obeys all copyright laws.
- These group communication pieces will be “debuted/presented” during class on **Friday, June 2nd**. ** An accompanying ~2-page “additional information and resources document is also required and will be submitted along with the communication product.

Group project timeline and related grades (total associated 145 pts):

- 3 Individual Learning Objectives **Variable due dates** - (90 pts)
- Communication piece **June 2nd** (50 pts)
- 2-page resource document **June 2nd** (5 pts)

Individual Project Details

By the end of the 2nd week, each student will have chosen a solid waste topic/problem to research and present (during the last week of class) a compelling argument to the class (oral presentation) and lay-audience (report format) on a solution(s) to the topic/problem. Additional details will be posted on canvas and described during class.

Consideration to the materials used in both the presentation and report include:

- a) Should be based on information gathered by the student from: the periodic literature; government, NGO and other websites; and reputable media sources.
- b) Present the following content:
 - Define the Problem: -
 - What is the problem and why is it a problem?
 - Waste stream and specific hazards associated with it.



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- Health effects from exposure to hazards within the waste stream
 - Susceptible or vulnerable populations
 - Describe the underlying scientific evidence or theories.
 - Identify the "stakeholders": - Responsible government agency or agencies; Industry; User (consumers) groups.
 - Describe the available solutions/substitutions etc.
 - Conclude with the student's recommendations.
- c) Consist of a ~5-minute PowerPoint presentation (25 pts) to be delivered in class and an accompanying written argument in a report format (50 pts).

Individual project timeline and related grades (total associated 100 pts):

- Paper topic submitted **April 14th** - in class (5 pts)
- News article summary related to your topic due **April 21st** (10 pts)
- Paper outline due **May 5th** (10 pts)
- Final paper due via canvas **June 2nd** (50 pts)
- Presentation on **June 2nd** (25 pts)

Course Policies

1. **COVID-related expectations:** All UW students are expected to follow state [doh.wa.gov], local, [kingcounty.gov] and [UW COVID-19 policies and recommendations](#).

Please be extra conscientious about masking during the first few weeks of the quarter, because we will have a lot of members of the community traveling and can reasonably expect to see a surge in COVID cases.

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. Thank you for your patience and support as we all transition together back to in-person learning!

2. **Academic Integrity** (<http://sph.washington.edu/students/academicintegrity/>) 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.

Notice: The University has a license agreement with VeriCite, an educational tool that helps prevent or identify plagiarism from Internet resources. Your instructor may use the service in this class by requiring that assignments are submitted electronically to be checked by VeriCite. The VeriCite Report will indicate the amount of original text in your work and whether all material that you quoted, paraphrased, summarized, or used from another source is appropriately referenced.

3. Access and Accommodation

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 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.

Additionally, 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](#).

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[\(https://registrar.washington.edu/staffandfaculty/religious-accommodations-policy/\)](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/).

5. 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:

- a. 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.
- b. 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.
- c. 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.

6. 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 ourselves 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.

7. 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.

8. 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 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.



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9. 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:
 - 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
 - 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](#)



Additional Course Resources

Required and supplementary readings can be found on the canvas site. Additional addresses (URLs) will be provided throughout the quarter. Websites of interest include:

- [EPA Office of Solid Waste](#)
- Washington State Department of Ecology – [Solid Waste and Financial Assistance](#)
- Washington State Bills and Laws
- Bills - <http://apps.leg.wa.gov/billinfo/>
- RCWs/WACs - <http://www1.leg.wa.gov/LawsAndAgencyRules/>
- King County Solid Waste Division Services
- <http://your.kingcounty.gov/solidwaste/index.asp>
- Public Health Seattle/King County – Solid Waste
- <http://www.kingcounty.gov/healthservices/health/ehs/garbage.aspx>
- Seattle Public Utilities
- <http://www.seattle.gov/util/MyServices/Garbage/index.htm>



Individual project – Suggested Topics List

Purpose

The purpose of this project is to provide a forum for an in-depth examination of a solid waste issue of the student's choice.

Possible Paper Topics

- Construction Recycling “Green Building Programs”/Sustainable building
- ‘Take it back’ electronic recycling program
- Gas to Energy projects
- Recycled tire products (crumb rubber used for sports fields or playground)
- Community Litter Clean-up Programs
- Bio-solids application
- Biodiesel production/use
- Recycled Earth Products
- Disaster-related SW Disposal Issues (e.g. 9-11 World Trade Center site / SE Asia Tsunami / Hurricane Katrina, Sandy, Irma or Maria)
- War time SW disposal issues
- Compact fluorescent vs. LED light bulbs
- Fast Fashion / – 2ndary Clothing market
- The practice of Garbage Picking
- Policies banning a particular waste stream (France & Plastics; various municipalities and plastic bags/styrofoam, etc.)
- Cradle-to-cradle design

OR

Make a proposal!