

Fire Technology

Fire protection is a highly specialized professional field requiring extensive knowledge and use of scientific principles. Successful application of the fundamental principles of fire protection, including suppression and extinguishment of fires, rescue, emergency medical services, prevention techniques and practices, preplanning for fire protection, and disaster control, requires technical knowledge and the ability to work within an organized system at the fire ground or other emergency scene. These actions require trained, professional people to accomplish the goals and objectives of today's public and/or private organizations in meeting their commitment to the public and employees they serve. Fire Technology provides the student the opportunity to prepare for a rewarding career in the public fire service or in private industry.

For the most current information about VVC's Fire Technology programs, application deadlines, costs, and other requirements, please visit http://www.vvc.edu/academic/fire_technology/.

Fire Technology

This program provides vocational and technical in-service training for interested students. Each student who completes a program of courses that meets the specified requirements is entitled to a certificate of completion in that field. Certificates are awarded as evidence that well defined levels of proficiency have been attained and they are recognized as such by employers.

In order to be awarded the certificate, the student must have completed the prescribed program with at least a 2.0 grade point average in the prescribed course work. The number of courses prescribed for each certificate varies according to the area of training.

Career Opportunities

Apparatus Operator, Disaster Preparedness, Fire Administrative Analyst, Fire Chief, Fire Division Chief, Fire Fighter I
Fire Officer I, Fire Prevention Specialist, Fire Protection Engineer, Industrial Fire Safety Specialist

Faculty

Heath Cohen

Degrees and Certificates Awarded

Associate in Science, Fire Technology
Fire Fighter Certificate

Fire Prevention Officer Certificate
Fire Company Officer Certificate

Associate Degree

To earn an Associate in Science degree with a major in Fire Technology (10809) complete 18 units from any of the degree applicable certificate requirements or from any Fire Technology courses (numbered 50 and above) and meet all Victor Valley College graduation requirements. FIRE 138 (Cooperative Education) may be used as elective credit, but may not be used to fulfill major requirements.

Business Administration is also a highly recommended bachelor's degree major for people in this field who are seeking advancement. See Business Administration for transfer requirements.

*Courses numbered below 50 do not apply to the Associate Degree.

Transfer

Not usually a transfer major. Some Fire Technology courses do transfer as electives or fulfill subject credit requirements, California State University, Los Angeles offers a B.S. degree in Fire Protection Administration and Technology which requires a minimum of 18 major units to be completed in Fire Technology at a community college. Cal Poly San Luis Obispo and Humboldt State University offer degrees in Forestry with concentrations in Fire Management. Visit www.assist.org for community college courses which will transfer as requirements toward these bachelor's degrees. Students planning to pursue this bachelor's degree should also complete the CSU General Education-Breadth Requirements before transfer if possible.

Program Learning Outcomes

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

- Demonstrate knowledge and skills required to respond appropriately to fire and environmental emergency situations at the private, city, state and federal levels with emphasis in one or more of the following areas: wildland firefighting; hazardous materials response; structural fire suppression, prevention, and investigation, disaster response, first responder; emergency medical technician; or leadership responsibilities.
- Demonstrate the ability to analyze, appraise and evaluate fire and emergency incidents and identify components of emergency management and fire fighter safety including: Size-up, report on condition, Incident Command System; RECEO; 10 Standard Firefighting Orders; and 18 Situations that "Shout Watch Out".
- Identify and 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.
- Identify minimum qualifications and entry level skills for fire fighter hiring. The student will be able to describe the following elements: application process; written exam process; physical agility exam, oral interview, chief's interview; background investigation; and fire fighter probationary process.
- Identify and describe common types of building construction and conditions associated with structural collapse and firefighter 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.

Fire Fighter Academy

Required prerequisites for the Fire Academy:

Fire 11B*	Confined Space Rescue Awareness	0.5
Fire 66	Basic Incident Command	1.0
Fire 82A	Hazardous Materials First Responder Awareness	1.5
EMS 60	Emergency Medical Technician	9.5

*Courses numbered below 50 do not apply to the associate's degree.

Victor Valley College's Fire Technology Department is an accredited Regional Training Program (ARTP) as designated by the Office of the California State Fire Marshal (CSFM). As an ARTP, the VVC Fire Technology Department is authorized to deliver a CSFM Accredited Firefighter I Academy and a full suite of CSFM courses leading to advanced levels of certification. In addition, the VVC Fire Technology Department is authorized by CSFM to deliver Fire Fighter I certification examinations in support of CSFM's accreditation by the International Fire Service Accreditation Congress (IFSAC) and the National Board of Fire Service Professional Qualifications (Pro Board).

