

## Fire Technology

### FT 101 Fire Protection Organization

#### 3.0 units

Acceptable for credit: Transfer CSU

C-ID Course Number: N/A

Provides an introduction to fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection; fire loss analysis; organization and function of public and private fire protection services, fire departments as part of local government; laws and regulations affecting fire services, fire service nomenclature, specific protection functions, basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics. (Fall, Spring) (Letter Grade or Pass/No Pass)

### FT 102 Fire Prevention Technology

#### 3.0 units

Acceptable for credit: Transfer CSU

C-ID Course Number: N/A

Advisories: Completion of or concurrent enrollment in; FT 101 - Fire Protection Organization

Provides fundamental information regarding the history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use of fire codes, identification and correction of fire hazards, and the relationship of fire prevention with fire safety education and detection and suppression systems. (Fall, Spring) (Letter Grade Only)

### FT 103 Fire Protection Equipment and Systems

#### 3.0 units

Acceptable for credit: Transfer CSU

C-ID Course Number: N/A

Advisories: Completion of or concurrent enrollment in; FT 101 - Fire Protection Organization

Provides information relating to the features of design and operation of fire detection and alarm systems, heat and smoke control systems, special protection and sprinkler systems, water supply for fire protection and portable fire extinguishers. (Fall, Spring) (Letter Grade Only)

### FT 104 Building Construction for Fire Protection

#### 3.0 units

Acceptable for credit: Transfer CSU

C-ID Course Number: N/A

Advisories: Completion of or concurrent enrollment in; FT 101 - Fire Protection Organization

A study of the components of building construction that relates to fire safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, preplanning fire operations, and operating at fires. The development and evolution of building and fire codes will be studied in relationship to past fires in residential, commercial, and industrial occupancies. (Fall, Spring) (Letter Grade Only)

### FT 105 Fire Behavior and Combustion

#### 3.0 units

Acceptable for credit: Transfer CSU

C-ID Course Number: N/A

Advisories: FT 101 - Fire Protection Organization

This course of study presents theory and fundamentals of how and why fires start, spread, and are controlled; an in-depth study of fire chemistry and physics, fire characteristics of materials, extinguishing agents, and fire control techniques. (Fall, Spring) (Letter Grade Only)

### FT 106 Principles of Fire and Emergency Safety and Survival

#### 3.0 units

Acceptable for credit: Transfer CSU

C-ID Course Number: N/A

This course introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavior change throughout the emergency services. (Fall, Spring) (Letter Grade Only)

### FT 107 Apparatus and Equipment

#### 3.0 units

Acceptable for credit: Transfer CSU

This course exposes the student to mechanized equipment operated by the men and women of the fire service and regulations pertaining to their use. Subject matter includes: driving laws, driving techniques, construction and operation of pumping engines, ladder trucks, aerial platforms, specialized equipment and apparatus maintenance. (U) (Summer) (Letter Grade Only)

### FT 111 Develop A Personal Philosophy of Leadership

#### 2.0 units

Acceptable for credit:

This is the first of four courses in the Public Safety Leadership and Ethics Program that centers on the students introspective look at what makes a good leader and setting a plan to personally move in that direction. (Letter Grade Only)

### FT 112 Leading Others

#### 1.5 units

Acceptable for credit:

Prerequisite: FT 111

Training courses focusing on specialized fire technology topics. Topics will be identified on a periodic basis in conjunction with employment or program/discipline needs. (Letter Grade Only)

### FT 113 Organizational Leaderships

#### 2.0 units

Acceptable for credit:

Prerequisite: FT 112

Training courses focusing on specialized fire technology topics. Topics will be identified on a periodic basis in conjunction with employment or program/discipline needs. (Letter Grade Only)

### FT 130 Principles of Emergency Management

#### 3.0 units

Acceptable for credit: Transfer CSU

An introduction to the fundamentals of the emergency management system. Topics include the four phases of the emergency management cycle, community-focused hazard

analysis, and the connection between planning and emergency management. This course is not open to students who have completed or who are enrolled in Emergency Medical Services 130. (F,S,U) (Fall, Spring, Summer) (Letter Grade Only)

