

OESM101: INTRODUCTION TO OCCUPATIONAL SAFETY AND HEALTH

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Office Hours: Tuesday 3:30-4:45

Course Description:

An overview of the development and implementation of safety and health principles in the workplace. The class introduces accident prevention concepts, hazard identification and evaluation methods, investigation and reporting techniques, recordkeeping, environmental management, workers' compensation principles, and survey of relevant regulations and professional guidelines.

Course Objectives:

Upon completion of the course, students will be able to:

- § Define types of accident and give an example for each type
- § Describe costs of accidents and explain major reasons for accident prevention
- § Classify air contaminants and list routes of entry
- § Explain health effects of common hazardous chemicals in the workplace
- § Identify common chemical, physical, and biological hazards in the workplace
- § Define 'ethics' and name guidelines used to determine ethical behavior
- § Discuss ethical issues for the health and safety professional
- § Identify federal and state agencies responsible for various functions in occupational and environmental safety & health
- § Explain how OSH standards are developed and enforced
- § Describe HIOSH compliance inspection procedures
- § Give examples of hazard control methods
- § Apply hazard analysis methods to a given scenario
- § Conduct a witness interview as part of a mock accident investigation
- § Describe characteristics of good machine guarding and give examples
- § Explain the lockout/tagout procedures
- § Describe hazards associated with electrical work and ways to control the hazards
- § Apply the following concepts: PEL, TLV, flash point, LEL, UEL
- § Use information from an MSDS to identify hazards and recommend controls
- § Identify risk factors for cumulative trauma disorders and recommend controls
- § Correctly record work-related injuries and illnesses in the OSHA 300 form
- § List cost items covered under the Hawaii Workers Compensation Law
- § Explain hazards evaluation requirements as part of the PPE program
- § Inspect and maintain a half-face respirator
- § Conduct qualitative fit testing for a half-face respirator
- § Name types of respirators and explain their limitations
- § Discuss relevant environmental regulations
- § Describe criteria for an effective health and safety program
- § Show quantitative ways to measure safety performance
- § Conduct a limited safety inspection of a workplace
- § Develop a written project on an occupation, its associated hazards, and hazard control methods

Textbook:

Goetsch D.L. *Occupational Safety and Health for Technologists, Engineers, and Managers*. 2005. Fifth Edition. Prentice-Hall, Inc.

Student Evaluation:

Students are expected to complete **all** of the following:

Homework I	20 points
Homework II	20 points
Two quizzes	15 points each
Final examination (multiple-choice)	85 points
Group project: Paper (15-20 typewritten pages)	25 points
Oral presentation (15-20 min)	20 points
Bonus points: Mini-presentation	5-15 points

::: Plagiarism is ground for expelling :::

Plagiarism: Taking writings (phrases, sentences, paragraphs, etc) from another and pass them off as one's own

If direct quoting is unavoidable, use quotation marks (".....") and provide source immediately after the quote. Direct uses of illustrations, diagrams, photographs and other graphic images are considered plagiarism as well. If unavoidable, cite the source of the image.

Grading: A: 180-200 B: 160-179 C: 130-159 D: 100-129 F: <100

Final grades are permanent. Final "I" grades will not be allowed in this class. Final "N" grades will be given only in very rare and exceptional cases.

HCC Grading Policies:

- a. *No Show Policy.* Students must attend both of the first two class sessions of the semester or may be dropped unless they notify the instructor or the Division Chair in advance of their absence.
- b. *Disappear Policy.* Students may receive an "F" grade if they do not officially drop their course by the drop deadline listed in the Academic Calendar of the current HCC catalogue or the schedule of classes.

Emergency Procedures:

- a. Location of first aid kit: In the back of classroom by the sink
- b. Evacuation of building:
 - Use Diamond Head and Ewa stairs and proceed to parking lot #2 (by the cafeteria).
 - Assemble and wait for further instructions from the instructor.
- c. Accident or Injury:
 1. Call 911 for an ambulance. Give essential information:
 - Location -- building and room number, road to enter campus
 - Type of emergency and victim's condition
 - Your name and phone number
 2. Call 284-1270 (cell - Security)
 - To notify Campus Security that an ambulance has been summoned
 - To have Campus Security escort the ambulance to the location
 - To request other assistance

OESM 101: Introduction to Occupational Safety and Health

WEEK	TOPIC	CHAPTERS*	NOTES
1	Introduction	1 & 2	
2	Library Session: <i>Meet at the library 5 pm</i> Ethics & Safety	19	Distribute homework 1
3	Legal Aspects	4	
4	Scientific Background Project Assignment	Hand-out	Homework 1 due Form teams and select topic
5	Quiz 1 (30 min) Academic Counselor: Marilyn Ito-Won Coop Ed Coordinator: Chit Leong		Covers weeks 1-4
6	Hazard Analysis	21	
7	Accident Investigation	22	Distribute homework 2
8	Mechanical Hazards Electrical Hazards	8 & 12	
9	Biological & Chemical Hazards Industrial Hygiene	14 & 20	
10	Falling & Lifting Hazards Ergonomics	6 & 9	
11	Quiz 2 (30 min) Recordkeeping	Hand-out	Covers weeks 6-10 Homework 2 due
12	Workers Compensation	5	
13	Personal Protective Equipment	Hand-out	
14	Environmental Management	25	Written project due Last week: Bonus
15	Safety Program Management Comprehensive Review	Hand-out (Case Study)	
16	Project Presentations		
17	Final Exam		Covers weeks 1-15

* Reading assignments prior to class