FIRE 95 – Basic Fire Academy is a 13 unit course. Students must submit applications by appropriate deadlines to enter the academy. In addition to this course there is recommended coursework that enables students to sit for certification exams and gain employment. The following courses should be taken during the same semester as FIRE 95.

FIRE 4B	First Responder Operational Weapons of Mass Destruction	0.5
FIRE 11	Low Angle Rope Rescue Operational	0.5
FIRE 11E	Rapid Intervention Crew Tactics	1.5
EMS 40A	Firefighter Physical Agility Entrance Exam Techniques	1.0
FIRE 53	Hazardous Materials First Responder Operational Decontamination	0.5
FIRE 63A	Auto Extrication	0.5

Fire Technology

FIRE FIGHTER CERTIFICATE OF ACHIEVEMENT (04969)

Awarded to the student who successfully completes the following course of study to meet the minimum qualifications and competencies as required by National Fire Protection Association and California State Fire Marshal's Fire Fighter I certification program.

Units Required: 32.0

All of the following must be completed with a grade of "C" or better:

FIRE 100	Principles of Emergency Services	3.0
FIRE 101	Fundamentals of Fire Service Operations	3.0
FIRE 102	Fire Prevention Technology	3.0
FIRE 103	Fire Protection and Systems	3.0
FIRE 104	Fire Behavior and Combustion	3.0
FIRE 82A	Hazardous Materials First Responder Operational	1.5
EMS 60	Emergency Medical Technician I	5.0
FIRE 95	Basic Fire Academy	12.5

FIRE PREVENTION OFFICER CERTIFICATE OF ACHIEVEMENT (07594)

Describes an individual who has successfully completed the competencies as required for a certified fire prevention officer by the California State Fire Marshal's Office. Meets entry requirements for fire prevention specialist and/or fire prevention officer.

Units Required: 30.0

All of the following must be completed with a grade of "C" or better:

FIRE 100	Principles of Emergency Services	3.0
FIRE 101	Fire Service Operations	3.0
FIRE 102	Fire Prevention Technology	3.0
FIRE 103	Fire Protection Equipment and Systems	3.0
FIRE 104	Fire Behavior and Combustion	3.0
FIRE 107	Fire Investigation or	3.0
FIRE 77	Investigation 1A	2.0
FIRE 70	Fire Instructor Training 1A	2.0
FIRE 71	Fire Instructor Training 1B	2.5
FIRE 74,75, & 78	Fire Prevention 1A, 1B, 1C	6.0
FIRE 76	Fire Management 1 - Supervision for Company Officers	2.5

Fire Technology Courses

FIRE 4B FIRST RESPONDER OPERATIONAL WEAPONS OF MASS DESTRUCTION

Units: 0.5

8-9 hours lecture

Prerequisite: FIRE 82A or CSTI Has-Mat First Responder Operational Certification. Pass/No Pass) This course does not apply to the Associate Degree.

This course introduces the student to the basic concepts for first responder operational procedures at the scene of a potential or actual terrorist incident and discusses safety and survival tactics.

FIRE 9A FIRE CONTROL IV, OIL AND GAS FIRE FIGHTING TECHNIQUES

Units: 0.5

8-9 hours lecture

(No prerequisite. Pass/No Pass) This course does not apply to the Associate Degree.

This course provides the fire fighter student with live fire situations to gain skills and experience in combating fires involving liquefied petroleum gas and flammable liquids. Subjects include flammable liquid fire behavior, safety on the fire ground, extinguishing agents, flammable liquid/gas transportation vehicles, water-flow requirements and actual fire extinguishing exercises. A basic knowledge of firefighting skills and knowledge plus access to appropriate safety equipment and clothing is presumed.

FIRE 10 FIRE FIGHTER SKILLS MAINTENANCE

Units: 4.0

16-18 hours lecture and 144-162 hours laboratory

(No prerequisite: Recommended preparation: Employment as a fire fighter with a recognized fire protection agency (State mandated). Employment as a career fire fighter or paid call fire fighter. Pass/No Pass.) This course does not apply to the Associate Degree.

A series of lectures and manipulative drills designed to provide maintenance of skills learned, including updates in technology relating to fire department organization, hoses, ladders, tools and equipment, salvage, fire chemistry, extinguishers and agents, fire control, prevention, arson, crowd and traffic control, mutual aid, communications, fire safety and emergency rescue techniques.

FIRE 10C COMPANY OFFICER'S SKILLS MAINTENANCE

Units: 1.5

16-18 hours lecture and 24-27 hours laboratory

(Prerequisites: Employment as a wildland fire fighter or fire fighter serving a community with wildland or interface fire conditions. State mandated. Pass/No Pass.) This course does not apply to the Associate Degree.

