

**Fire Technology** 

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## **Certificate/Associate of Science Degree Program**

Firefighters work to protect the community against injury, loss of life, and destruction of property by fire. When a fire is reported, Firefighters respond quickly and work as a highly-organized team to put it out.

Firefighters assess emergency situations to determine what actions to take. Using their knowledge of various types of fires, construction design, building materials, and physical layout of properties, Firefighters work toward the source of the fire. They lay and connect hose lines, select and attach nozzles, and direct streams of water or chemicals onto the fire in a way that best stops it. They may place ladders and force their way into a burning structure using axes, crowbars, saws, and power tools. Equipped with fire resistant clothing and a breathing apparatus, Firefighters may have to make their way through smoke-filled passages to get to the source of a fire.

Firefighters have also assumed a wider range of responsibilities, including emergency medical services. In fact, most calls to which Firefighters respond involve medical emergencies. In addition, some Firefighters work in hazardous material units and are trained for the control, prevention, and cleanup of materials. Firefighters rescue people trapped in burning structures, give first aid to the injured, and help in the resuscitation of victims who are overcome by smoke. Rescue trucks are equipped with tools such as cutting torches, saws, resuscitators, first aid kits, lights, and other rescue equipment. Most fire departments have paramedic units able to provide more complex medical aid.

## JOB OUTLOOK:

The fire service has been experiencing higher than normal employee turnover due to the Baby-Boomers that are exiting the workforce for retirement. This has left a large workforce void that needs to be filled. The Crafton Hills College Regional Fire Academy and Fire Technology Program is fully prepared and committed to meet that demand and professionally educate and train these future firefighters.

In California between 2014 and 2024 it is expected that approximately 1,200 new Firefighters will be hired each year, with 100 of those each year in the San Bernardino and Riverside area. Employment of Fire Fighters is expected to increase slightly faster than the average for all occupations. Labor Market Source: State of California Employment Development Dept.

## WORKING CONDITIONS:

Firefighters must work in conditions that are highly stressful and very physically demanding. The protective gear can be very heavy and hot. Firefighters work long and varied hours that include working regularly on weekends and holidays. They may work more than 50 hours a week or longer. Shifts and hours vary from agency to agency. In some agencies, Firefighters are on duty for 24 hours, then off for 48 hours, and receive an extra day off at intervals. In others, they work a day shift of 10 hours for 3 or 4 days, a night shift of 14 hours for 3 or 4 nights, have 3 or 4 days off, and then repeat the cycle.

## EARNINGS:

As of 2017 median annual wages of full-time Fire Fighters in California is approximately \$71,743. In California Fire Fighters typically earn from \$54,500 to \$92,000. Labor Market Source: State of California Employment Development Dept.

## EMPLOYMENT:

Paid career firefighters held about 30,000 jobs in California. More than 9 out of 10 worked in municipal or county fire departments. Most job openings will be created by the need to replace Fire Fighters who retire or promote to supervisory positions. Firefighting occupations attract many job seekers because the work is challenging and pensions are offered upon retirement. The number of qualified applicants is usually greater than the number of job openings in most communities. Applicants can improve their employment opportunities by completing a Fire Fighting program at a community college, and by obtaining emergency medical technician (EMT) certification. Most fire departments have paramedic units able to provide more complex medical aid.

The modern fire service also offers numerous career paths in both the public and private sectors. Some individuals will choose to pursue a career as a Fire Inspector; they examine structures to prevent fires and ensure compliance with fire codes, Fire Investigators; they determine the origin and causes of fires, collect evidence and interview witnesses, and Forest Firefighters; they control and suppress forest fires.

## **PHYSICAL DEMANDS:**

Because firefighting is an extremely physically demanding profession, strength and physical stamina are required.

