

Safety Engineering (IE 449)

2023 3rd Trimester

Instructor

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Objectives

The aim of the course in Safety Engineering (IE 449) is to train students by providing them the scientific know-how and orientation in theories and practices in the area of Occupational Safety and Health to make them fit into academic and/or managerial positions.

Topics of the course

1. Safety and Health Manager (Ch. 1) introduction of safety in general - what was the safety before OSHA and after - why safety in company - Responsibility of the manger - differences bt safety and Health (Safety specialist and Industrial Hygienist.
2. Development of Safety and Health Function (Ch. 2) worker's Compensation (General and in KSA) - Record-Keeping (some OSHA Form 300, 300A, 301) - Accident Cause Analysis.
3. Concepts of Hazard Avoidance (Ch. 3) (Some approach Enforcement approach, Engineering approach, psychology approach)
4. Impact of Federal Regulation (Ch. 4)
5. Process Safety and Disaster Preparedness (Ch. 6) (Process Information, Process analysis, Training)
6. Environmental Control and Noise (Ch. 10) – Lab
7. Personal Protection and First Aid (Ch. 12)(PPE training, Hearing Protection, Ear and Face Protection , Respiratory Protection, Head Protection
8. Fire Protection (Ch. 13) (Mechanics of Fire, Fire Prevention, Fire Extinguish)
9. Electrical Hazards (Ch. 17)

Materials: Textbook

Industrial Safety and Health Management; Asfahl, Ray, and Rieske, David,
Pearson Prentice Hall: New Jersey, 2010. ISBN-13-142392-4 Safety
Engineering.CoVan, James,

John Wiley & Sons: New York 1995 ISBN: 0-471-55612-2

Schedule

Lecture: 2 , 4 days; 8:00 – 10:20 am and 10:30 am - 12:50 pm

Office Hours: !!!!

Grading

Midterm Exam: 30%

Lab: 10%

Assignments/Quizzes: 5%

Project: 15% (Report 10% and Presentation 5%)

Final Exam: 40%

Attendance

Attendance will be taken at the beginning of each class period.

Students who absent themselves during a semester for more than 25% of the required number of lectures (including tutorial and lab classes) may not be allowed to continue the course and denied from sitting for the final examination (according to the 9th article of the regulation of the study phase and testing).

Official excuses for the absence should be submitted within one week after the absence day. Medical excuses from King Khalid Hospital and other government hospitals are accepted. Excuses from Clinics are not accepted.