This course provides the fire fighter company officer student with new information and skill development to maintain efficiency and effectiveness as a company officer and fire fighter. New policies, procedures and equipment are presented and student demonstrates proficiency in using tools, tactics and strategies for managing personnel, budgets and legal responsibilities in today's fire service.

FIRE 10D HAND CREW FIRE FIGHTER SKILLS MAINTENANCE

Units: 3.5

24-27 hours lecture and 96-108 hours laboratory

(Prerequisites: Employment as a hand crew fire fighter with a modern fire service agency. State mandated. Pass/No Pass.) This course does not apply to the Associate Degree.

This course provides the fire fighter student with new information and skill development to maintain efficiency and effectiveness as a wild land hand crew fire fighter. New policies, procedures and equipment are presented and student demonstrates proficiency in using tools, tactics and strategies for constructing and maintaining a fire line and other related fire control tactics and operations. CDF certified.

FIRE 11 LOW ANGLE ROPE RESCUE OPERATIONAL

Units: 0.5

24-27 hours laboratory

(No prerequisite. Recommended preparation: FIRE 11B, FIRE 66 AND FIRE 95. Pass/No Pass) This course does not apply to the Associate Degree.

This course is designed to equip the student with the information, techniques and methods for utilizing rope, webbing, hardware friction devices, and litters in low angle rescue situations. Topics include rope and related equipment, anchor systems, safety lines, stretcher lashing and rigging, mechanical advantage, single line and two line rescue systems. This course is designed for the fire fighter student with essential firefighting skills.

Fire Technology Courses

FIRE 11A RESCUE SYSTEMS I

Units: 1.5

16-18 hours lecture and 24-27 hours laboratory

(Prerequisite: FIRE 11. Pass/No Pass) This course does not apply to the Associate Degree.

The 40-hour State Fire Rescue Systems I course is designed to provide the student with the ability to apply basic search and rescue skills, under the California Urban Search and Rescue Operational levels. Students learn to approach rescue situations safely and understand the organizational concerns at an All-Risk technical rescue incident. Upon completion of the course, the student will receive a California State Fire Marshals Certificate, which is the foundation requirement for other urban search and rescue classes.

FIRE 11B CONFINED SPACE RESCUE AWARENESS

Units: 0.5

8-9 hours lecture

(No prerequisite. Pass/No Pass) This course does not apply to the Associate Degree.

Designed for all fire service personnel. This course provides instruction in identifying a permit and non-permit required confined space, the hazards associated with confined spaces, target industries and hazards, state regulations, communications, and equipment requirements. This course does not qualify participants to make permit required entries. OSFM-SFT certification. Material and FSTEP Certification Fee.

FIRE 11D CONFINED SPACE RESCUE OPERATIONAL

Units: 1.5

16-18 hours lecture and 24-27 hours laboratory

(Prerequisite: FIRE 11 and FIRE 11B. Pass/No Pass) This course does not apply to the Associate Degree.

This course is designed for personnel who in the discharge of rescue duties find themselves working in “immediately dangerous to life and health environments”. This is the 40 hour California State Fire Marshal course required for USAR Team members.

FIRE 11E RAPID INTERVENTION CREW TACTICS

Units: 1.5

16-18 hours lecture and 24-27 hours laboratory

(Prerequisite: Fire Fighter I or equivalent experience, per Office of the State Fire Marshal. Pass/No Pass) This course does not apply to the Associate Degree.

This course is designed to meet OSHA respiratory protection standards for two in/two out and provides students with self survival and basic firefighter rescue skills.

FIRE 11G AUTO EXTRICATION TECHNIQUES

Units: 1.0

8-9 hours lecture and 24-27 hours laboratory

(Prerequisite: Fire Fighter I or equivalent experience, per Office of the State Fire Marshal. Pass/No Pass) This course does not apply to the Associate Degree.

This course is a certified California State Fire Marshal course that provides students with hands-on experience in the procedures and systems utilized during an automobile extrication. Subjects covered include: Auto extrication, types of hand and power tools, removing windows, opening doors, removing roofs, pulling steering wheels, moving foot pedals, raising dashboards, pulling seats, stabilization of vehicles, and simulated rescues of trapped victims.

FIRE 40 FIRE FIGHTER ENTRANCE EXAMINATION TECHNIQUES

Units: 0.5

8-9 hours lecture

(No prerequisite. Grade Option) This course does not apply to the Associate Degree.

This course is designed to prepare the student to take and successfully pass the entrance level fire fighter examination process. Topics discussed include: seeking employment opportunities, the application process, the various examinations given to applicants, oral interviews, and other aspects of the examination process.

