

Course Syllabus

[Jump to Today](#)

 [Edit](#)

ENVH 564
RECOGNITION OF HEALTH AND SAFETY HAZARDS IN INDUSTRY
Autumn Quarter, 2019
2 Credits

Instructors: Marty Cohen, ScD, CIH, CSP, mcohen@uw.edu,
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221-6301

Time: Mondays 11:30 AM – 1:20 PM

Place: Remote access via Zoom

URL: <https://canvas.uw.edu/courses/1320258>

Introduction: This course is designed to provide an introduction to the recognition of occupational safety and health hazards and approaches to controlling hazards, primarily through tours of representative local industrial facilities. Lectures consist of an introduction to hazard recognition and control strategies, and discussions will address the hazards of the various industries toured.

Learning objectives. At the conclusion of this course, students will be able to:

1. Identify hazards associated with specific industrial processes.
2. Identify alternative control options for several health and safety problems in a wide range of industrial processes.
3. Develop a strategy for conducting a walkthrough assessment of an industrial process.
4. Describe hazards in clear written language associated with industrial processes using specific field observations.
5. Clearly communicate health and safety hazards to various audiences.

NOTE Regarding Field Trips: In a typical year, ENVH 564 would have lectures and site visits on alternating weeks. Due to the current COVID-19 pandemic, there will be no class visits to the worksites this quarter, as has been done in the past. The current plan is for the instructors to tour the facilities with a live Zoom session during the class time, showing video feeds of the facilities and allowing for students to ask questions of the facility host. All students will also be required to submit 2 questions prior to each

site visit that may be asked of our host. We will have an assistant participating in the Zoom meeting who won't be on site and can facilitate discussion while the instructors are busy on-site. To allow students to "explore" the worksite in a virtual manner, 360° video will be shot at various locations at the site and uploaded after the visit for students to explore. Because field-based practitioners and researchers will need some of the field skills typically taught in this class, we will still instruct it in a manner as if you were to go to a worksite. Depending on the worksite and our ability to safely transport students to worksites, there may be the potential for students to get to one of the site visits. During the weeks of no site visit, we will discuss the previous site visit and discuss the recorded topical lecture that will have been viewed prior to class.

Student Requirements:

1. Complete assigned readings in advance. Ear plug use video on first day is required.
2. Be prepared for the week's lecture or site visit.
3. Students must be prepared and dressed appropriately for all field trips. If not dressed appropriately, student will not be allowed on site. (Not applicable unless going on site)
4. Students complete:
 - **Industry Reviews:** A summary of each industry being visited will be due the week of that site visit for the 2nd and 5th site visits only. The summary will include the following sections (please keep them in this order): Definition of Industry, Processes, Hazards, and Exposure Controls and Applicable Health and Safety Standards. For more detail on the written reports, see page 8 of the syllabus. These documents should be less than 2 pages in length, excluding references (please use multiple references). For the 3rd and 4th site visits, the same information should be investigated, but a written report is not required. Your knowledge of the industry may be tested on the way to the sites. For an example, see Files>Report Outlines & Examples>ExampleReview in Canvas.
 - **Industry Reviews:** A summary of each industry being visited will be due the week of that site visit for the 2nd and 5th site visits only. The summary will include the following sections (please keep them in this order): Definition of Industry, Processes, Hazards, and Exposure Controls and Applicable Health and Safety Standards. For more detail on the written reports, see page 10 of the syllabus. These documents should be less than 2 pages in length, excluding references (please use multiple references). For the 3rd and 4th site visits, the same information should be investigated, but a written report is not required. Your knowledge of the industry may be tested during the Zoom session. For an example, see Files>Report Outlines & Examples>ExampleReview in Canvas.
 - **Walk-Through Report:** This technical report will summarize the fourth tour. It should describe the company, their health and safety program structures, the company-specific production processes, raw materials used, potential for hazards and exposures, and recommendations for controls. The report should be no longer than 10 pages (excluding references) and should include appropriate bibliographic citations, including primary research sources. The report will be due 2 weeks after the site visit. Please use the structure shown in the guidance document where appropriate (page 11 of

the syllabus) and submit the report in the Assignment section for "Site Visit Report". For an example, see Files>Report Outlines & Examples in Canvas.

