

# Fire Technology

Degree: A.A. - Fire Technology  
Certificate: Fire Technology

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Fire technology is the science of fighting and preventing fires through an organized team effort. Firefighters must have a thorough understanding of the physical and chemical laws of combustion, a working knowledge of firefighting and safety equipment, and ability to administer emergency medical aid. The fundamental principles and underlying causes for destructive fires are coupled with basic fire prevention techniques, fire behavior and control and fire hydraulics as a background for advanced training. This includes a study of fire chemistry and physics, firefighting equipment and extinguishing agents, solution to fire hazards and an introduction to the organization of various firefighting units.

Advanced training includes fire safety and safety equipment, sprinkler and alarm systems, portable fire extinguishing equipment.

## Career Opportunities

Employment opportunities in the fire service are expected to increase in the next ten years. Nine of ten firefighters are employed by municipal fire departments, and there is opportunity for employment in agencies such as the California Department of Forestry & Fire Protection, and the U.S. Forest Service.

The best career opportunities are expected to be found in small but growing municipalities. Salaries for beginning firefighters are excellent with opportunity for advancement. Most fire department also provide good fringe benefits and retirement plans.

## Requirements for Degree Major: 35 units

### Core Requirements

FT 200, 300, 301, 302, 303, and 304;  
and 15 units chosen from the following:  
FT 110, 130, 132, 170, 180, 190, 192, 310, 320.

### General Education Graduation Requirements:

Students must also complete the general education graduation requirements for an A.A. degree. See graduation requirements.

## Requirements for Certificate: 35 units

A certificate of achievement in Fire Technology will be awarded to students who complete 20 units in the Fire Technology CORE courses: FT 200, 300, 301, 302, 303, and 304. Fifteen (15) additional units must be chosen from the following recommended electives: FT 110, 130, 132, 170, 180, 190, 192, 310, 320.

## FT 110 Fire Apparatus 3 Units

Formerly: FT 73

Prerequisite: None

Advisory: FT 300 or 90.

Course Not Transferable UC or CSU

Hours: 54 hours LEC

This course covers fire apparatus design, specifications and performance capabilities. It also includes the effective utilization of apparatus in fire service emergencies.

## FT 130 Fire Company Organization and Management 3 Units

Formerly: FT 61

Prerequisite: None

Advisory: FT 300 or 90.

Course Not Transferable UC or CSU

Hours: 54 hours LEC

This course provides a review of fire department organization, planning, organizing and supervising to meet the needs of the fire department, with emphasis on the company officer's role.

## FT 132 Fire Service Records and Reports 3 Units

Formerly: FT 62

Prerequisite: None

Advisory: FT 300 or 90.

Course Not Transferable UC or CSU

Hours: 54 hours LEC

This course covers fire department records systems, principles of report writing, applications in the area of pre-fire survey, and post-fire reporting.

## FT 140 Related Codes and Ordinances 3 Units

Formerly: FT 63

Prerequisite: None

Advisory: FT 300 or 90.

Course Not Transferable UC or CSU

Hours: 54 hours LEC

This course includes familiarization and interpretation of national, state and local codes, ordinances and laws which influence the field of fire prevention.

**FT 170 Fire Investigation 3 Units**

Formerly: FT 65

Prerequisite: None

Advisory: FT 300 or 90.

Course Not Transferable UC or CSU

Hours: 54 hours LEC

This course includes determining the cause of fires (accidental, suspicious and incendiary); types of fires, related laws; introduction to incendiary fires; recognizing and preserving evidence; interviewing witnesses and suspects, arrest, detention, and court procedures.

**FT 180 Rescue Practices 3 Units**

Formerly: FT 68

Prerequisite: None

Advisory: Fire Technology 1 or 90.

Course Not Transferable UC or CSU

Hours: 54 hours LEC

This course focuses on rescue problems and techniques, emergency rescue equipment; toxic gases, chemicals, diseases, and radiation hazards. Also included are the care of victims including emergency childbirth, respiration and resuscitation, extrication and other emergency conditions.

**FT 190 Fire Tactics and Strategy 3 Units**

Formerly: FT 66

Prerequisite: None

Advisory: Fire Technology 1 or 90.

Course Not Transferable UC or CSU

Hours: 54 hours LEC

This course includes principles of fire control through the utilization of manpower, equipment, and extinguishing agents on the fireground.

**FT 192 Wildland Fire Control 3 Units**

Formerly: FT 69

Prerequisite: None

Advisory: Fire Technology 1 or 90.

