

Course Syllabus

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ENVH 462 /562 Technical Aspects of Occupational Safety

ENVH 462 - 3 Credits ENVH 562-3 Credits

Instructor Name: Rick Gleason, CIH, CSP

Time: Tuesdays 10:30 am - 1:15 pm

Location: By Zoom

ENVH 462/562 Technical Aspects of Occupational Safety University of Washington

Department of Environmental and Occupational Health Sciences

Graduate students (ENVH 562) will have an additional safety research project to develop an Accident Prevention Program (Safety Manual) for a selected industry.

March 30, 2021 - June 1, 2021

Spring Quarter, 2021, 3 credits

Time: Tuesday, 10:30AM – 1:15 PM

Location: Zoom

Instructor: Rick Gleason, MSPH, CIH, CSP Direct Phone Number (206) 856-6660

rgleason@uw.edu (<mailto:rgleason@uw.edu>)

(Office Hours by appointment)

Richard Gleason is inviting you to a scheduled Zoom meeting.

Topic: ENVH 462/562

Time: Mar 30, 2021 10:30 AM Pacific Time (US and Canada)

Every week on Tue, until Jun 1, 2021, 10 occurrence(s)

Mar 30, 2021 10:30 AM

Apr 6, 2021 10:30 AM

Apr 13, 2021 10:30 AM

Apr 20, 2021 10:30 AM

Apr 27, 2021 10:30 AM

May 4, 2021 10:30 AM

May 11, 2021 10:30 AM

May 18, 2021 10:30 AM

May 25, 2021 10:30 AM

Jun 1, 2021 10:30 AM

Join Zoom Meeting

<https://washington.zoom.us/j/94838175071>

Required Texts:

None: All information will be provided online

Lecture Date	Topic
1 Tues. 3/30	Intro. OSHA Act, Safety Programs and Committees, Inspections.
2 Tues. 4/6	Work on Powerpoint Presentations. Worker Safety and Health Lecture/Temporary Labor Workers
3 Tues. 4/13	Health Hazards in Construction, Silica, Asbestos, Lead
4 Tues. 4/20	Hazcom, PPE, Respiratory Protection, Noise Permit Required Confined Spaces
5 Tues. 4/27	Welding Safety and Electrical Safety
6 Tues. 5/4	Stairways, Ladders, Fall Protection, Scaffolds
7 Tues. 5/11	Crane Safety and Material Handling, Forklifts
8 Tues. 5/18	Fire Safety, Equipment, Trenching and Excavation, Power Tools

9 Tues. 5/25 Demolition, Recordkeeping, Training, Accident Investigation.
 10 Tues. 6/1 Last Day of Class,

ENVH 462/562 30 hour Const. Safety Topic Sign in March 30, 2021

Topic	Print Name
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April 6

Working Alone	Abhyjot
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Workplace Violence Prevention	Sarina
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Emergency Eyewash	Jinjin
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OSHA Focus Four	Nick
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April 13

Asbestos	Josephine
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Silica	Diana
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Lead	Yoojin
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Benzene	Eduardo
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Ergonomics in Construction	Christine
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April 20

Hazcom/GHS	Wendy
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Respiratory Protection	Jacob
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Hearing Conservation	Sydney
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Heat Stress	Dave
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Confined Spaces	Aaron
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April 27

Welding	Emmanual
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Electrical	Connor
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Process Safety Management	Amy
Bloodborne Pathogens	Hillary
May 4	
Stairways	Ashley
Ladders	Moonsuk
Scaffolds	Shreyas
Fall Protection	Pearl
Concrete Masonry	Jo
May 11	
Cranes	Aditi
Forklifts	Jack
Heavy Equipment	Yesenia
Tunnel Safety	Rich
May 18	
Fire Safety	Helen
Trenching and Excavation	Nicole
Power Tools	Joel
Elevating Work Platforms	Kendal
May 25	
Demolition	Codi
Eye Safety	Aqueeb
Flagging Safety	Anna
Orange Vests	Anureet
Hard hats Head Protection	Isabel
June 1	

Grading

Undergraduate ENVH 462 grades are based on a, final (25%), a Class presentation on a Safety and Health topic, (25%). Homework and class participation will cover 40%. Attendance will cover 10% as a bonus. The grades of the graduate students in ENVH 562 will determined similar to the above Grades are based on a final (25%), a Class presentation on a Safety and Health topic, (25%). Homework and class participation and the final Company Safety Manual Write Up (40%). Attendance will cover 10%.

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/). 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/).

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/).

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/) (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.