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FIRE 40A FIRE FIGHTER PHYSICAL AGILITY ENTRANCE EXAM TECHNIQUES

Units: 1.0 | **48-54 hours laboratory**

(Prerequisite/Co-requisite: FIRE 95. Pass/No Pass) This course does not apply to the Associate Degree.

This course is designed to prepare the student to take the entrance level firefighter physical agility examination through physical conditioning and specificity training. Students are shown varying entrance exam events often used in the physical agility portions and basic ergonomic techniques. General lecture on health and the importance of firefighter physical fitness. Emphasis on physical conditioning and exercise.

FIRE 51A FIREFIGHTER/EMT PUBLIC SAFETY VERTICAL INTEGRATION

Units: 4.5 | **8-9 hours lecture and 192-216 hours laboratory**

(Prerequisite: FIRE 95)

This course is the field externship portion of the FIREFIGHTER I Academy. Students will spend lab hours in the field with an all-risk fire department performing the duties of a Firefighter/EMT.

FIRE 51F FIRE CONTROL 3B

Units: 0.5 | **24.0-27.0 hours lecture laboratory**

(No prerequisite)

This course is designed to develop fundamental skills in combating structure fires by providing the students with a thorough understanding of fire behavior, ventilation procedures and techniques, interior fire attack, and exterior fire attack using a live-fire simulator. In many cases, this will be the fire fighter's first exposure to live structural fire fighting..

FIRE 51G FIRE CONTROL 4

Units: 0.5 | **24.0-27.0 hours lecture laboratory**

(No prerequisite)

This course provides the knowledge and skills that prepare a firefighter to extinguish an ignitable liquid fire, control a flammable gas fire, and develop an incident action plan for a pipeline emergency.

FIRE 53 HAZARDOUS MATERIALS FIRST RESPONDER OPERATIONAL DECONTAMINATION

Units: 0.5 | **8-9 hours lecture**

(Prerequisite: FIRE 82A. Pass/No Pass)

This course provides the student with the information and skills to safely and competently decontaminate people and equipment at a hazardous materials (haz mat) incident. California Specialized Training Institute (CSTI) certified. Meets federal and state requirements as listed in 29 CFR 1910.120 (q), CCR 5192 (q), NFPA472. \$10.00 fee for CSTI certificate.

FIRE 53A FIRE APPARATUS DRIVER/OPERATOR 1A: EMERGENCY VEHICLE OPERATIONS

Units: 1.5 | **16-18 hours lecture and 24-27 hours laboratory**

(No prerequisite.)

This course provides the student with information on driver responsibilities, recognized standards, and related laws for fire apparatus. Topics include basic inspections, documentation, maintenance, and troubleshooting fire apparatus, and techniques on driving and positioning fire apparatus. Each student also has the opportunity to increase his or her driving skills during simulated driving conditions. Designed for fire service emergency response personnel. (Former course number FIRE 63)

FIRE 54A TRUCK ACADEMY

Units: 2.0 | **96-108 hours laboratory**

(No prerequisite.)

This course is for veteran firefighters or other interested students that want to enhance their knowledge and ability as it pertains to the fire ground operations associated with truck company tactics and strategy. Basic roof construction, vertical and horizontal ventilation, forcible entry, positive and negative ventilation, search and rescue, thermal imaging technology, firefighter safety and survival, rapid intervention tactics, elevator rescue and related truck company operations will be discussed.

Fire Technology Courses

FIRE 55C INCIDENT MANAGEMENT OF THE FIREFIGHTER EMERGENCY

Units: 0.5

24-27 hours lecture

(No prerequisite. Pass/No Pass)

This command level awareness course provides the student with the incident management terminology and methodology that is employed during a fire fighter emergency. Classroom simulations based on case studies allow students to participate in simulated incident command positions during a fire fighter emergency.

FIRE 59 BASIC WILDLAND FIRE FIGHTER ACADEMY

Units: 3.5

48-54 hours lecture and 24-27 hours laboratory

(No prerequisite. Recommended preparation: FIRE 11B Must have/obtain Title 8-Confined Space Awareness certificate; FIRE 82A must have/obtain CSTI Haz-Mat First Responder Operational Certificate; must have/obtain CAL FIRE - EEO/Sexual Harassment Prevention certification; must have/obtain Title 22 - EMS -Public Safety First Aid, or Emergency Medical Responder, or Emergency Medical Technician Basic certification; must have/obtain Title 22 - EMS-CPR/AED Public Safety certification; must have/obtain CAL FIRE - Wildland Firefighter Safety \$ Survival Level 1 certification; must have/obtain FEMA-EMI Online - IS-100, ICS 100, an introduction to the incident command system certification; must have/obtain NWCG - S-190, Introduction to wildland fire behavior (classroom only) certification; must have/obtain FEMA-EMI Online - IS-700, NIMS National Response Plan certification; must have/obtain SFT - Firefighter Survival certification.)