- **Hazard Identification Exercises:** These exercises will help the students develop skills in hazard and controls identification. These short exercises will be one page or less in length and due one week after the site visits. See page 12 of the syllabus for the questions. Only four of these will be required, as one will not be required for the fourth site visit for which you write a site visit report.
- **Submit 2 questions per site visit:** You will be required to submit 2 questions for the host of each site visit. Questions will be entered into the Google form entitled: Site Visit Questions. You will also have the ability to ask questions of our host live.
- **There will be no final exam, but we will meet on the day of the final for one last class.**

Grading: Industry reviews (20%, 2 @ 10% each), Hazard identification exercises (30%, 4 @ 7.5% each), Walk-through report (40%), Quizzes (?? - 5%), and Class participation (5%).

Following is the grading scale that will be used:

# grade	Letter	%age	# grade	Letter	%age
4	A	100	2.8	B-	83
3.9	A	98	2.7	B-	82
3.8	A-	96	2.6	B-	81
3.7	A-	94	2.5	B-	80
3.6	A-	92	2.4	C+	79
3.5	A-	90	2.3	C+	77
3.4	B+	89	2.2	C+	76
3.3	B+	88	2.1	C	75
3.2	B+	87	2.0	C	74
3.1	B	86	1.9	C	73
3.0	B	85	1.8	C-	71
2.9	B	84	1.7	C-	70

Writing: One component of your grades for the written assignments will be your ability to clearly convey your ideas and information to the reader. If you are having difficulties, the UW has a good resource to assist students improve their writing skills (<https://depts.washington.edu/owrc/> [↗] (<https://depts.washington.edu/owrc/>)). The Department also has a list of writing resources on its Portal (<https://portal.deohs.washington.edu/index.php/academic-support-writing-resources> [↗] (<https://portal.deohs.washington.edu/index.php/academic-support-writing-resources>)) and has a class on Technical writing in the Spring (ENVH 521).

Tips for your writing:

1. The writing required in the class is not creative writing, it is technical writing.
2. All figures, graphs, photos, and tables must be numbered and have a descriptive caption. These should also be referenced in the text.
3. If you have a graphic or table in a report, you'll need to say something about it in the text.
4. Writing must be your own, do not search out old class materials, examples are provided.
5. Do not copy and paste large amounts of text into your reports. Even if you cite it, if there's a lot of it, it's not your writing.

Text Book

Highly Recommended

Burgess, WA. Recognition of Health Hazards in Industry: A Review of Materials and Processes. 2nd edition, New York, John Wiley and Sons. 1995

Attendance: Your presence during Zoom sessions is highly recommended as it may be difficult or impossible to make up missed classes. A majority of your grade is dependent upon your presence at the Zoom sessions during the site visits. Your participation score will depend on your ability to engage in class discussions.

End of Year Evaluations: If I get >75% of the class submitting class evaluations, everyone will earn an extra 1 point. Even if you don't really want the point, please complete the evaluation. It's important that I get feedback, either good, bad, or indifferent. I like to use it to improve the class for next year.

Class Participation: You're highly encouraged to participate actively in class discussion, both in the classroom and in the field. Part of your final grade will be based on participation. This presupposes being present during the Zoom sessions, being prepared (having read assigned material), and being willing to exchange views with fellow students. Some kinds of "interactions" are especially helpful in class discussion, and these are highly valued. They include:

- Expressing your view and supporting it with evidence from the assigned reading or from another authoritative source.
- Asking a thoughtful question about something in the reading that was unclear to you.
- Responding to another student's comment by asking a clarifying question, indicating that you listened attentively and want to dig deeper.
- Building on another student's comment in an iterative way.
- Effectively reflecting back and/or summarizing what is being said in the conversation and identifying points of consensus or disagreement.
- Taking things "one step further," that is, commenting on the broader significance of a point in the reading or the discussion, or drawing a link between such a point and an apparently unconnected issue, indicating that you're a systems thinker making connections.

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 478-120). 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.

Statement on Inclusion and 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 identity and expression, citizenship and 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.