### **FT 149 Cooperative Work Experience: Occupational**

#### **1.0 - 8.0 units**

Acceptable for credit: Transfer CSU

Limitations on Enrollment: To participate in Cooperative Work Experience: (1) students must be working at a job within their major, (2) students must be able to become involved in new or expanded responsibilities on the job, (3) the employer must be willing to cooperate with the college in the supervision and evaluation of the student and (4) the student must attend all coordination/consultation meetings in addition to other work and class responsibilities. NUMBER OF TIMES COURSE CAN BE REPEATED: Students enrolled in CWE 149 may earn up to 8 units of credit per semester not to exceed 16 units in total. Any units earned in any other Cooperative Work Experience course will be included in the 16 unit maximum. CWE Units Unpaid Placement: 1 unit 60 hours 2 units 120 hours 3 units 180 hours 4 units 240 hours 5 units 300 hours 6 units 360 hours 7 units 420 hours 8 units 480 hours CWE Units Paid Placement: 1 unit 75 hours 2 units 150 hours 3 units 225 hours 4 units 300 hours 5 units 375 hours 6 units 450 hours 7 units 525 hours 8 units 600 hours

Supervised employment extending classroom-based learning to an on-the-job learning environment relating to the student's career and educational goals. In addition, these work experiences improve the student's basic work skills and professional competencies by creating career awareness, improving work habits, and fostering positive workplace attitudes. (Letter Grade or Pass/No Pass)

### **FT 307 Firefighter I Academy IA**

#### **6.0 units**

Acceptable for credit: D - Credit - Degree Applicable

Advisories: EMT Basic or Paramedic or Public Safety First Aid and CPR as defined by California Health and Safety Code, Section 1797.182, NOTE: Approval of equivalent training is not a guarantee state regulatory or licensing agencies will also grant equivalency.

Technical and manipulative training in concepts of fire department organization and operations. Includes fire behavior, ICS, building construction, safety, rescue, ropes and knots, ladders, low angle rope rescue, hose and appliances, personal protective equipment, and accountability. (Fall, Spring) (Letter Grade Only)

### **FT 308 Firefighter 1 Academy IB**

#### **7.0 units**

Acceptable for credit: D - Credit - Degree Applicable

Prerequisite: FT 307; NOTE: Approval of equivalent training is not a guarantee state regulatory or licensing agencies will also grant equivalency. Prior to beginning this course students must already be familiar with, and be able to demonstrate all of the entrance skills listed. These will not be taught in the course; rather, they will be the starting point for advanced officer training that builds upon them.

Technical and manipulative training in concepts of fire service operations. Includes hazardous materials, wildland firefighting, fire protection systems, fire investigation, tactics, loss prevention and overhaul, vehicle extrication, ventilation, Flammable Liquids and Gas firefighting, forcible entry, structural firefighting and rescue operations. (Fall, Spring) (Letter Grade Only)

### **FT 310 Fire Service Physical Fitness**

#### **4.0 units**

Acceptable for credit: D - Credit - Degree Applicable

C-ID Course Number: Not applicable

Corequisite: FT 307 - Firefighter I Academy IA ; and FT 308 - Firefighter 1 Academy IB

This course explores the physical demands of the fire service and provides the correct training practices to meet those physical demands. Concurrent enrollment in the Allan Hancock College Fire Academy is required. This class is designed to teach a variety of body flexibility, strengthening and cardio operations. Included will be muscle toning, muscle endurance, body alignment, balance and conditioning. This class will include some level of anatomical and physiological instruction and demonstration of the body's muscle and joint functions so the student may develop the ability to learn, explore, and enhance their body strength, flexibility, balance, core stability, muscular/breathing endurance and body systems assisting in the execution of life and fire safety operation. The fitness class process will consist of lecture, warm-up through stretching, the intense engagement of the physical combination between muscle and cardiovascular use and a body cool-down. The objective is to improve flexibility, strength, cardio using the body and other equipment to facilitate objectives. This class will utilize various types of equipment in conjunction with the body being the main source equipment through movement. Equipment used may include body balls, jump ropes, cardio machines, free weights and the physical fitness equipment as needed, including emphasis on fire equipment, tools, situations and exercises in the fitness process. (Fall, Spring) (Letter Grade Only)

