

FIRE SCIENCE

An Accredited Regional Training Program through the California State Fire Marshal and the State Board of Fire Services

The Fire Science certificate is designed to give students the required knowledge to pursue entry-level municipal or wildland fire service careers. Students will gain a broad working knowledge of the many aspects of fire service organization and operations, proper use of fire equipment, tactics and strategies of fire fighting, specialized job skills, and management techniques. The Fire Science program emphasizes critical thinking skills in the examination and analysis of modern fire service issues and the strengthening of effective written and oral communication skills.

This program follows the United States Fire Administration's National Fire Academy, Fire and Emergency Services (FESHE) Higher Education Model.

Student Learning Outcomes for this certificate are:

- Identify minimum qualifications and entry-level skills for firefighter hiring.
- Analyze, appraise and evaluate fire and emergency incidents and identify components of emergency management and firefighter safety.
- Comprehend laws, regulations, codes and standards that influence fire department operations, and identify regulatory and advisory organizations that create and mandate them, especially in the areas of fire prevention, building codes and ordinances, and firefighter health and safety.
- Analyze the causes of fire, determine extinguishing agents and methods, differentiate the stages of the fire and fire development, and compare methods of heat transfer.
- Identify and describe common types of building construction and conditions associated with structural collapse and firefighter safety.
- Differentiate between fire detection and fire suppression systems.

A. REQUIRED COURSES:

31.5 – 33.75 units distributed as follows:

1. All courses from the following (24 units):

FIR 101	Fire Protection Organization
FIR 102	Fundamentals of Fire Prevention
FIR 103	Fire Protection Equipment and Systems
FIR 104	Building Construction for Fire Protection
FIR 105	Fire Behavior and Combustion
FIR 106	Principles of Fire and Emergency Services Safety and Survival

2. Choose a minimum of 7.5 units from:

FIR 153	Fire Hydraulics
FIR 167	Wildland Fire Safety and Hand Crew Operations: Basic Wildland Firefighter (L-180, S-130, S-190)
HEA 140A	Emergency Medical Technician (EMT)