This course presents information and skill development to students seeking employment and a career with a wildland fire agency. Several requisites/entrance skills required for CAL FIRE certification. This course provides 80 hours of the 179 hours of wildland firefighter training required for employment with the California Department of Forestry and Fire Protection (CALFIRE) and includes the basic requirements for the US Forest Service. Upon completion, students will receive National Wildland Coordinating Group (NWCG) certification in I-100, S-110, S-130, S-190, and L-180. Students must have a good attitude and a willingness to work hard.

FIRE 59B WILDLAND FIRE FIGHTER'S SKILLS MAINTENANCE

Units: 1.5

16-18 hours lecture and 24-27 hours laboratory

This course provides the fire fighter student with new information and skill development to maintain efficiency and effectiveness as a wildland fire fighter. New protocols, procedures and equipment are presented and student demonstrates proficiency in using tools, tactics and strategies for fire control. (Previously FIRE 10B)

FIRE 61G FIRE LINE EMERGENCY MEDICAL TECHNICIAN (EMT)

Units: 1.0

16-18 hours lecture

(No prerequisites.: Recommended Preparation: Current EMT-1 certification (state mandated per CFSTES policy), employment as a fire fighter in a public or private fire service organization. Pass/No Pass)

This eight hour course is designed to prepare the fire fighter, Emergency Medical Technician to safely operate at a major wildland fire incident at the fire line location. Course covers duties and responsibilities of the Fire Line EMT; equipment needs, helicopter safety, the Incident Command System (ICS) organization, review of treatments for common fire line injuries, and use of makeshift aids.

FIRE 61J RESCUE SYSTEMS 2

Units: 1.5

16-18 hours lecture and 24-27 hours laboratory

(No prerequisite: Pass/No Pass) This course does not apply to the Associate Degree.

This course is designed for personnel who in the discharge of rescue duties will engage in missions that encompass numerous hazards such as those involving confined spaces, energized electrical services, hazardous materials, adverse weather, unstable structures, high technology rescue tools, emergency building shoring, breaking, breaching, burning and cutting, and lifting and moving heavy objects.

FIRE 61K RESCUE SYSTEMS 3: STRUCTURE COLLAPSE TECHNICIAN

Units: 0.5

24-27 hours laboratory

(No prerequisite. Pass/No Pass)

Bridges the training gap between the California State Fire Training Rescue Systems 2 Advanced Rescue Skills course and the Federal Emergency Management Agency Structural Collapse Technician course. Key topics include: power actuated tools, pneumatic shores, additional tools and techniques for breaking and breaching, cutting a tensioned cable, the "O" course, rigging, and crane operations.

Fire Technology Courses

FIRE 61L ROPE RESCUE TECHNICIAN

Units: 1.0 | 48-54 hours lecture

(No prerequisite)

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 the engineering and operation of simple to complex rescue systems.

FIRE 63A AUTO EXTRICATION

Units: 0.5 | 24-27 hours laboratory

(No prerequisite. Pass/No Pass)

Provides hands-on experience in the procedures and systems utilized during an automobile extrication. Subjects covered include: Auto Extrication, types of hand and power tools, removing windows, opening doors, removing roofs, pulling steering wheels, moving foot pedals, raising dashboards, pulling seats, stabilization of vehicles, and simulated rescues of trapped victims.

FIRE 64 FIRE APARATUS DRIVER/OPERATOR IB: PUMP OPERATIONS

Units: 1.5 | 16-18 hours lecture and 24-27 hours laboratory

(No prerequisite. Recommended preparation: FIRE 95. Pass/No Pass)

The course provides the student with information on pump construction and theory of pump operations. Topics include: methods for performing basic hydraulics and techniques on basic inspections, documentation, maintenance, and troubleshooting fire pumps. Each student also has the opportunity to increase his or her pumping skills during simulated pumping conditions. Designed for fire service emergency response personnel.

FIRE 65 BASIC WILDLAND FIRE CONTROL

Units: 3.5 | 24-27 hours lecture, and 96-108 hours laboratory

Offered Spring. (No prerequisite)

Basic wildland engine and hand-crew training. The course covers fire suppression organizations, fire behavior, meteorology, suppression techniques, and safety. Meets federal fire agencies requirements for employees and mutual aid cooperators.