### **FT 319 Emergency Response to Terrorism**

#### **3.0 units**

Acceptable for credit: D - Credit - Degree Applicable

Prerequisite: California State Fire Training certification standards require candidate to have met educational requirements for Fire Fighter I prior to Fire Officer (Level 1 and II) certification or equivalent. NOTE: Approval of equivalent enrollment eligibility is not a guarantee that state regulatory and licensing authorities will also grant equivalency for licensure or employment purposes. Enables emergency responders to recognize circumstances and key indicators that may signify a terrorist incident or threat potential. Topics include implementing incident command, self-protective measures, scene security, force protection, and defensive measures associated with biological, nuclear, incendiary, chemical, and explosives incidents. Materials and information relevant to current events on emergency preparedness in terrorist incident management for emergency responders of all disciplines are explored. This course is not open to students who are enrolled in or have received credit for Emergency Medical Services 319. (Pass/No Pass)

**FT 338 Land Navigation****2.0 units**

Acceptable for credit: D - Credit - Degree Applicable  
A study of mapping and GPS skills as applied to fire, Haz-Mat and EMS emergency response. Emphasizes interpreting topographic maps and use of both the compass and GPS device. This course is not open to students who are enrolled in or have received credit for Emergency Medical Services 338 or Environmental Technology 338. (Fall, Spring) (Pass/No Pass)

**FT 341 Fire Hydraulics****3.0 units**

Acceptable for credit: D - Credit - Degree Applicable  
Repeatable: 99.00

Prerequisite: FT 308 - Firefighter 1 Academy IB ; or State Fire Marshall certified basic fire fighting academy or equivalent as determined by the Director, Fire, Safety, and Emergency Medical Services. NOTE: Approval of equivalent training is not a guarantee state regulatory or licensing agencies will all grant equivalency

Hydraulic laws and formulas as applied to the fire service, including application of formulas and mental calculations to hydraulic problems, water supply problems, and underwriters' requirements for pumps. Reviews basic mathematics. (A) (Letter Grade or Pass/No Pass)

**FT 343 Pump Theory****0.5 units**

Acceptable for credit: D - Credit - Degree Applicable  
Prerequisite: FT 308 - Firefighter 1 Academy IB ; or State Fire Marshall certified basic fire fighting academy or equivalent as determined by the Director, Fire, Safety, and Emergency Medical Services. NOTE: Approval of equivalent training is not a guarantee state regulatory or licensing agencies will also grant equivalency.  
Explores theory and workings of different types of fire pumps. Topics include positive displacement, centrifugal, and varieties of pump impellers. (A) (Pass/No Pass)

**FT 344 Emergency Vehicle Operations****0.5 units**

Acceptable for credit: C - Credit - Not Degree Applicable  
Students will learn defensive driving principles and apparatus handling techniques. Driving problems will be presented to the student in both class situations and field examples. The student will gain actual field experience by driving over a prepared course and having to react to different traffic problems. (Fall, Spring) (Letter Grade Only)

**FT 346 Driver Operator 1B****2.0 units**

Acceptable for credit: D - Credit - Degree Applicable  
Limitations on Enrollment: Valid Class C Firefighter Endorsed driver's license and Fire Apparatus/Operator 1A (2008 or 2015 version)  
Prerequisite: FT 308 - Firefighter 1 Academy IB or; or State Fire Marshall certified basic fire fighting academy or equivalent as determined by the Director, Fire, Safety, and Emergency Medical Services. NOTE: Approval of equivalent enrollment eligibility is

not a guarantee that state regulatory and licensing authorities will also grant equivalency for licensure or employment purposes. Provides the student with theory and operation of fire service pumps. Topics include pump maintenance, water supplies, field hydraulics and pump operating techniques. (A) (Pass/No Pass)

**FT 347 Vehicle Extrication****0.5 units**

Acceptable for credit: C - Credit - Not Degree Applicable  
Introduction to the safe and proper techniques for extrication of trapped victims of vehicle accidents. Various tools are used and different extrication methods are presented. (Fall, Spring) (Pass/No Pass)

**FT 348 Pump Operation for Volunteers****0.5 units**

Acceptable for credit: D - Credit - Degree Applicable  
Basic theory, methods, and techniques for operating fire service pumps at an emergency scene. (Letter Grade Only)

**FT 360 Rescue Systems I****1.5 units**

Acceptable for credit: D - Credit - Degree Applicable  
Prerequisite: FT 308 - Firefighter 1 Academy IB ; or State Fire Marshall certified basic fire fighting academy or equivalent as determined by the Director, Fire, Safety, and Emergency Medical Services. NOTE: Approval of equivalent enrollment eligibility is not a guarantee that state regulatory and licensing authorities will also grant equivalencies for licensure or employment purposes. Presents various rescue systems, ladders systems, lifting and moving heavy objects, emergency building shores, breaching walls and basic rope rescue. (Pass/No Pass)

