

OESM 145: Occupational Safety and Health in Construction

Course Description:

An introductory course that covers a broad overview of construction safety and HIOSH/OSHA construction safety and health standards.

Course Objectives:

Upon completion of the course, students are expected to be able to:

- Identify specific HIOSH/OSHA construction standards
- Apply relevant HIOSH/OSHA construction standards to given construction scenarios
- Discuss major health and safety issues common to the construction work environments
- Analyze various construction situations to identify hazards and recommend preventive/corrective measures
- Design and conduct a “toolbox” safety meeting
- Conduct short presentations on construction safety

Course House Rules:

- Call the instructor if you are going to miss or be late for a class session.
- As a courtesy to your instructor and other classmates, be on time for class sessions.
- No cellular phone and/or beeper disruptions during class time. Please turn cellular phones and beepers to silent or vibration mode.
- To keep our classroom clean, please dispose food and beverage containers in the outside rubbish bins.
- Be open to learning. Ask questions as there are no dumb questions. If you do not understand something during the class, feel free to ask the instructor to re-explain the course material.
- If you are feeling tired during the course session, feel free to get up from your seat to do a micro-break of body stretching.
- Only letter grades (A, B, C, D, or F) will be given. There will be no “Incomplete.”
- For our safety at night, try to leave as a group when the class is over.

Grading:

A	90 - 100 %	369 to 410 points
B	80 - 89 %	328 to 368 points
C	70 - 79 %	287 to 327 points
D	60 - 69 %	246 to 286 points
F	< 60 %	0 to 245 points

Points from:

Attendance	75 points (5 points for each class day)
Class Participation	30 points (2 points for each class day)
Project	25 points
Quizzes	130 points (10 points for each quiz)
Final Exam	150 points
Extra Credit Activities	10 points maximum

Quizzes and Final Exam:

Quizzes will be given for each prior class session. Each quiz will have 10 questions consisting of true or false questions, multiple choice questions, and/or fill in the blank questions.

A final exam will be given at the end of the course. The final exam will have 150 questions that will focus on material covered from each class session. The final exam will consist of true or false questions, multiple choice questions, and/or fill in the blank questions.

Individual Project:

Each student will do one individual course project. During class session number 12, each student will be randomly issued a safety and/or health topic to be discussed in a mock toolbox meeting held during class session number 15. The toolbox discussion shall be between 5 and 10 minutes in duration. In addition, the student needs to create a handout for this toolbox meeting which will be given to the instructor and all students in the class who will act as employees at the mock toolbox meeting. The toolbox meeting handout shall be no more than one double sided sheet in length.

Extra Credit Projects:

Each student will have two ways to earn a maximum of 10 extra course points.

- X Between class sessions 2 and 14, you can earn 2 points by bringing in construction work site photographs, construction safety articles, and/or current safety/health event topics to a class session for discussion. A student can earn points five times this way for an accumulative total of 10 points.
- X Between class sessions 10 and 14, you can earn 10 points by giving a 5 minute presentation to the class regarding a technique you read, observed, researched, or tried to implement in the goal of motivating employees to work safely on the job. The technique can be from either general industry or construction industry.

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Week	Topics
1	Introductions; OESM 145 course; OSHA/HIOSH agencies; HIOSH inspection process
2	General safety and health requirements (chapter 12-110, HAR); competent person; general contractor responsibilities; written safety and health program
3	Safety importance; direct and indirect costs; safety training and education; medical and first aid; record keeping and reporting requirements; OSHA 200 and 300 logs; * class exercise of reviewing OSHA logs
4	Housekeeping; sanitation; illumination; means of egress; * class exercise on using a light meter; * <u>guest speaker</u> by a private sector construction safety officer
5	Personal protective and life saving equipment
6	Fire protection and prevention; welding and cutting
7	Hand and power tools; general machine guarding; * <u>guest speaker</u> by a private sector construction safety officer
8	Fall protection; personal fall arrest equipment; * class exercise of putting on a full body harness
9	Scaffolds; stairways and ladders
10	Electrical; * class exercise on using various electrical testing equipment
11	Excavations; * <u>guest speaker</u> by a private sector construction safety officer; * class exercise on doing a hands-on soil ribbon test
12	Steel erection; concrete and masonry construction; material handling, storage, use and disposal; cranes, derricks, hoist, and conveyors
13	Signs, signals, and barricades; motor vehicles and mechanized equipment; rollover protection structures and overhead protection; demolition
14	Confined spaces; ergonomic issues in construction; hazard communication; training techniques; job hazard analysis; inspections and hazard recognition; accident investigations
15	Presentation of course projects; toolbox meetings
16	Open topics; class discussion; fill out evaluation forms
17	Final Exam