

OESM 205: PHYSICAL HAZARDS

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Course Description:

An overview and introduction of common and some special "Physical Hazards of Worksites " that are essential for the "students of safety" to have reviewed in an academic setting. The class introduces the Physical Hazards and related accident prevention concepts, identification and evaluation methods, as well as preparation for real world accident investigation. Provides resource options and available organizations that are available for the safety professional. Provide a safety perspective from a Real - world safety practitioner aspect.

Course Objectives:

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

- Define types of accident and give examples for each type
- A focus on Accident Prevention thru design....
- Identify common physical that can be expected in a variety of work areas.
- Define 'ethics' and name guidelines used to determine ethical behavior
- Discuss ethical issues for the health and safety professional and how to "earn your stripes":
- Identify federal and state agencies responsible for various functions in occupational safety and health
- Explain how OSH standards are developed and enforced
- Explain how 'consensus standards are developed, published [ANSI] and ways to use them.
- Give numerous - real world examples of hazard control methods
- Discuss Fire Protection....Basics and Intro to Fire Suppression systems [Video and on-Campus Field Trip]
- Understanding Flammable & Combustible...a must for a Safety professional [Review Video]
- Describe characteristics of good machine guarding and give examples [Review videos]
- Explain the lockout/tagout procedures [Review videos]
- Describe hazards associated with electrical work and ways to control the hazards[Review video]
- Learn to use electrical inspection devices to actually perform basic electrical safety inspection
- Identify risk factors for cumulative trauma disorders and recommend controls[Review video]
- Explain hazards evaluation requirements as part of the PPE program[Review video]
- Describe criteria for an effective health and safety program[Review Hawaiian Electric's safety program]
- Show quantitative ways to measure safety performance
- Develop a safety inspection checklist and use the checklist to inspect a workplace.

Student then selects and inspects a work site. Submits inspection report w/ recommendations for corrections.

- Examine the agencies that can offer support to a safety person...by contacting an assigned Hawaii safety related agency, interview a representative, then develop a written report that is written for and shared with fellow students.
- See how it applies via a Field Trip to Hawaiian Electric Co. Operations Facility to review and observe many of the Physical Hazards that were review in the program

Textbook:

Harris, Montgomery, O'Reilly National Safety Council "Accident Prevention Manual: Engineering & Technology", 12th edition..NSC Press

Student Evaluation:

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

Term Paper as assigned	10 points
Safety Inspection	10 points
Two quizzes (matching & short answers)	10 points each
Mid - Term Examination [various]	20 points
Final examination (multiple-choice)	30 points
Field Trip to Haw'n Elec.	05 points
Participation	05 points

Grading:

A: 90 - 100

B: 80 -89

C: 70 - 79

D: 60 -69

F: <60

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:

- 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.
- 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:

- Location of first aid kit:* In the back of classroom by the sink.
- 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.
- Accident or Injury During Evening, after 4:30 p.m.:*
 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 extension 247 or 284-1270 (cell - Security)
 - To notify others that an ambulance has been summoned
 - To have Campus Security escort the ambulance to the location
 - To request other assistance

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WEEK	TOPIC	READING ASSIGNMENT	COMMENT
1	Introduction - Why Inspections/ Controls		
2	Why Inspection [cond]	Chapter 1& Appendix	
3	Safety thru Design	Chapter 2,3& 4	Assign Term Topic
4	Quiz 1..Boilers & Press Ves.	Chapter 5	
5	Safeguarding and PPE	Chapter 6 & 7	
6	Indus. Sanitation & Med Surv.	Chapters 8& 9	
7	Electrical Safety & Fire Protection	Chapters 10&11	
8	Mid Term Exam		
9	Flammables & Comb. Liq. - ADA	Chapters 12 & 13	
10	Material Handling	Chapters 14-16	
12	Field Trip to HECO		
13	Powered Industrial Trucks & Quiz 2	Chapters 17& 18	Report Paper Due
14	Hand & Port Tools Welding & Metals	Chapters 19 &20	
15	Welding & Metals----- Semester Review Inspection Report Due	Chapters 21 -25	Inspection Report Due
16	Final Exam		Covers weeks 1-16