

FIRE 0012 - OCCUPATIONAL SAFETY AND HEALTH FOR EMERGENCY SERVICES

Catalog Description

Hours: 54 lecture

Description: This course introduces the basic concepts of occupational health and safety as it relates to emergency service organizations. Topics include risk and hazard evaluation and control procedures for emergency service organizations. (CSU)

Course Student Learning Outcomes

- CSLO #1: Explain the historical development and current structure of occupational health and safety programs in both industry and emergency services
- CSLO #2: Differentiate between safety standards and regulations, and describe the roles and responsibilities of personnel involved in health and safety programs, including responders, supervisors, and safety officers
- CSLO #3: Identify and evaluate risks and incidents through the components of risk identification, risk evaluation, incident management, and accountability systems.
- CSLO #4: Apply principles of workplace safety including the use of PPE, wellness/fitness plans, and pre-incident planning, response, and training activities
- CSLO #5: Analyze post-incident procedures and critical incident management

Effective Term

Fall 2026

Course Type

Credit - Degree-applicable

Contact Hours

54

Outside of Class Hours

108

Total Student Learning Hours

162

Course Objectives

1. Explain the significance of occupational health and safety.
2. Describe and analyze the components of risk identification, risk evaluation and incident management.
3. Recall and describe key historical milestones in the development of occupational health and safety in emergency services and industry.
4. Identify and summarize current occupational health and safety programs used in industrial and emergency service settings.

5. Distinguish and compare standards and regulations by listing their characteristics and explaining their differences.
6. List and describe the components of risk identification, risk evaluation, and incident management using real-world examples.
7. Explain the relevance of workplace safety and describe the role and importance of personal protective equipment (PPE).
8. Describe and construct a comprehensive wellness/fitness plan tailored to emergency service personnel.
9. Identify and analyze the leading causes of line-of-duty firefighter deaths related to health, wellness, fitness, and vehicle operations using current data.
10. Evaluate the effectiveness of existing safety protocols and recommend improvements based on case studies and incident reports.

General Education Information

- Approved College Associate Degree GE Applicability
- CSU GE Applicability (Recommended-requires CSU approval)
- Cal-GETC Applicability (Recommended - Requires External Approval)
- IGETC Applicability (Recommended-requires CSU/UC approval)

Articulation Information

- CSU Transferable

Methods of Evaluation

- Classroom Discussions
 - Example: Student performance in a classroom discussion on occupational safety will be evaluated based on participation, understanding of key concepts, and the ability to apply safety principles to real-world scenarios. Students must demonstrate critical thinking, actively contribute to dialogue, and respectfully engage with peers. Quality of insights and relevance to course objectives will be assessed.
- Objective Examinations
 - Example: After a presentation on the components of NFPA 1500 students will be asked the following question. What is the NFPA number for a health and safety plan? A. NFPA 1010 B. NFPA 1001 C. NFPA 1500 D. NFPA 1031 Correct Answers is C-NFPA 1500
- Reports
 - Example: Student will complete a research paper analyzing a current occupational health and safety issue in emergency services. The paper must demonstrate understanding of risk management, safety regulations, wellness programs, and post-incident analysis, with clear application of course concepts and critical thinking.

Repeatable

No

Methods of Instruction

- Lecture/Discussion
- Distance Learning

Lecture:

1. The instructor delivers a structured lecture on firefighter health risks, including heat stress, carcinogen exposure, and behavioral health, using slides and real-world case studies. NFPA 1500 standards and

wellness program components are explained in detail. Following the lecture, the instructor facilitates a guided discussion, prompting students to analyze how these health risks impact firefighter performance and long-term well-being. Students are expected to engage in critical dialogue, share experiences, and explore how these concepts apply to their own departments.

Other materials and-or supplies required of students that contribute to the cost of the course.

Distance Learning

1. In an online module on occupational health and safety for first responders, the instructor uploads a video lecture covering PPE use, exposure risks, and OSHA standards. Students are expected to watch the video, take notes, and complete an interactive quiz. After the quiz, the instructor will provide a discussion prompt in which they monitor student posts, answers questions, and provide feedback. Students will reply to the instructor prompt and engage in peer discussions while applying concepts through scenario-based activities.

Typical Out of Class Assignments

Reading Assignments

Students will read selected chapters from the Occupational Health and Safety textbook, and two NIOSH LODD reports from the college library database. They will critically analyze contributing factors and be prepared to discuss how hazard identification and the hierarchy of controls could have prevented the incidents. Students will then apply course concepts to real-world firefighter fatalities.

Writing, Problem Solving or Performance

Students will create a sample NFPA 1500 Health and Safety Program for a Fire Agency. Students will reach out to current fire agencies or explore peer reviewed articles from the College Library. The components of NFPA must be part of the submission which is listed below: Occupational Safety and Health Program: Establishes a comprehensive safety and health policy that includes risk management, standard operating procedures (SOPs), and accountability systems to reduce firefighter injuries and fatalities. Wellness and Fitness Program: Promotes physical and mental health through medical evaluations, fitness assessments, behavioral health support, and rehabilitation programs to ensure personnel are fit for duty. Training and Education: Requires ongoing, job-specific training to ensure firefighters are competent in safe operations, emergency procedures, and the use of protective equipment, with emphasis on reducing exposure to hazards.

Other (Term projects, research papers, portfolios, etc.)

Required Materials

- Occupational Safety and Health in the Emergency Services, Revised
 - Author: James S Angle
 - Publisher: Jones and Barlett
 - Publication Date: 2025
 - Text Edition: 5th
 - Classic Textbook?: No
 - OER Link:
 - OER: