

Course Outline of Record

Los Medanos College

2700 East Leland Road

Pittsburg CA 94565

Course Title: Firefighter 1 Academy

Subject Area/Course Number: FIRE-120

New Course OR Existing Course

Author(s): Mike Grillo and Ricky Hurtado

Subject Area/Course No.: FIRE-120

Units: 16

Course Title: Firefighter 1 Academy

Discipline(s): Fire Technology

Pre-Requisite(s): Satisfactory completion of Fire 101 and Fire 102 or equivalent
Satisfactory completion of an Emergency Medical Technician training program including
Current NREMT or California State EMT license or certification
Satisfactory completion of Fire 106 or satisfactory completion of the Candidate Physical Ability Test (CPAT)
Successful clearance of standard medical physical exam within 6 months prior to the Fire Academy
Fire Cadets are required to carry their own medical insurance

Advisories: English 95

Catalog Description: The Firefighter 1 Academy at Los Medanos College prepares students (cadets) for entry-level jobs in firefighting careers. This course provides the minimum level of training required by the California State Fire Marshall and prepares the cadet for jobs serving as volunteer, reserve and career Firefighters. The Firefighter 1 Academy also leads toward California State Firefighter 1 Certification track. The California State Firefighter 1 curriculum, guidelines and assessments are closely followed and delivered throughout this academy. Standards of performance in written exams and skill demonstrations are established by The Office of the State Fire Marshall utilizing IFSAC (International Fire Service Accreditation Congress) and Pro-Board Fire professional qualification system testing standards. The Firefighter 1 Academy is fully accredited by the California State Fire Marshal and the California State Board of Fire Services. Los Medanos College has been approved by State Fire Training as an Area Regional Training Program (ARTP). There is a mandatory orientation required for this course.

Mandatory fees apply for State Certificates issued and for capstone testing and other activities during the Firefighter 1 Academy

Schedule Description: The Basic Fire Academy prepares you for entry-level jobs involving exciting and rewarding careers in the Field of FIRE and EMS. Successful completion of the fire academy leads toward California State Firefighter 1 Certification. This capstone course provides you with hands-on experience using fire tools and equipment. This is a great opportunity for potential fire fighters to learn firefighting procedures on the drill ground while involved in group dynamics. Many students (cadets) begin volunteer, reserve and entry-level jobs in the fire service after successfully completing our academy. The Los Medanos Fire Academy is a physically demanding and academically challenging course designed to provide our Fire Cadets with the soft skills, academic and technical knowledge needed to function as an entry level Firefighter in the State of California. There is a mandatory orientation required for this course. **Mandatory fees apply for State Certificates issued and for capstone testing and other activities during the Firefighter 1 Academy.**

Hrs/Mode of Instruction: Lecture: 228 Lab: 180 Activity: ____ Total Hours 408

Credit Credit Degree Applicable (DA)
 Credit Non-Degree (NDA)

Grading Pass/No Pass (P/NP)
 Letter (LR)
 Student Choice (SC)

Repeatability 0
 1
 2
 3

Last date of Assessment: September 2016

Cohort #: 2

Please apply for: LMC General Education Requirement(s): None

Transfer to: CSU UC IGETC Area ____ CSU GE Area ____ C-ID Number ____

Course is Baccalaureate Level: Yes No

Course Outline of Record

Los Medanos College

2700 East Leland Road

Pittsburg CA 94565

Course Title: Firefighter 1 Academy

Subject Area/Course Number: FIRE-120

Signatures:

Department Chair _____ Date _____
Librarian _____ Date _____
Dean (Technical Review) _____ Date _____
Curriculum Committee Chair _____ Date _____
President/Designee _____ Date _____
CCCCD Approval Date (Board or Chancellor's Office) _____ Date _____

STAND ALONE COURSE: YES NO

Course approved by Curriculum Committee as Baccalaureate Level: XX YES NO

LMC GE Requirement Approved by the Curriculum Committee: none

FOR OFFICE OF INSTRUCTION ONLY. DO NOT WRITE IN THE SECTION BELOW.

Begin in Semester _____ Catalog year 20____/20____ Class Max: _____
Dept. Code/Name: _____ T.O.P.s Code: _____ Crossover course 1/ 2: _____
ESL Class: Yes / No _____ DSPS Class: Yes / No _____ Coop Work Exp: Yes / No _____

- Class Code A Liberal Arts & Sciences SAM Code A Apprenticeship Remediation Level B Basic Skills
 B Developmental Preparatory B Advanced Occupational NBS Not Basic Skills
 C Adult/Secondary Basic Education C Clearly Occupational
 D Personal Development/Survival D Possibly Occupational
 E For Substantially Handicapped E* Non-Occupational
 F Parenting/Family Support
 G Community/Civic Development *Additional criteria needed
 H General and Cultural 1 One level below transfer
 I Career/Technical Education 2 Two levels below transfer
 J Workforce Preparation Enhanced 3 Three levels below transfer
 K Other non-credit enhanced
 Not eligible for enhanced

Course Outline of Record

Los Medanos College

2700 East Leland Road

Pittsburg CA 94565

Course Title: Firefighter 1 Academy

Subject Area/Course Number: FIRE-120

Institutional Student Learning Outcomes:

General Education SLOs:

At the completion of the LMC general education program, a student will:

1. read critically and communicate effectively as a writer and speaker.
2. understand connections among disciplines and apply interdisciplinary approaches to problem solving.
3. think critically and creatively
4. consider the ethical implications inherent in knowledge, decision-making and action.
5. possess a worldview informed by diverse social, multicultural and global perspectives.