Course Not Transferable UC or CSU

Hours: 54 hours LEC

This course covers all aspects of wildland fire fighting and introduces new advances in technology for wildland fire suppression.

**FT 200 Emergency Medical Technician I 5 Units**

Formerly: FT 77

Prerequisite: Health Education 10 or current Cardiopulmonary Resuscitation certification

Course Not Transferable UC or CSU

Hours: 72 hours LEC; 72 hours LAB

This course is designed to instruct a student to the level of Emergency Medical Technician I. This includes all skills necessary for the individual to provide emergency medical care at a basic life support level with a fire, ambulance or other specialized service. This course is conducted in compliance with Title 22, Division 9, Chapter 2 of the California Code of Regulation and Emergency Medical Technician I. A grade of "C" or better is required for certification as EMT-1. Not open to students who have taken Paramedic 77. May be repeated by students whose EMT certification has lapsed

**FT 209 Emergency Medical Technician IFS Refresher Course 1 Unit**

Formerly: FT 78

Prerequisite: Valid EMT certificate.

Course Not Transferable UC or CSU

Hours: 20 hours LEC; 4 hours LAB

Persons who hold a valid Emergency Medical Technician I certificate, or a certificate that has been expired for less than one year, shall be admitted. Consists of classroom instruction, simulation and supervised field instruction. May be taken four times for credit.

**FT 300 Fire Protection Organization 3 Units**

Formerly: FT 1

Prerequisite: None

Course Transferable to CSU

Hours: 54 hours LEC

This course 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 the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics.

**FT 301 Fire Prevention Technology 3 Units**

Formerly: FT 2

Prerequisite: None

Corequisite: Fire Technology 1 or 90.

Course Transferable to CSU

Hours: 54 hours LEC

This course 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 system.

**FT 302 Fire Protection Equipment and Systems 3 Units**

Formerly: FT 3

Prerequisite: None

Corequisite: Fire Technology 1 or 90.

Course Transferable to CSU

Hours: 54 hours LEC

This course 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.

**FT 303 Building Construction for Fire Protection 3 Units**

Formerly: FT 4

Prerequisite: None

Corequisite: Fire Technology 1 or 90.

Course Transferable to CSU

Hours: 54 hours LEC

This course is the study of the components of building construction that relate to fire safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, pre-planning 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.

**FT 304 Fire Behavior and Combustion 3 Units**

Formerly: FT 5

Prerequisite: None

Corequisite: Fire Technology 1 or 90.

Course Transferable to CSU

Hours: 54 hours LEC

This course provides the student with the theories and fundamentals of 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.

**FT 310 Fire Service Hydraulics 3 Units**

Formerly: FT 7

Prerequisite: None

Advisory: Fire Technology 1 or 90.

Course Transferable to CSU

Hours: 54 hours LEC

## Fire Technology

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This course provides information on obtaining water from various sources of supply, properly routing it through the pump, and discharging it through various devices with the proper pressures for fire suppression.

### **FT 320 Hazardous Materials 3 Units**

*Formerly: FT 6*

*Prerequisite: None*

*Advisory: Fire Technology 1 or 90.*

*Course Transferable to CSU*

*Hours: 54 hours LEC*

This course is an Introduction to the world of hazardous chemicals, including physical properties, uses in industry, and characteristics when involved in spills, fires, and accidents. This course also provides basic hazardous materials information regarding emergency procedures, legal requirements, and compliance to regulations.

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The following courses are held at the Sacramento Regional Public Safety Training Center (SRPSTC) located at 5146 Arnold Avenue, McClellan (formerly McClellan AFB). These courses are certified by the California State Fire Marshal's Office. All courses are offered in an intense, concentrated format. Course registration is accomplished by contacting the SRPSTC by phone (916) 570-5000 or in person. Student registration into some courses may be restricted by California statute of prerequisites. Pre-payment is required for course registration.

Incident Command System (I 300)

Wildland Fire Behavior (S 190)

Fire Command 1-A

Fire Command 1-B

Fire Prevention 1-A

Fire Prevention 1-B

Fire Prevention 1-C

Fire Management 1

Fire Investigation 1-A

Fire Investigation 1-B

Fire Instructor 1-A

Fire Instructor 1-B

Fire Apparatus Driver/Operator 1-A

Fire Apparatus Driver/Operator 1-B

Rescue Systems 1

Rescue Systems 2

Basic Firefighter Recruit Academy