On our first day of class we will create ground rules together to follow in promoting a productive learning environment for all members of the class. We are committed to making this class an equitable learning environment. Please talk with us right away if you experience disrespect in this class from other students and/or from us, and we will work to address it in an educational manner.

Reporting Learning Environment Concerns: The Office of the Dean has a student concern policy, a faculty concern policy and standard HR procedures for staff concerns. Students are encouraged to report any incidents of bias in any of the following ways:

- Report the incident to someone they feel comfortable with (including teaching staff, adviser or department staff) or directly inform the SPH Assistant Dean for Equity, Diversity & Inclusion Dr. Victoria Gardner at vg@uw.edu (<mailto:vg@uw.edu>).
- Email dcinfo@uw.edu to file a non-anonymous, confidential report (tracked by Director of Student and Academic Services and Assistant Dean of Equity, Diversity & Inclusion) or
- Send an anonymous and confidential report using the bias concern form here. Report is received by the Assistant Dean for EDI and the Director of Program Operations for Student and Academic Services and tracked for investigation and/or resolution. Reporter can remain completely anonymous but will not receive a response.

Access and Accommodations: The UW Disability Resource team has provided the following statement for the syllabus:

Your experience in this class is important to me. 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 (<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/>).”

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.

Statement on 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.

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
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Date	Details	
Mon Oct 5, 2020	 Class 1 Reading (https://canvas.uw.edu/courses/1397834/assignments/5625549)	due by 10:30am
	 How People Interact with Chemicals in the Workplace (https://canvas.uw.edu/courses/1397834/assignments/5625558)	due by 10:30am
	 How to Properly Wear Ear Plugs (https://canvas.uw.edu/courses/1397834/assignments/5625559)	due by 10:30am
	 Lecture of Foundry Processes/Hazards (https://canvas.uw.edu/courses/1397834/assignments/5661192)	due by 11:30am
Mon Oct 12, 2020	 Class 2 Reading (https://canvas.uw.edu/courses/1397834/assignments/5625550)	due by 10:30am
	 ENV H 564 A Au 20: Recognition Of Health And Safety Problems In Industry (https://canvas.uw.edu/calendar?event_id=1714094&include_contexts=course_1397834)	11:30am to 1:30pm
	 Site Visit 1 - Foundry (https://canvas.uw.edu/courses/1397834/assignments/5625567)	due by 11:30am
Mon Oct 19, 2020	 Class 3 Reading (https://canvas.uw.edu/courses/1397834/assignments/5625551)	due by 10:30am
	 ENV H 564 A Au 20: Recognition Of Health And Safety Problems In Industry (https://canvas.uw.edu/calendar?event_id=1714095&include_contexts=course_1397834)	11:30am to 1:30pm
	 Lecture of OHS Programs and Standards (https://canvas.uw.edu/courses/1397834/assignments/5661193)	due by 11:30am
	 North Star Haz ID Exercise (https://canvas.uw.edu/courses/1397834/assignments/5625562)	due by 11:30am
Mon Oct 26, 2020	 Class 4 Reading (https://canvas.uw.edu/courses/1397834/assignments/5625552)	due by 10:30am

Date	Details
	<p data-bbox="456 163 1114 302">  ENV H 564 A Au 20: Recognition Of Health And Safety Problems In Industry 11:30am to 1:30pm </p> <hr/> <p data-bbox="456 369 1211 474">  Commercial Building Construction Review due by 11:30am </p> <hr/> <p data-bbox="456 537 1211 642">  Site Visit 2 - Commercial Building Construction site due by 11:30am </p>
Mon Nov 2, 2020	<p data-bbox="456 709 1211 772">  Class 5 Reading due by 10:30am </p> <hr/> <p data-bbox="456 840 1539 978">  ENV H 564 A Au 20: Recognition Of Health And Safety Problems In Industry 11:30am to 1:30pm </p> <hr/> <p data-bbox="456 1045 1539 1108">  Construction Site Haz ID Exercise due by 11:30am </p> <hr/> <p data-bbox="456 1176 1539 1239">  Lecture of Control Strategies due by 11:30am </p>
Mon Nov 9, 2020	<p data-bbox="456 1312 1539 1451">  ENV H 564 A Au 20: Recognition Of Health And Safety Problems In Industry 11:30am to 1:30pm </p> <hr/> <p data-bbox="456 1518 1539 1581">  Class 6 Reading due by 11:30am </p> <hr/> <p data-bbox="456 1648 1539 1711">  SawStop Video due by 11:30am </p> <hr/> <p data-bbox="456 1778 1539 1883">  Site Visit 3 - Stone countertop fabrication due by 11:30am </p>