FIRE 66 BASIC INCIDENT COMMAND

Units: 1.0 | 16-18 hours lecture

(No prerequisite. Recommended preparation: Federal Emergency Management Institute's ICS-100. Pass/No Pass)

This course introduces students to the principles of the Incident Command System (ICS) associated with incident-related performance. Topics include: leadership and management, delegation of authority and management by objectives, functional areas and positions, briefings, organizational flexibility, transitions and transfers. CSFM FSTEP Certification.

FIRE 67 TRENCH RESCUE

Units: 0.5 | 24-27 hours laboratory

(Prerequisite: FIRE 95 with a grade of 'C' or better. Pass/No Pass)

This course is designed to provide hands on techniques for fire service personnel to effect a rescue at an excavation or trench cave-in. Topics include: critical considerations while responding to trenching emergencies; evaluation of cave-in scenes; basic life support procedures and temporary protection for victims; specialized tool usage; shoring techniques; and below grade rescue safety procedures.

FIRE 69 RESCUE PRACTICES

Units: 3.0 | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite. Pass/No Pass)

Rescue practices will provide training for emergency service personnel in reaching victims injured in collisions, cave-ins, collapse, or inaccessible areas such as mountainous terrain. Course includes training in both light and heavy auto extrication and packaging victims for transport; recovery of victims of earth collapse such as trench rescue; basic repelling techniques and use of the basket stretcher.

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FIRE 70 INSTRUCTOR IA – INSTRUCTIONAL TECHNIQUES PART I

Units: 2.5

40-45 hours lecture

(No prerequisite)

This is the first of a three-course series. Topics include methods and techniques for training in accordance with the latest concepts in career education; selecting, adapting, organizing, and using instructional materials appropriate for teaching cognitive lessons; criteria and methods to evaluate teaching and learning efficiency; and an opportunity to apply major principles of learning through teaching demonstrations. Two (2) student instructor teaching demonstrations are required of all. Designed for personnel preparing for company officer, SFT registered instructor or training officer position.

FIRE 70C TRAINING INSTRUCTOR 1C: INSTRUCTIONAL DEVELOPMENT TECHNIQUES

Units: 2.5

40-45 hours lecture

(Prerequisite: FIRE 70 and FIRE 71 completed with a grade of "B" or better, or Training Instructor 1A and 1B certification taken from another school.)

This is the third of a three-course series. Topics include methods and techniques for developing lesson plans, ancillary components, and tests in accordance with the latest concepts in career education. The course offers the opportunity to develop, receive feedback, and finalize instructional materials and deliver a teaching demonstration. Two (2) student instructor teaching demonstrations are required of all.

FIRE 71 TRAINING INSTRUCTOR 1B – PSYCHOMOTOR LESSON DELIVERY

Units: 2.5

40-45 hours lecture

(Prerequisite: FIRE 70 with a grade of C or better.)

This is the second of a three-course series. Topics include methods and techniques for training in accordance with the latest concepts in career education; selecting, adapting, organizing, and using instructional materials appropriate for teaching psychomotor lessons; criteria and methods to evaluate teaching and learning efficiency; and an opportunity to apply major principles of learning through teaching demonstrations. Two student instructor teaching demonstrations are required of all. Designed for personnel preparing for a Company Officer, SFT Registered Instructor, or Training Officer position.

FIRE 72 COMMAND IA – STRUCTURE FIRE COMMAND OPERATIONS FOR COMPANY OFFICERS

Units: 2.0

32-36 hours lecture

(Prerequisite: FIRE 66 minimum grade B or valid ICS 200 certificate or equivalent. Pass/No Pass.)

This State Fire Marshal course offers an introduction to command principles, command safety and risk management principles. Company officer initial actions at an incident including the development of incident priorities, strategy, and tactics. Information on the roles and responsibilities of a Company Officer for post-incident actions and the opportunity to gain experience in a controlled environment through structure fire incident simulations.

FIRE 72C FIRE COMMAND 1C I-ZONE FIREFIGHTING FOR COMPANY OFFICERS

Units: 2.0

32-36 hours lecture

(No prerequisite)

This course is designed around the responsibilities of the Company Officer at a wildland/urban interface incident. It will bring the structural Company Officer out of the city and into the urban/interface incident. In other words, from his or her comfort zone into an area that could very well be quite unfamiliar. This course is required for Fire Officer Certification by the Office of the State Fire Marshal.

FIRE 73 FIRE COMMAND IB – INCIDENT MANAGEMENT FOR COMPANY OFFICERS (1998)

Units: 2.0

32-36 hours lecture

(Prerequisite: SFT Command 1A and ICS 200 certification.)

