

Course Syllabus

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

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Time: Mondays 10:30 - 12:20 (with extensions for field trips)

Place: SOCC 308 (South Campus Center)

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.

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.

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.
- **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 9 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 10 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. See Files>Report Outlines & Examples>HazIDExQuestions2015.docx in Canvas for the questions.
- **Brief In-Class Quizzes:** A brief in-class quiz, on days that there is no site visit, may be given to assess whether students have completed the out-of-class reading/viewing.
- **There will be no final exam.**

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 of Environmental and Occupational Health Sciences also has a class on Technical writing in Environmental Health (ENVH 520).

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 in class and at site visits 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 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 your final grade will be based on participation. This presupposes coming to class, 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 (<http://sph.washington.edu/students/academicintegrity/> (<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. Assignments may be evaluated using [Vericite](https://vericite.com/) (<https://vericite.com/>), which is a tool to help evaluate the integrity of written assignments.

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/>).(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/>). 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.

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>) 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>). 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.

Access and Accommodation (<http://depts.washington.edu/uwdrs/faculty-resources/syllabus-statement/> (<http://depts.washington.edu/uwdrs/faculty-resources/syllabus-statement/>)):

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 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 (<mailto: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 Policy

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 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/E2%80%A6>).

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.

Course Summary:

Date	Details	due by 10:30am
Mon Sep 30, 2019	 Class 1 Reading https://canvas.uw.edu/courses/1320258/assignments/4841154	due by 10:30am
	 How People Interact with Chemicals in the Workplace https://canvas.uw.edu/courses/1320258/assignments/4841163	due by 10:30am
	 How to Properly Wear Ear Plugs https://canvas.uw.edu/courses/1320258/assignments/4841164	due by 10:30am
Mon Oct 7, 2019	 Class 2 Reading https://canvas.uw.edu/courses/1320258/assignments/4841155	due by 10:30am
	 Site Visit 1 - Foundry https://canvas.uw.edu/courses/1320258/assignments/4841172	due by 10:30am
Mon Oct 14, 2019	 Class 3 Reading https://canvas.uw.edu/courses/1320258/assignments/4841156	due by 10:30am
	 North Star Haz ID Exercise https://canvas.uw.edu/courses/1320258/assignments/4841167	due by 10:30am
Mon Oct 21, 2019	 Class 4 Reading https://canvas.uw.edu/courses/1320258/assignments/4841157	due by 10:30am
	 Commercial Building Construction Review https://canvas.uw.edu/courses/1320258/assignments/4841161	due by 10:30am
	 SawStop Video https://canvas.uw.edu/courses/1320258/assignments/4841171	due by 10:30am
	 Site Visit 2 - Commercial Building Construction site https://canvas.uw.edu/courses/1320258/assignments/4841173	due by 10:30am
Mon Oct 28, 2019	 Class 5 Reading https://canvas.uw.edu/courses/1320258/assignments/4841158	due by 10:30am
	 Pop Health Bldg Haz ID Exercise https://canvas.uw.edu/courses/1320258/assignments/4841170	due by 10:30am

Date	Details	
Mon Nov 4, 2019	 Class 6 Reading (https://canvas.uw.edu/courses/1320258/assignments/4841159)	due by 10:30am
	 Motor Vehicle & Heavy Equipment Mfg. Review (https://canvas.uw.edu/courses/1320258/assignments/4841166)	due by 10:30am
	 Site Visit 3 - Personnel lift mfg (https://canvas.uw.edu/courses/1320258/assignments/4841174)	due by 10:30am
Mon Nov 11, 2019	 Genie Haz ID Exercise (https://canvas.uw.edu/courses/1320258/assignments/4841162)	due by 11:59pm
Mon Nov 18, 2019	 Lead-Acid Battery Mfg. Review (https://canvas.uw.edu/courses/1320258/assignments/4841165)	due by 10:30am
	 Site Visit 4 - Lead-Acid Battery Mfg. (https://canvas.uw.edu/courses/1320258/assignments/4841175)	due by 10:30am
Mon Nov 25, 2019	 Class 9 Reading (https://canvas.uw.edu/courses/1320258/assignments/4841160)	due by 10:30am
Mon Dec 2, 2019	 Class 10 Reading (https://canvas.uw.edu/courses/1320258/assignments/4841152)	due by 10:30am
	 Site Visit 5 - Steel Mill (https://canvas.uw.edu/courses/1320258/assignments/4841176)	due by 10:30am
	 Steel Mill Review (https://canvas.uw.edu/courses/1320258/assignments/4841178)	due by 10:30am
	 Site Visit (Dyno) Report (https://canvas.uw.edu/courses/1320258/assignments/4841177)	due by 11:59pm
Mon Dec 9, 2019	 Class 11 Reading (https://canvas.uw.edu/courses/1320258/assignments/4841153)	due by 10:30am
	 Nucor Hazard ID Exercise (https://canvas.uw.edu/courses/1320258/assignments/4841168)	due by 10:30am
	 The Importance of Using a Fit Tested Respirator (https://canvas.uw.edu/courses/1320258/assignments/4841179)	due by 10:30am
 Participation (https://canvas.uw.edu/courses/1320258/assignments/4841169)		
 Quiz #1 (https://canvas.uw.edu/courses/1320258/assignments/4841151)		
 Quiz #2 (https://canvas.uw.edu/courses/1320258/assignments/4841149)		
 Quiz #3 (https://canvas.uw.edu/courses/1320258/assignments/4841150)		