ENVH 462 /562 Course Objectives:

Learning Objectives:

1. *Identify who is covered by OSHA and WISHA and who is not, the purposes of the OSHA Act, state plans, and how administrative responsibilities are split within the federal government.*
2. *Differentiate between coverage under different sets of OSHA Standards: General Industry, Construction, Agriculture and Maritime Standards. This course will focus on the construction industry*
3. *List the employer's principal duty under OSHA to comply with occupational safety and health standards.*
4. *Distinguish between national consensus standards and established federal standards.*
5. *Differentiate between specification and performance standards.*
6. *Recognize the employer's obligation to comply with general duty obligations and understand the significance of a recognized hazard.*
7. *Identify the role of employees in complying with standards and their ability to trigger inspections, as well as their role in the conduct of inspections*
8. *Recognize the limited nature of the employee's role in enforcement proceedings initiated before the OSHA Review Commission*
9. *Define current OSHA inspection and enforcement priorities, including OSHA special emphasis programs, such as amputations and those in the petrochemical industries.*
10. *List special considerations that prompt inspections, such as lockout/tagout and accidents resulting in fatalities.*
11. *List the various categories of civil and criminal violations, as well as the penalties that can be assessed.*
12. *Identify OSHA's compliance directive for assessing these penalties as well as the "egregious" citation policy.*
13. *Recognize the liability of employers and managers, from operations staff, superintendents and up to the CEO.*
14. *Locate and apply OSHA and WISHA safety and health standards, policies, and procedures.*
15. *Utilize standards and regulations to supplement an on-going safety and health program*
16. *Identify common violations of standards and propose corrective actions*
17. *Describe appropriate abatement procedures for selected safety and health hazards in construction such as lead, silica and asbestos*
18. *Conduct occupational safety and health training for workers from regulations*

19. Identify common hazards of occupational injury and illness in a general industrial environment
20. Students will be able to conduct an on-site safety and health audit and report identifying hazards and corrections
21. *Distinguish between permit-required and non-permit-required confined space.*
22. *Identify the techniques of testing for hazardous atmosphere, how to use the buddy system and the elements of emergency rescue.*
23. *Identify the PPE Standard requirements for a hazard assessment, equipment selection, and employee training.*
24. *Recognize the significance of its connection to the Hazard Communication Standard and strategies for compliance.*
25. *List the requirements for forklifts and powered industrial truck operations.*
26. *Review the top four hazards on construction sites, falls, electrical, struck by and caught in accidents.*
27. *Define standards for controlling noise exposure and hearing loss, and ventilation for abrasive blasting, grinding tools on construction sites..*
28. *Identify how to use these standards to set design codes for new equipment, and what criteria to use to determine if existing installations meet current standards.*
29. *Address the requirements for fire extinguishers, hazard classifications, training and inspections, fire brigades, training equipment, and registration.*
30. *List OSHA's construction flammable storage requirements and identify if a facility is properly equipped to comply with these requirements*

ENVH 562 Technical Aspects of Safety

Each student will pick a topic and present a 15 minute presentation of the OSHA regulations pertaining to that section. Handouts should be prepared and distributed to the class on the day of the presentation. A short quiz should be prepared with approximately 3 questions from your presentation. Please have enough copies so students can take the quiz at the end of your class. You should strive for approximately 15 powerpoint slides for the 15 minute presentation. Please include yourself in at least two of the slides. The possible topics could include:

Chemical Hazard Communication, MSDS's (OSHA's Global Harmonization Standard)

Hearing Protection

Respiratory Protection

Emergencies, Means of Egress

Fire Protection

Material Handling, Forklift Safety

Hand and Power Tools

Machine Guarding

Chemical Process Safety

Confined Space Entry

Crane Safety

Fall Protection

Ladder Safety

Scaffold Safety






Electrical Safety






Trenching and Excavation

Hard Hats / Safety Glasses / Safety Footwear

Students will receive the OSHA 30 hour Construction Safety and Health Training Card upon completion of the course.

Course Summary:

Date	Details	Due
Tue Apr 6, 2021	 Assignment 1 https://canvas.uw.edu/courses/1449231/assignments/6069779	due by 10am
Tue Apr 13, 2021	 Assignment 2 https://canvas.uw.edu/courses/1449231/assignments/6069780	due by 10:30am
Tue Apr 20, 2021	 Assignment 3 https://canvas.uw.edu/courses/1449231/assignments/6069781	due by 10am
Tue Apr 27, 2021	 Assignment 4 https://canvas.uw.edu/courses/1449231/assignments/6069782	due by 10am
Tue May 4, 2021	 Assignment 5 https://canvas.uw.edu/courses/1449231/assignments/6069783	due by 1pm

Date	Details	Due
Tue May 11, 2021	 Assignment 6 (https://canvas.uw.edu/courses/1449231/assignments/6069784)	due by 10am
Tue May 18, 2021	 Assignment 7 (https://canvas.uw.edu/courses/1449231/assignments/6069785)	due by 10am
Tue May 25, 2021	 Assignment 8 (https://canvas.uw.edu/courses/1449231/assignments/6069786)	due by 10am
Tue Jun 1, 2021	 Assignment 9 (https://canvas.uw.edu/courses/1449231/assignments/6069787)	due by 2pm
	 Roll Call Attendance (https://canvas.uw.edu/courses/1449231/assignments/6069788)	