## EDUCATION AND TRAINING:

Applicants for municipal firefighting jobs generally must pass a written exam; physical test of strength, physical stamina, and agility; and a medical examination that includes drug screening and a psychological test; a lie detector test and an oral interview. Those who receive the highest scores in all phases of testing have the best chances for employment. The completion of community college courses and a degree in fire technology, and the completion of a community college Fire Academy Program may significantly improve an applicant's chances for appointment. An emergency medical technician (EMT) certification is normally an employment requirement. High school preparation courses in blueprint reading, chemistry, computer technology, health science, language arts, mathematics, and shop are also extremely helpful.

## PERSONAL QUALITIES:

Personal qualities that are important to Firefighters are: mental alertness, self-discipline, good judgment, integrity ,dependability, endurance, strength, and commitment to public service. The job of a Firefighter may appeal to those who enjoy activities that involve practical, hands-on problems and solutions.

## CAREER LADDER:

Advancement in most fire agencies depends upon the results of competitive written examinations, job performance and interviews. A Firefighter seeking a promotion is often required to participate in community college or continuing education programs to keep current with the latest concepts and procedures related to fire suppression, medical training, and management techniques. The line of promotion is usually to engineer, captain, battalion chief, assistant chief, deputy chief, and finally, Fire Chief. Advancement to positions higher than battalion chief usually requires a bachelor's degree in fire science, public administration, or a related subject area.

## ASSOCIATE OF SCIENCE DEGREE FIRE TECHNOLOGY

Candidates must successfully complete a minimum of 23.50 units of prescribed coursework. A minimum grade of "C" must be maintained in all prescribed coursework related to Fire Technology. NOTE: A "C" in these courses is considered to be 80% or higher.

**UNITS** 

#### **REQUIRED COURSES:**

FIRET 100 Fire Protection Organization	3.00
FIRET 101 Fire Prevention Technology	3.00
FIRET 102 Fire Behavior and Combustion	3.00
FIRET 103 Fire Protection Systems	3.00
FIRET 114 Principles of Fire and Emergency Services	
Safety and Survival	3.00
FIRET 116 Building Construction for Fire Protection	3.00

A minimum of 5.50 units are to be selected from the following courses:

FIRET 040A Fire Inspector 1A:	
Duties & Administration	2.00
FIRET 040B Fire Inspector 1B: Fire and Life Safety	2.00
FIRET 040C Fire Inspector 1C: Field Inspection	1.50
FIRET 040D Fire Inspector 1D:	
Field Inspection - California Specific	1.00
FIRET 085A Company Officer 2A:	
Human Resource Management	2.50
FIRET 085B Company Officer 2B:	
General Administrative Functions	1.50
FIRET 085C Company Officer 2C:	
Fire Inspections and Investigations	2.50
FIRET 085D Company Officer 2D:	
All Risk Operations	1.50
FIRET 085E Company Officer 2E:	
Wildland Incident Operations	2.00
FIRET 087 Fire Investigation 1A	2.50
FIRET 088 Fire Investigation 1B	2.50
FIRET 104 Fire Apparatus and Equipment	3.00
FIRET 106 Fire Protection Hydraulics and	
Water Supply	3.00
FIRET 113 Fire Service Career Preparation	3.00
FIRET 118 Wildland Fire Control	3.00

Lower division requirements for students interested in transferring to a four-year institution in this field may differ from associate degree requirements. Prospective transfer students should complete the general education and lower division requirements of the school to which they will be transferring. See a counselor for details. Information is also available at www.assist.org.

### CONTINUING YOUR EDUCATION

To fulfill the Associate Degree requirements you will need to complete all required general education (G.E.) units in addition to the Fire Technology core courses. It is important that you check with a counselor to insure that completion of the G.E. requirements is correct and in appropriate categories.

#### ASSOCIATE DEGREE REQUIREMENTS

Completion of a minimum of 60 units, completion of the Fire Technology program core and non-core courses, and required general education are required for the Associates Degree. All courses must be completed with a "C" grade or higher. Detailed Associate Degree Requirements can be found in the current version of the Crafton Hills College Catalog, or see a Counselor to assist you in course selection.