Designed for first-in incident commander and company officers. This course provides the student with information on tactics, strategies, and scene management for multi-casualty incidents, hazardous materials incidents, and wildland fires. Each student also has the opportunity to increase his or her knowledge and skills by handling initial operations at these types of incidents through simulation and class activities. This course applies to Fire Officer Certification.

Fire Technology Courses

FIRE 74 FIRE PREVENTION IA

Units: 2.0 | **32-36 hours lecture**

(No prerequisite. Recommended preparation: FIRE 102.)

Designed for the entry-level fire inspector. Upon completion of this course, the student will have a basic knowledge of the certification and capstone task book process; the role of the fire inspector including; the inspection process; how to investigate, document, and resolve complaints; the legal process as it relates to the role of the fire inspector; permit types and processes; plan review; and public education including its purpose and how to evaluate needs and select a delivery model.

FIRE 74C FIRE PREVENTION 2A

Units: 2.5 | **40-45 hours lecture**

(No prerequisite)

This course provides the most up-to-date information on laws and regulations pertaining to systems, description, installations and problems relating to fire protection systems. This course is specifically designed for in-service fire department personnel wishing to complete their Prevention Officer II certification.

FIRE 74D FIRE PREVENTION 2B

Units: 2.5 | **40-45 hours lecture**

(Prerequisite: Completion of State Fire Training (SFT) Fire Prevention Officer Certification Track)

This course provides the participants with extensive, in depth information about the fire and life safety standards of buildings as they relate to Titles 19 and 24. Topics for discussion include: Types of construction, construction methods and materials, interior finishes, roof coverings, occupancy and more.

FIRE 74E FIRE PREVENTION 2C

Units: 2.5 | **40-45 hours lecture**

(Prerequisite: Completion of State Fire Training (SFT) Fire Prevention Officer Certification Track)

This course introduces the participants to unique and unusual prevention challenges. Topics include: Industrial ovens, cleaning and finishing processes, welding, refrigeration systems, medical gases, fireworks, and special extinguishing systems.

FIRE 75 FIRE PREVENTION IB

Units: 2.0 | **32-36 hours lecture**

(No prerequisite)

This course provides the most up-to-date information on laws and regulations pertaining to systems, description, installations and problems relating to fire protection systems. This course is specifically designed for in-service fire department personnel wishing to complete their SFT Prevention Officer I Certification.

FIRE 76 MANAGEMENT 1-SUPERVISION FOR COMPANY OFFICERS

Units: 2.5 | **40-45 hours lecture**

(No prerequisite)

This course is designed to prepare or enhance the first line supervisor's ability to supervise subordinates. It introduces key management concepts and practices utilized in the California Fire Service. The course includes discussions about decision making, time management, leadership styles, personnel evaluations, and counseling guidelines. This course applies to Fire Officer certification.

FIRE 77 INVESTIGATION IA

Units: 2.5 | **40-45 hours lecture**

(Recommended Preparation: FIRE 102)

This course provides the student with an introduction and basic overview of fire scene investigation. Provides information on fire scene indicators, and introduces fire service personnel to the concepts of fire investigation. Applies to Fire Officer and Fire Investigator I certification.

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FIRE 78 FIRE PREVENTION IC

Units: 2.0

32-36 hours lecture

(No prerequisite)

This course provides the student with information on how to safely store, handle, dispense and transport flammable liquids and gases. Topics of discussion include: bulk handling and storage requirements, transportation of flammable and combustible liquids and gases, fire code requirements for storage outdoors, indoors, inside special rooms and portable container requirements. Applies towards Fire Prevention Officer I certification.

FIRE 82 HAZARDOUS MATERIALS FIRST RESPONDER AWARENESS

Units: 0.5

8-9 hours lecture

(No prerequisites)

This course is designed to provide the student with information essential to those people who are likely to be first responders at hazardous materials incidents. Designed to meet federal and state requirements for awareness training for employees handling and using hazardous materials.

FIRE 82A HAZARDOUS MATERIALS FIRST RESPONDER OPERATIONAL

Units: 1.5

24-27 hours lecture

(No prerequisite. Pass/No Pass)

This course provides the students with a fundamental knowledge of the factors affecting operating procedures at a Hazardous Material Incident. This course will improve the capabilities of the first responder to respond to a Haz Mat event in a safe and competent manner, within the typical resource and capability limits at the "operational" level. This course meets the First Responder Operational Haz Mat Emergency Response certified course requirements of California Code of Regulations (CCR) Title 19, Division 2, Chapter 1, Subchapter 2, Sections 2510-2560.

