

Fire Technology

Careers & Technology

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DEGREE

A.A. — Fire Technology

CERTIFICATE OF ACHIEVEMENT

Fire Technology

Program Description

The fire service is one of the most dynamic employers in the country. This CRC program is designed to provide the student with updated skills and knowledge necessary to prepare and successfully apply for fire service positions.

The curriculum serves as an inservice program as well as a pre-employment program for students seeking employment or advancement in the profession of fire fighting and fire suppression.

Career Opportunities

| | |
|--------------|------------|
| Firefighter | Inspector |
| Investigator | Supervisor |
| Manager | |

Some Career Opportunities may require more than two years of college study. Classes beyond the associate degree may be required to fulfill some Career Opportunities or for preparation for transfer to a university program.

Highlights

- Up-to-date technical information
- Field trips to a variety of fire service locations
- Networking with other fire service members
- Fire Technology work experience internships (Fire Technology 498 for on-the-job experience)

NOTE TO TRANSFER STUDENTS:

If you are interested in transferring to a four-year college or university to pursue a bachelor's degree in this major, it is critical that you meet with a CRC counselor to select and plan the courses for your major. Schools vary widely in terms of the required preparation. The courses that CRC requires for an associate's degree in this major may be different from the requirements needed for the bachelor's degree.

For information about the student learning outcomes for this program, see <http://www.crc.losrios.edu/pslo>

DEGREE

A.A. — Fire Technology

CODE #1127

This curriculum is designed to serve both as an in-service program and as a pre-employment program for students seeking employment or advancement in the profession of urban fire fighting and fire suppression.

| | |
|---|-----------|
| REQUIRED PROGRAM.....Units | |
| FT 300 Fire Protection Organization..... | 3 |
| FT 301 Fire Prevention Technology..... | 3 |
| FT 302 Fire Protection Equipment and Systems..... | 3 |
| FT 303 Building Construction for Fire Protection..... | 3 |
| FT 304 Fire Behavior and Combustion..... | 3 |
| EMT 100 Basic Emergency Medical Care..... | 5 |
| Plus fifteen (15) units selected from: | 15 |
| FT 110 Fire Apparatus (3) | |
| FT 130 Fire Company Organization and Management (3) | |
| FT 132 Fire Service Records and Reports (3) | |
| FT 140 Related Codes and Ordinances (3) | |
| FT 170 Fire Investigation (3) | |
| FT 180 Rescue Practices (3) | |
| FT 190 Fire Tactics and Strategy (3) | |
| FT 320 Hazardous Materials (3) | |
| TOTAL UNITS REQUIRED | 35 |

* A current California EMT 1, EMT 1A or EMT IFS certificate will be accepted as satisfactory completion of the EMT 100 requirement.

Suggested Elective:

FT 498

G.E. Graduation Requirements for this degree - see pages 20-21

CERTIFICATE OF ACHIEVEMENT

Fire Technology

CODE #1127

This curriculum is designed to serve both as an in-service program to improve or maintain job skills and as a pre-employment program for the profession of urban fire fighting and fire suppression.

REQUIRED PROGRAM..... Units

| | | |
|---|--|-----------|
| FT 300 | Fire Protection Organization..... | 3 |
| FT 301 | Fire Prevention Technology..... | 3 |
| FT 302 | Fire Protection Equipment and Systems..... | 3 |
| FT 303 | Building Construction for Fire Protection..... | 3 |
| FT 304 | Fire Behavior and Combustion..... | 3 |
| EMT 100 | Basic Emergency Medical Care..... | 5 |
| Plus fifteen (15) units selected from: | | 15 |
| FT 110 | Fire Apparatus (3) | |
| FT 130 | Fire Company Organization and Management (3) | |
| FT 132 | Fire Service Records and Reports (3) | |
| FT 140 | Related Codes and Ordinances (3) | |
| FT 170 | Fire Investigation (3) | |
| FT 180 | Rescue Practices (3) | |
| FT 190 | Fire Tactics and Strategy (3) | |
| FT 320 | Hazardous Materials (3) | |
| TOTAL UNITS REQUIRED..... | | 35 |

* A current California EMT 1, EMT 1A or EMT IFS certificate will be accepted as satisfactory completion of the EMT 100 requirement.

FIRE TECHNOLOGY (FT)

FT 110 Fire Apparatus 3 Units

Prerequisite: None

Advisory: FT 300, or employment as a firefighter

Hours: 54 hours LEC

A study of the design, specifications, and performance capabilities of fire apparatus. Effective utilization of equipment on the fireground will be the focus with emphasis on practical applications.

FT 130 Fire Company Organization and Management 3 Units

Prerequisite: None

Advisory: FT 300, or employment as a firefighter

Hours: 54 hours LEC

An in-depth review of the operation, organization and planning concepts of today's fire departments. Emphasizes the functions of management including budgeting, time management, delegation, motivation, and discipline. Explores concepts of continuous improvement, team-building, and principles of quality management, relative to fire service operations.