### FIREFIGHTER I BASIC TRAINING ACADEMY CERTIFICATE

The objective of this certificate is to develop the skills required for Firefighter I Certification and to develop the teamwork skills, attitudes and public service commitment necessary for employment in the fire service. Completion of this certificate may lead to entry-level employment as a firefighter in the public or private sectors. The Firefighter I Basic Training Academy is approved by the California State Fire Marshal's Office as an Accredited Regional Training Center.

Admission: Open to all students who have completed the prerequisite courses. Registration is limited to class size restrictions. Contact the Fire Technology Office or check the Crafton Hill website for application materials.

PREREQUISITES:	UNITS
FIRET 100 Fire Protection Organization	3.00
FIRET 101 Fire Prevention Technology	3.00

EMT-I Emergency Medical Technician I Certification (Successfully pass the National Registry Exam)

Either a "CPAT" (Candidate Physical Ability Test) or the Biddle Physical Agility Test. Completion of "CPAT" or Biddle Exam must be valid through the end of the academy.

<b>RECOMMENDED COURSES:</b>	UNITS
ENGL 101 Freshman Composition	4.00
FIRET 902 Firefighter Physical Agility Preparation	3.00
MATH 090 Elementary Algebra	4.00

Candidates must successfully complete a minimum of 16.00 units of prescribed coursework. A minimum grade of "C" must be maintained in all required coursework to remain in the Fire Academy and to receive the Firefighter I Basic Training Academy Certificate. NOTE: A "C" or better in these courses is considered to be 80% or higher.

<b>REQUIRED COURSES:</b>	UNITS
KIN/F 049 Basic Firefighter Physical Fitness	2.00
FIRET 115 Firefighter I Basic Training Academy	14.00
TOTAL UNITS	16.00

# A student receiving a certificate in this field will be able to:

- Participate successfully in a culturally diverse environment
- Develop effective interpersonal communication skills
- Solve problems and makes decisions inherent to the profession

### STATE FIRE TRAINING CERTIFICATE

Crafton Hills College offers the following State Fire Training Courses for:

Fire Inspector I Certification Fire Inspector II Certification Company Officer Certification Chief Officer Certification

### ADMISSION TO CRAFTON HILLS COLLEGE

Admission to Crafton Hills College is open to those who meet any one of the following requirements:

- 1. Eighteen years of age or older and can benefit from instruction offered by the college, or
- 2. A high school graduate, or
- 3. Have a G.E.D. (General Education Development) Certificate, or
- 4. Have a California High School Proficiency Certificate

Out-of-state residents and citizens of other countries here on student visas may also attend Crafton Hills College, subject to regulations that can be obtained from the Admissions & Records Office. These students will be required to pay non-resident tuition fees. (Education Code: 68050)

Current high school students may be admitted under special circumstances. See the current Craton Hills College Catalog for specific requirements.

Every new student is required to participate in the assessment/placement process. This process is designed to assist students in choosing classes and is necessary to determine placement in English, mathematics and reading courses at Crafton Hills College. In order to receive priority registration new students must complete the assessment/placement process.

The assessment is a multiple-choice format covering reading comprehension, sentence skills, arithmetic, elementary algebra, and college algebra. Assessment is provided on a walk-in basis or by appointment depending on the time of year. The assessment schedule is available online.

Students who will be participating in the assessment are strongly encouraged to access the assessment orientation presentation and review materials that are available on our campus website at www.craftonhills/ assessment, plan on two hours to complete the assessment process. For questions you may contact the assessment center at 909.389.3361 or email at assessment@craftonhills.edu.

Crafton Hills College is accredited by the Accrediting Commission for Community and Junior Colleges of the Western Association of Schools and Colleges, 10 Commercial Boulevard, Suite 204, Novato, CA 94949, 415.506.0234, an institutional accrediting body recognized by the Council for Higher Education Accreditation and the U.S. Department of Education.