

OESM 153: Accident Investigation

Course Description:

Professional and scientific approach to accident investigation; including accident causation, discovering hazardous conditions and practices, how to establish relevant facts. Case studies.

Course Objective:

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

- Describe benefits of an effective accident investigation
- Discuss steps necessary for an effective accident investigation
- Appropriately conduct an accident investigation
- Analyze root causes for a given occupational incident
- Collect evidence necessary for an effective investigation
- Explain effective methods for a witness interview
- Appropriately conduct an interview of witnesses
- Demonstrate the use of various investigative tools
- Recommend hazard control measures to prevent future incidents
- Prepare a written accident investigation report
- Conduct an oral presentation on a given topic

Required Textbook:

The Root Cause Analysis Handbook, Max Ammerman (1998)

Supplemental texts:

- *Basic Guide to Accident Investigation and Loss Control*, Jeffrey Vincoli
- *Cause, Effect, and Control of Accidental Loss* by Ron McKinnon
- *Know the Risk*, by R. B. Duffey & J. W. Saull
- *Apollo Root Cause Analysis*, Dean Gano

Reading assignments: Read the indicated book chapter(s) or additional material BEFORE the date of the class. Be prepared to discuss the material in class.

Student Evaluation:

There will be readings from the textbook as well as supplemental materials. Students will be expected to come to class and participate in the class discussions and exercises.

Attendance & Class participation	50 points
Homework assignments	50 points
Presentations	100 points
Midterm	100 points
Final	200 points
Total	500 points

Grading:

A = 500-450 pts.
B = 449-400 pts.
C = 399-325 pts.
D = 324-250 pts.
F = 250 pts. or less

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

HCC Grading Policies:

- a. No Show Policy. Students must attend both of the first to 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 of the schedule of classes.

Emergency Procedures:

- a. Location of first aid kit:
- b. Evacuation of building: Use Diamond Head and Ewa stairs and proceed to parking lot #2 (by the cafeteria). Assemble and wait further instructions from the instructor.
- c. Accident or Injury During Evening, after 4:30 pm.:
 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	Subject	Reading Assignment*
1	Introduction	Introduction
2	Defining the problem	Ch. 1
3	Task Analysis	Ch. 2
4	Change Analysis	Ch. 3
5	Control Barrier Analysis	Ch. 4
6	Event and Causal Factor Charting	Ch. 5
7	Interviews	Ch. 6
8	Review for the midterm exam	
9	Midterm Exam	
10	Root Cause Analysis	Ch. 7
11	Develop Corrective Actions Report	Ch. 8 Ch. 9
12	Exercise	
13	Presentations	
14	Presentations	
14	Review of final exam	
15	FINAL EXAM	

* *The Root Cause Analysis Handbook*, Max Ammerman (1998)