Date	Details
	 Stone Countertop Fabrication Review (https://canvas.uw.edu/courses/1397834/assignments/5625561) due by 11:30am
Mon Nov 16, 2020	 ENV H 564 A Au 20: Recognition Of Health And Safety Problems In Industry (https://canvas.uw.edu/calendar?event_id=1714099&include_contexts=course_1397834) 11:30am to 1:30pm
	 Class 7 Reading (https://canvas.uw.edu/courses/1397834/assignments/5625555) due by 11:30am
	 Dominis Haz ID Exercise (https://canvas.uw.edu/courses/1397834/assignments/5625557) due by 11:30am
	 Lecture of Personal Protective Equipment (https://canvas.uw.edu/courses/1397834/assignments/5661196) due by 11:30am
	 The Importance of Using a Fit Tested Respirator (https://canvas.uw.edu/courses/1397834/assignments/5625574) due by 11:30am
Mon Nov 23, 2020	 ENV H 564 A Au 20: Recognition Of Health And Safety Problems In Industry (https://canvas.uw.edu/calendar?event_id=1714100&include_contexts=course_1397834) 11:30am to 1:30pm
	 Lead-Acid Battery Mfg. Review (https://canvas.uw.edu/courses/1397834/assignments/5625560) due by 11:30am
	 Site Visit 4 - Lead-Acid Battery Mfg. (https://canvas.uw.edu/courses/1397834/assignments/5625570) due by 11:30am
 Class 8 Readings (https://canvas.uw.edu/courses/1397834/assignments/5661169) due by 11:59pm	
Mon Nov 30, 2020	 ENV H 564 A Au 20: Recognition Of Health And Safety Problems In Industry (https://canvas.uw.edu/calendar?event_id=1714101&include_contexts=course_1397834) 11:30am to 1:30pm

Date	Details	
Mon Dec 7, 2020	 ENV H 564 A Au 20: Recognition Of Health And Safety Problems In Industry (https://canvas.uw.edu/calendar?event_id=1714102&include_contexts=course_1397834)	11:30am to 1:30pm
	 Class 10 Reading (https://canvas.uw.edu/courses/1397834/assignments/5625547)	due by 11:30am
	 Fire Fighting Industry Review (https://canvas.uw.edu/courses/1397834/assignments/5625573)	due by 11:30am
Mon Dec 14, 2020	 Site Visit 5 - Fire Fighting (https://canvas.uw.edu/courses/1397834/assignments/5625571)	due by 11:30am
	 Fire Fighter Haz ID Exercise (https://canvas.uw.edu/courses/1397834/assignments/5625563)	due by 11:30am
Wed Dec 16, 2020	 Site Visit (Dyno) Report (https://canvas.uw.edu/courses/1397834/assignments/5625572)	due by 11:59pm
	 Class 11 Reading (https://canvas.uw.edu/courses/1397834/assignments/5625548)	due by 10:30am
	 Lecture of Hazard Communication (https://canvas.uw.edu/courses/1397834/assignments/5661197)	due by 11:30am
	 ENV H 564 A Au 20: Recognition Of Health And Safety Problems In Industry (https://canvas.uw.edu/calendar?event_id=1714110&include_contexts=course_1397834)	6:30pm to 8:30pm
	 Class 9 Readings (https://canvas.uw.edu/courses/1397834/assignments/5661232)	due by 11:59pm
 Participation (https://canvas.uw.edu/courses/1397834/assignments/5625564)		
 Quiz #1 (https://canvas.uw.edu/courses/1397834/assignments/5625544)		
 Quiz #2 (https://canvas.uw.edu/courses/1397834/assignments/5625545)		

Date**Details**

**Quiz #3**

<https://canvas.uw.edu/courses/1397834/assignments/5625546>

**Site Visit Questions Form**

<https://canvas.uw.edu/courses/1397834/assignments/5635223>