**FT 361 Confined Space Awareness****0.5 units**

Acceptable for credit: C - Credit - Not Degree Applicable  
Introduces fire service personnel to confined space entry/rescue training as required by CAL-OSHA title 8 General Safety Orders. (Letter Grade Only)

**FT 362 Confined Space Rescue Technician****1.0 unit**

Acceptable for credit: C - Credit - Not Degree Applicable  
Prerequisite: FT 308 - Firefighter 1 Academy IB ; or State Fire Marshall certified basic fire fighting academy or equivalent as determined by the Director, Fire, Safety, and Emergency Medical Services. NOTE: Approval of equivalent enrollment eligibility is not a guarantee that state regulatory and licensing authorities will also grant equivalencies for licensure or employment purposes. Identification of confined spaces and familiarization with CAL-OSHA and federal regulations. Techniques for hazard mitigation will be explored. (Fall, Spring) (Letter Grade or Pass/No Pass)

**FT 363 Low Angle Rescue****1.0 unit**

Acceptable for credit: C - Credit - Not Degree Applicable  
Provides information on the skills, equipment and techniques that are necessary to successfully accomplish a basic low angle rescue. (Letter Grade Only)

**FT 364 Rope Rescue Technician****1.0 unit**

Acceptable for credit: D - Credit - Degree Applicable

Advisories: FT 360 - Rescue Systems I

Prerequisite: FT 363 - Low Angle Rescue

This course will prepare participants to undergo competency testing for high angle rescue. The scope of the program is to familiarize participants with the high angle environment and experience; and for them to safely participate in engineering and operation of simple to complex rescue systems. (Fall, Spring) (Pass/No Pass)

**FT 365 Trench Rescue Technician****0.5 units**

Acceptable for credit: D - Credit - Degree Applicable

Prerequisite: FT 360 - Rescue Systems I

This three day (24 hour) course will take you from classroom discussion to working safely and efficiently in a trench rescue environment. This hands-on training program will cover topics that include: Trench and Excavation Regulations, Understanding Soil, Trench Configurations, Trench Hazards, Rescue Team Preparation, Incident Response, Initial On Scene and Pre-Entry Operations, Shoring Systems and Components, Installation of Shoring Systems, Victim Rescue and Recovery and Incident Termination (Letter Grade or Pass/No Pass)

**FT 370 Introduction to Surf Rescue****0.5 units**

Acceptable for credit: C - Credit - Not Degree Applicable

Designed to acquaint rescue personnel with the surf environment, surf rescue equipment, and safe surf rescue practices. (Letter Grade Only)

**FT 379A Public Safety Fitness Triade****4.0 units**

Acceptable for credit: D - Credit - Degree Applicable

C-ID Course Number: N/A

This course is designed to prepare men and women for successful completion of a Public Safety Basic Academy in Law Enforcement, Fire Technology or Emergency Medical Services. This course will focus on physical, academic, emotional and psychological preparation. (Fall, Spring) (Letter Grade Only)

**FT 384 Rescue Systems 2****1.0 unit**

Acceptable for credit: D - Credit - Degree Applicable

Prerequisite: FT 360 - Rescue Systems I

Provides advanced heavy rescue system techniques. Key topics include: Structural building types, wood and mechanical shores, crib capacities, floor weight calculations, building search, confined space considerations, damaged structure hazard assessment, use of power tools, air bags, and USAR ICS. (Fall, Spring) (Pass/No Pass)

**FT 399 Special Topics in Fire Technology****0.5 - 3.0 units**

Acceptable for credit: -

- (Letter Grade or Pass/No Pass)

**FT 410 Volunteer Firefighter****3.0 units**

Acceptable for credit: C - Credit - Not Degree Applicable

Provides the volunteer firefighter with the minimum safety and technical training required for them to function in an effective, competent manner. (Letter Grade Only)

**FT 483 Competency of Ignition Sources****1.0 unit**

Acceptable for credit: C - Credit - Not Degree Applicable

Theory and fundamentals of how to conduct fire investigation in structures. Required course in order to maintain certification as a Certified Fire Investigator (CFI). (Fall, Spring) (Pass/No Pass)