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Textbook:  Ronald Scott, *Basic Concept of Industrial Hygiene*  

**Description:** Application of scientific and engineering principles in the selection and design of control systems related to chemical, physical and ergonomic exposures in the process and manufacturing industries; relationships of criteria, analysis and specifications for the assessment and control of occupational related illnesses.

**Topics:**
- Introduction to industrial safety and health
- Concepts of hazard avoidance
- Federal regulations
- Information systems
- Introduction to process safety
- Building and facilities
- Ergonomics
- Health and toxic substances
- Environmental control and noise
- Flammable and explosive materials
- Personal protection
- Fire protection
- Material handling and storage
- Machine guarding
- Welding
- Electrical hazards
- Construction

**Objectives:**
- To introduce the industrial hygiene engineering field from a historical standpoint and to describe the legal basis of health and safety in the U.S.
- To focus on chemical hazards (the problems that arise from skin contact/inhalation of chemicals, the detection and control of airborne contaminants, and the threat of fire or explosion are discussed)
- To discuss injuries as a result of sound, radiation, heat, biological agents, and accidents, and to introduce ergonomics.
- To introduce important industries and application of safety principles.