

ENV H 462 A Sp 23: Technical Aspects Of Occupational Safety

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ENVH 462 /562 Technical Aspects of Occupational Safety

ENVH 462 - 3 Credits ENVH 562-3 Credits

Instructor Name: Rick Gleason, Edward Kasner

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

Location: In Person in HSB T-635

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. AN example of a formal written Accident Prevention Program for the Construction Industry can be found at Labor and Industries Website at:

[ConstructionAPPSample.doc \(live.com\)](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fni.wa.gov%2Fsafety-health%2F_docs%2FConstructionAPPSample.doc&wdOrigin=BROWSELINK)  [\(https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fni.wa.gov%2Fsafety-health%2F_docs%2FConstructionAPPSample.doc&wdOrigin=BROWSELINK\)](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fni.wa.gov%2Fsafety-health%2F_docs%2FConstructionAPPSample.doc&wdOrigin=BROWSELINK)

March 28, 2023 - May 30, 2023

Spring Quarter, 2023, 3 credits

Time: Tuesday, 10:30AM – 1:15 PM

Location: HSB T-635

Instructor: Rick Gleason, MSPH, CIH, CSP Direct Phone Number (206) 856-6660 rgleason@uw.edu
(<mailto:rgleason@uw.edu>)

Edward Kasner, PhD, MPH 206-616-4225 ejkasner@uw.edu (<mailto:ejkasner@uw.edu>)

(Office Hours by appointment)

Required Texts:

None: All information will be provided online

ENVH 462/562 30-hr Construction Safety Topic Sign-in

Lecture	Date	Topic
1	3/28	Intro. OSHA Act, Safety Programs and Committees, Inspections.
2	4/4	Worker Safety and Health Lecture/Temporary Labor Workers
3	4/11	Health Hazards in Construction, Silica, Asbestos, Lead
4	4/18	Hazcom, PPE, Respiratory Protection, Noise; Permit Required Confined Spaces
5	4/25	Welding Safety and Electrical Safety
6	5/2	Stairways, Ladders, Fall Protection, Scaffolds
7	5/9	Crane Safety and Material Handling, Forklifts
8	5/16	Fire Safety, Equipment, Trenching and Excavation, Power Tools
9	5/23	Demolition, Recordkeeping, Training, Accident Investigation
10	5/30	Last Day of Class
No Class	6/6	Final Due

Class 2: April 4

Working Alone: Kyla Hoggins

Workplace Violence Prevention: Meghana Emani

Emergency Eyewash: Malia McArtor

OSHA Focus Four: Xeyneb Al-Azadi

Class 3: April 11

Asbestos: Kai Sisounthone

Silica: Shifa Mohammad

Lead: Carolina Rodriguez

Benzene: Heather Larsen

Ergonomics in Construction: Yoojin Kang

Class 4: April 18

Hazcom/GHS: Arie Korporaal

Respiratory Protection: Kelly Le

Hearing Conservation: Sarina Tran

Heat Stress: Ashlyn Gonzalez-Soriano

Class 5: April 25

Welding: Delaney Lawler

Electrical: Tania Vallejo Quiroga

Process Safety Management: Mithila Kumbhar

Bloodborne Pathogens: Ruben Santiago Juarez

Class 6: May 2

Stairways: Piyusha Gaikwad

Ladders: Ayushi Desai

Scaffolds: Melissa Ordonez

Fall Protection: Issavel Stephenson

Concrete Masonry: Rakesh Nair

Class 7: May 9

Cranes: Rishi Laddha

Forklifts: Muhammad Ali Khdair

Heavy Equipment: Komal Suresh Nagare

Tunnel Safety: Maggie Woodwell

Confined Spaces: Grace Ittig

Class 8: May 16

Fire Safety: Keerat Kaur

Trenching and Excavation: Flora McAllister

Power Tools: Friday Elkan

Elevating Work Platforms: Hafza Adan

Class 9: May 23

Demolition: Ivy T. Singh

Eye Safety: Andeep Sandhu

Flagging Safety: Amrutha Ederada

Hard hats Head Protection: Randeep Singh

Wildland Fire Smoke Safety: Jessi Kelley

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/). 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/).



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/>).

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 one of the slides.