FIRE 86 INTERMEDIATE INCIDENT COMMAND SYSTEM (ICS)

Units: 1.5

24-27 hours lecture

(Prerequisite: FIRE 66 or experience as an Emergency Responder using the ICS system. Pass/No Pass)

This course provides training on resources for personnel who require advanced application of the Incident Command System (ICS). The target audience for this course is for individuals who may assume a supervisory role in expanding incidents or Type 3 incidents. These incidents may extend into multiple operational periods. This course expands upon information covered in the ICS-100 and ICS-200 courses. This course will include but not be limited to: unified command, incident/event assessment and objective development, the ICS planning process, incident/event resource management, transfer of command and demobilization.

FIRE 95 BASIC FIRE ACADEMY

Units: 13.0

120-135 hours lecture and 264-297 hours laboratory

(Prerequisite: FIRE 11B with a grade of "C" or better, or CA State Fire Marshall Confined Space Awareness Certificate; FIRE 82A with a grade of "C" or better, or CSTI HazMat FRO First Responder Operational Certificate; FIRE 66 with a grade of "C" or better, or I200 Cert.; and EMS 60 with a grade of "C" or better, or EMT certification.)

Basic Fire Academy provides basic training for individuals interested in becoming a career firefighter. Comprehensive introduction to basic firefighting theory and skills required in modern firefighting, including: study of characteristics and behavior of fire; practice in fundamental fire suppression activities with special attention on safety; practice in basic rescue techniques; study of public service principles and fire service etiquette. Students must attend a mandatory orientation.

FIRE 100 PRINCIPLES OF EMERGENCY SERVICES

Units: 3.0

CSU 48-54 hours lecture

(No prerequisite)

This course provides an overview to fire protection and emergency services; career opportunities in fire protection and related fields; culture and history of emergency services; 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; life safety initiatives.

Fire Technology Courses

FIRE 101 FUNDAMENTALS OF FIRE SERVICE OPERATIONS

Units: 3.0 CSU | 48-54 hours lecture

(No prerequisite)

Provides the student with the fundamentals of fire department organization, management, and resources, and emphasizes the use of those resources to control various emergencies.

FIRE 102 FIRE PREVENTION TECHNOLOGY

Units: 3.0 CSU | 48-54 hours lecture

(No prerequisite)

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.

FIRE 103 FIRE PROTECTION SYSTEMS

Units: 3.0 CSU | 48-54 hours lecture

(No prerequisite. Recommended preparation: FIRE 100)

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.

FIRE 104 FIRE BEHAVIOR AND COMBUSTION

Units: 3.0 CSU | 48-54 hours lecture

(No prerequisite)

This course will study the 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.

FIRE 105 BUILDING CONSTRUCTION FOR FIRE PROTECTION (Formerly FIRE 69)

Units: 3.0 CSU | 48-54 hours lecture

(No prerequisite)

This course provides the components of building construction that relate to fire and life 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 emergencies.

FIRE 107 FIRE INVESTIGATION

Units: 3.0 CSU | 48-54 hours lecture

(No prerequisite)

A study of the origin of any and all types of fires (accidental, incendiary, and suspicious); and law relating to fire investigation. Recognizing, collecting, and preserving evidence, interviewing witnesses and suspects, arrest and detention procedures, court procedures and giving a testimony.

FIRE 108 FIRE HYDRAULICS

Units: 3.0 CSU | 48-54 hours lecture

(No prerequisite)

Review of applied mathematics; hydraulics laws as applied to the fire service; application of formulas and mental calculation to hydraulics and water supply problems.

FIRE 109 WILDLAND FIRE CONTROL

Units: 3.0 CSU | 48-54 hours lecture

(No prerequisite)

This course is designed to provide students with a fundamental knowledge of the factors affecting wildland fire prevention, fire behavior, and control techniques.

Fire Technology Courses

FIRE 110 PRINCIPLES OF FIRE AND EMERGENCY SERVICES SAFETY AND SURVIVAL (Formerly FIRE 68)

Units: 3.0 **CSU** | 48-54 hours lecture

(No prerequisite)

This course introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavioral change throughout the emergency services.

FIRE 121 FIRE MANAGEMENT 2B

Units: 2.0 **CSU** | 32-36 hours lecture

(No prerequisite)

This course is designed to provide information and insight into the cyclical nature of budgeting and financial management. As a management course, the student will be presented with the essential elements of financial planning, budget preparation, budget justification, and budget controls. This course applies to Chief Officer Certification.

FIRE 138 COOPERATIVE EDUCATION

See Cooperative Education listing. Units: 1-8 **CSU**

FIRE 148 SPECIAL TOPICS

See Special Topics listing. Units: Variable units **CSU**

FIRE 149 INDEPENDENT STUDY

See Independent Study listing. Units: 1-3 units **CSU**