FT 132 Fire Service Records and Reports 3 Units

Prerequisite: None

Advisory: FT 130 or 300, or employment as a firefighter

Hours: 54 hours LEC

A course designed for all members of the fire service in the use of typical records and report systems. Involves knowledge and understanding of the fire department records systems, principles of report writing, applications in the area of pre-fire survey, post-fire reporting, research and planning.

FT 140 Related Codes and Ordinances 3 Units

Prerequisite: None

Advisory: FT 300, or employment as a firefighter

Hours: 54 hours LEC

Familiarization and interpretation of national, state and local codes, ordinances and laws which influence the field of fire protection.

FT 170 Fire Investigation 3 Units

Prerequisite: None

Advisory: FT 300, or employment as a firefighter

Hours: 54 hours LEC

Determining causes of fires (accidental, suspicious and incendiary), types of fires, related laws, introduction to arson and incendiaryism, recognizing and preserving evidence, interviewing witnesses and suspects, arrest and detention procedures, court procedures and giving court testimony.

FT 180 Rescue Practices 3 Units

Prerequisite: None

Advisory: FT 300, or employment as a firefighter

Hours: 54 hours LEC

Rescue problems and techniques, emergency rescue equipment, toxic gases, chemicals, and diseases, radiation hazards, care of victims, including emergency childbirth, respiration and resuscitation, extrication and other emergency conditions.

FT 190 Fire Tactics and Strategy 3 Units

Prerequisite: None

Advisory: FT 300, or employment as a firefighter

Hours: 54 hours LEC

The study of fundamental principles of fire tactics and strategy under fireground conditions and procedures for effective development and application of pre-fire plans. Fire emergency problems and definitive coping strategies are examined, related to staffing, equipment and extinguishing agents.

FT 210 Firefighter Internship Training Program 8 Units

Prerequisite: FT 300 with a grade of "C" or better; Current EMT

Certification and accreditation with Sacramento EMS agency.

BLS for the Healthcare Provider from American Heart Association (or the equivalent HEED 320; or current American Red Cross CPR for Professional Rescuer). Current CPR card (last 2 years)

Corequisite: FT 498

Enrollment Limitation: All students must be enrolled in FT 498 to sign up for FT 210.

Hours: 99 hours LEC ; 135 hours LAB

This course provides the techniques and skills to work effectively and safely within the fire environment as well as the fire department. Topics include indoctrination into the fire service, general maintenance, apparatus and equipment operations, fire control, salvage, fire prevention and public education, fire and arson investigation, rapid intervention crew tactics, physical fitness/wellness, emergency care, and forcible entry. Students may be charged a lab fee for personal protective equipment (PPE) in the use of and maintenance of structural firefighter turnouts and equipment in this course. Students will also be responsible for purchasing other equipment, liability insurance and uniforms. Credit/No Credit only.

FT 295
Independent Studies in Fire Technology **1-3 Units**

Prerequisite: None
Hours: 18 hours LEC ; 36 hours LAB

FT 299
Experimental Offering in Fire Technology **.5-4 Units**

Prerequisite: None
Hours: 18 hours LEC ; 54 hours LAB

FT 300
Fire Protection Organization **3 Units**

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**

Prerequisite: None
Advisory: FT 300
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 systems.

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

Prerequisite: None
Advisory: FT 300
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**

Prerequisite: None
Advisory: FT 300
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**

Prerequisite: None
Advisory: FT 300
Course Transferable to CSU
Hours: 54 hours LEC

This course provides the student with theories 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.

FT 320
Hazardous Materials **3 Units**

Prerequisite: None
Advisory: FT 300, 301, 302, 303, and 304
Course Transferable to CSU
Hours: 54 hours LEC

A study of the fire fighting practices related to hazardous chemicals, including their physical properties, uses in industry, and characteristics when involved in spills, fires, and accidents. Basic information regarding health effects and treatment, and fire department protocols and responsibilities.

FT 495
Independent Studies in Fire Technology **1-3 Units**

Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 36 hours LAB

FT 498
Work Experience in Fire Technology **1-4 Units**

Prerequisite: None
General Education: AA/AS Area III(b)
Course Transferable to CSU
Hours: 300 hours LAB

This course provides students with opportunities to develop marketable skills in preparation for employment or advancement within their current job. Course content will include understanding the application of education to the workforce; completion of required forms, which document the student's progress and hours spent at the work site; and developing workplace skills and competencies. During the course of the semester, the student is required to fulfill an 18 hour orientation and 75 hours of related paid work experience, or 60 hours of unpaid work experience for one unit. An additional 75 or 60 hours of related work experience is required for each additional unit. The course may be taken again when there is new or expanded learning on the job for a maximum of 16 units.

FT 499
Experimental Offering in Fire Technology **.5-4 Units**

Prerequisite: None
Course Transferable to CSU
Hours: 18 hours LEC ; 54 hours LAB