

Revised by: C. Bertram
Reviewed by: R. Mallard
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Board approval: December 9, 2010

Industrial Education Safety (IES) 1050 Hazardous Materials (1.5 Units)
[formerly Industrial Education Safety 50]

Prerequisite: None

Total Hours: 26 hours lecture

Catalog Description: This course covers Federal and California Occupational Safety and Health Administration (OSHA) general industry standards and integrates materials from other consensus and proprietary standards that relate to hazardous materials. Included are flammable and combustible liquids, compressed gases, Liquefied Petroleum (LP) gases and cryogenic liquids. Related processes such as spraying and dipping are covered as well as electrical equipment. This course is offered on a Pass/No Pass basis with the option to receive a letter grade.

Type of Class/Course: Degree Credit

Textbook: *29 CFR §1910, General Industry Regulations*, Mangan Communications, Inc.:
Davenport, Iowa, 2008. Print.
Cal-OSHA General Industry Safety Orders, Mangan Communications, Inc.:Davenport, Iowa, 2008. Print.

Additional Required Materials: None

Course Objectives:

By the end of the course, a successful student will be able to

1. describe methods for detecting unsafe storage conditions for hazardous materials,
2. explain electrical factors that may contribute to the creation or abatement of hazardous conditions,
3. compare hazardous conditions and unsafe procedures to the appropriate standards for abatement action, and
4. describe the necessary precautions for hazardous operations, such as the dispensing of flammable and combustible liquids.

Course Scope and Content:

- Unit I OSHA Subpart H
- A. General Requirements
 - B. Specific Agents
- Unit II Standards I
- A. Containers, Cabinets, and Rooms
 - B. Static Electricity

C. Spray Coating Operations

Unit III Standards II

- A. Process Safety Management
- B. Cryogenic Liquids
- C. Compressed Gases

Unit IV Hazardous Waste Operations and Emergency Response

- A. General Requirements
- B. Site Management
- C. Emergency Response Levels
- D. Decontamination
- E. Medical Records

Learning Activities Required Outside of Class: None

Methods of Instruction:

- 1. Lecture
- 2. Group exercises in class

Methods of Evaluation:

- 1. Written final exam
- 2. Performance observation