

CUYAMACA COLLEGE
COURSE OUTLINE OF RECORD

CENTER FOR WATER STUDIES 107 – SAFETY IN WATER & WASTEWATER

3 hours lecture, 3 units

Catalog Description

This course provides a broad overview of Occupational Safety and Health issues in the water and wastewater industry. Students will learn the history of safety related laws and regulations for the Construction and General Industry. Contemporary safety related issues facing the water and wastewater industry will be explored with an emphasis on the Occupational Safety and Health Administration of the California Department of Industrial Relations.

Prerequisite

None

Course Content

- 1) History of Occupational Safety and Health regulations in California
- 2) Cal/OSHA Title 8 Regulations
 - a. General Industry Safety Orders
 - b. Construction Safety Orders
- 3) Awareness Level Overview
 - a. Injury and Illness Prevention Programs (IIPP)
 - b. Accident, Illness and Injury Reporting
 - c. Asbestos Awareness
 - d. Back Injury Prevention
 - e. Bloodborne Pathogens
 - f. Confined Space Entry
 - g. Drug and Alcohol Abuse in the Workplace
 - h. Eye Protection
 - i. Fire Safety
 - j. Fall Safety
 - k. Hand and Power Tools
 - l. Hazardous Materials Handling and Disposal
 - m. Hearing Conservation
 - n. Heat Illness Prevention
 - o. Hoist, Crane and Davit
 - p. Ladders and Scaffolding
 - q. Lock-out/Tag-out
 - r. Machine Guarding
 - s. Material Handling and Storage
 - t. Motive Equipment Operation
 - u. Personal Protective Equipment (PPE)
 - v. Respiratory Protection
 - w. Slip, Trip and fall Prevention
 - x. Traffic Control through Construction Zones
 - y. Trenching and Shoring

Course Objectives

Students will be able to:

- 1) Describe the essential purpose and benefits of required safety regulations and the challenges associated with them.
- 2) Identify the major regulatory agencies involved in enforcement of safety, health and environmental regulations.
- 3) Compare and contrast the high-hazard industries in San Diego County with other regions in the State of California.
- 4) Demonstrate an understanding of the importance of safety, health and environmental regulations in the industry.

Method of Evaluation

A grading system will be established by the instructor and implemented uniformly. Grades will be based on demonstrated proficiency in subject matter determined by multiple measurements for evaluation, one of which must be essay exams, skills demonstration or, where appropriate, the symbol system.

- 1) Projects
- 2) Writing assignments
- 3) Quizzes
- 4) Homework assignments
- 5) Exams (objective, essay)

Special Materials Required of Student

None

Minimum Instructional Facilities

Smart classroom
Wi-Fi Internet Connection

Method of Instruction

- 1) Lecture and discussion
- 2) Audiovisual
- 3) Field trips
- 4) Safety Equipment Displays
- 5) Internet to research Safety and Health Regulations
- 6) Hands-on Instruction utilizing the Field Operations Skills Yard (FOSY)

Out-of-Class Assignments

- 1) Reading assignments
- 2) Writing assignments
- 3) Projects
- 4) Reports

Texts and References

- 1) Required (representative examples):
 - a. *CAL/OSHA CONSTRUCTION & ELECTRICAL SAFETY ORDERS JUNE 2018 EDITION*. Mancomm.com, 2018.
 - b. *CAL/OSHA GENERAL INDUSTRY & ELECTRICAL SAFETY ORDERS JUNE 2018 EDITION*. Mancomm.com, 2018
- 2) Supplemental: None

Exit Skills

Students having successfully completed this course exit with the following skills, competencies and/or knowledge:

- 1) Describe the essential purpose of safety and health regulatory agencies in the water and wastewater industry.
- 2) List the major agencies involved in enforcement of safety and health regulations in California.
- 3) Apply knowledge of the safety and health regulations to current and future employment.
- 4) Competently design a basic Injury and Illness Prevention Program (IIPP) for a small water/wastewater agency

Student Learning Outcomes

Upon successful completion of this course, students will be able to:

- 1) Describe the evolution of the occupational safety and health regulations in California.
- 2) Analyze the top health and safety issues in the water and wastewater industry and discuss potential solutions to those problems.
- 3) Demonstrate the proper use of personal protective equipment typically used in the water and wastewater industry.
- 4) Demonstrate the ability to extract specific safety requirements from the California Title 8 Code of Regulations.
- 5) Identify the proper steps required to safely evaluate a possible confined space entry.