

ENV H 462 A Wi 18: Technical Aspects Of Occupational Safety

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ENVIRONMENTAL & OCCUPATIONAL HEALTH SCIENCES
SCHOOL OF PUBLIC HEALTH · UNIVERSITY of WASHINGTON

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: BB-1404

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.

January 9- March 13, 2018

Winter Quarter, 2018, 3 credits

Time: Tuesday, 10:30AM – 1:15 PM

Location: BB1404

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

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

(Office Hours by appointment)

Required Texts:

None: All information will be provided online

| Lecture Date | Topic |
|-------------------------------|--|
| 1 Tues. 1/9 | Intro. OSHA Act, Safety Programs and Committees, Inspections. |
| 2 Tues. 1/16 Labor Workers | Work on Powerpoint Presentations. Worker Safety and Health Lecture/Temporary |
| 3 Tues. 1/23 | Health Hazards in Construction, Silica, Asbestos, Lead |
| 4 Tues. 1/30 | Hazcom, PPE, Respiratory Protection, Noise Permit Required Confined Spaces |
| 5 Tues. 2/6 | Welding Safety and Electrical Safety |
| 6 Tues. 2/13 | Stairways, Ladders, Fall Protection, Scaffolds |
| 7 Tues. 2/20 | Crane Safety and Material Handling, Forklifts |
| 8 Tues. 2/27 | Fire Safety, Equipment, Trenching and Excavation, Power Tools |
| 9 Tues. 3/6 | Demolition, Recordkeeping, Training, Accident Investigation. Last day of class |

Grading:

Undergraduate ENVH 462 grades are based on a midterm (20%), final (20%), a Class presentation on a Safety and Health topic, (25%). Homework and class participation will cover 35%. The grades of the graduate students in ENVH 562 will determined similar to the above Grades are based on a midterm (20%), final (20%), a Class presentation on a Safety and Health topic, (25%). Homework and class participation and the final Company Safety Manual Write Up (35%).

Disabilities -- If you would like to request academic accommodations due to a disability, please contact Disabled Student Services, 448 Schmitz, 543-8924 (V/TDD). If you have a letter from Disabled Student Services indicating you have a disability that requires academic accommodations, please present the letter to me so we can discuss the accommodations you might need for class.

- Academic Integrity Statement - 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](http://sph.washington.edu/students/academicintegrity/) (<http://sph.washington.edu/students/academicintegrity/>). 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

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|------------------|--|----------------|
| Tue Jan 16, 2018 |  Assignment 1 (https://canvas.uw.edu/courses/1128718/assignments/3941338) | due by 10am |
| Tue Jan 23, 2018 |  Assignment 2 (https://canvas.uw.edu/courses/1128718/assignments/3941339) | due by 10am |
| Tue Jan 30, 2018 |  Assignment 3 (https://canvas.uw.edu/courses/1128718/assignments/3941340) | due by 10am |
| Tue Feb 6, 2018 |  Assignment 4 (https://canvas.uw.edu/courses/1128718/assignments/3941341) | due by 10am |
| Tue Feb 13, 2018 |  Assignment 5 (https://canvas.uw.edu/courses/1128718/assignments/3941342) | due by 1pm |
| Tue Feb 20, 2018 |  Assignment 6 (https://canvas.uw.edu/courses/1128718/assignments/3941343) | due by 10am |
| Tue Feb 27, 2018 |  Assignment 7 (https://canvas.uw.edu/courses/1128718/assignments/3941344) | due by 10am |
| Tue Mar 6, 2018 |  Assignment 8 (https://canvas.uw.edu/courses/1128718/assignments/3941345) | due by 10am |
| Tue Mar 13, 2018 |  Assignment 9 (https://canvas.uw.edu/courses/1128718/assignments/3941346) | due by 2pm |
| |  Final Exam (https://canvas.uw.edu/courses/1128718/assignments/3941337) | due by 2pm |
| |  35 point final quiz from Student Questions in Class (https://canvas.uw.edu/courses/1128718/assignments/3941336) | due by 11:59pm |
| |  Roll Call Attendance (https://canvas.uw.edu/courses/1128718/assignments/3941347) | |