None

Program-Level Student Learning Outcomes (PSLOs):

Upon completion of this course the student(cadet) will:

PSLO #1 Be academically prepared to obtain an entry-level firefighter position in the state, county and/or municipal fire departments.

PSLO #2 Be able to Engage critical thinking in exercises to analyze and synthesize general firefighting information, firefighting procedures and other emergency situations.

PSLO #3 Be able to Demonstrate communication skills (written and/or oral) as it relates to effective team performance and maintaining systems for accurate communication in firefighting and emergency operations.

PSLO #4 Apply industry standards using materials, equipment and technology for efficient and safe firefighting.

PSLO #5 Demonstrate the skills and knowledge required to complete the CSFM/SFT Capstone certification exam for Firefighter 1 candidates.

Course-Level Student Learning Outcomes (CSLOs):

CSLO #1 Describe and explain roles, functions, duties and responsibilities of a professional Firefighter (PSLO 1, 3)

CSLO #2 Display leadership and interpersonal skills expected of a professional Firefighter (PSLO 3,5)

CSLO #3 Identify and use firefighting equipment and firefighting techniques to effectively extinguish fires, rescue victims, protect the environment and save property. (PSLO 3, 4, 5)

CSLO #4 Inspect, operate and maintain firefighting equipment in a safe and approved manner (PSLO 1, 2)

Assessment Instruments:

	Manipulative skill assessments	Drill ground Evolutions	Chapter Quizzes	Midterm	Final Exam	Certification/Capstone Exams
CSLO 1	X		X	X	X	X
CSLO 2	X		X			X
CSLO 3	X	X	X			X
CSLO 4	X	X	X	X	X	X

CSLO 1:

Assessment: Students take unit/chapter quizzes, midterms and a final exam that assess their knowledge of the roles, functions and responsibility of a professional firefighter.

Description: Students will be assessed by showing their ability to describe and explain a typical fire departments functions and duties of their personnel. They must also list the specific levels of a typical Fire department organization by diagramming an organizational chart showing the proper chain of command and their respective responsibilities therein.

Course Outline of Record

Los Medanos College

2700 East Leland Road

Pittsburg CA 94565

Course Title: Firefighter 1 Academy

Subject Area/Course Number: FIRE-120

Rationale: Entry level positions within the Fire service require candidates to have a vast mental bank of information such as listed above to compete a highly competitive selection process and to complete their probationary period once hired.

SAMPLE QUESTION.

On fire extinguishers, which symbol represents combustible metals or class D fuels?

- Star
- Square
- Triangle
- Circle

CSLO 2:

Assessment: Display leadership and interpersonal skills and adhere to all rules and regulations found in the Fire Cadet Recruit Manual.

Description: Cadets will be evaluated on their ability to display leadership and interpersonal skills expected of a professional Firefighter. Cadets will be expected to follow a strict chain of command and to be respectful of themselves, other cadets and Fire Academy staff always. Cadets will be given uniform inspections, be asked to participate in community service projects.

Rationale: An inherent part of firefighting is the ability of the individual to be able to get along with their teammates, the public and to be able to resolve any interpersonal conflicts that may arise from such interactions. Additionally, cadets will be placed in leadership positions and will be expected to coordinate a number of activities performed by professional firefighters following industry standards.

SAMPLE: Cadets are responsible for keeping track of their teammates' location when operating on the drill ground.

Assessment tool, verbal quiz

Engine Company #4, what is your PAR (personal accountability report)?

Proper response: **"All fire cadets are present and accounted for Sir/ Ma'am" or "Sir or Ma'am, Cadet X loading hose around the corner, all others cadets are present and accounted for Sir or Ma'am"**

CSLO 3: Identify and use firefighting equipment and firefighting techniques to effectively extinguish fires, rescue victims, protect the environment and save property. (PSLO 3, 4, 5)

Assessment: Students take unit/chapter quizzes, midterms, final exams and manipulative skills exams that assess their knowledge and abilities while performing in any of the 12 essential areas of firefighting. These twelve essential areas are required for continued accreditation by the California State Fire Marshal's Office and are listed below.

Description: Students receive training on the following manipulative skills. These skills are taught per State and Local guidelines. Step by step approved procedures and techniques are utilized. Students are allowed ample practice time using to further develop their skills in following procedures and techniques while using fire equipment in scenario situations. Students then are assessed in each of the following twelve areas as they given a specific task while being evaluated on their ability to complete the task in an approved, appropriate and safe manner.

The students are assessed throughout the semester on the following 12 areas:

1. *apparatus and equipment operations:*
2. *self-contained breathing apparatus,*
3. *ropes, knots and hitches*
4. *fire extinguishers*
5. *hose, nozzles, and fittings*
6. *ladders*
7. *auto extrication*

Course Outline of Record

Los Medanos College

2700 East Leland Road

Pittsburg CA 94565

Course Title: Firefighter 1 Academy

Subject Area/Course Number: FIRE-120

8. *confined space rescue*
9. *hazardous materials*
10. *wild land S130/190*
11. *firefighter safety and survival*
12. *search and rescue*
13. *fire attack*
14. *water supply and master appliance*
15. *Confine space awareness*

Rationale: The fire service is a rather complex career. Individuals must possess and maintain a very high level of proficiency in the selection and use of a multiple type of equipment. They must earn various fire certificates and then participate in continuing education to re-certify.

EXAMPLE "Demonstrate the proper use of a standard FIRE SHELTER"

Additional: State certified assessment from the California State Fire Marshalls office are used as testing instruments during the fire academy. They are Auto Extrication, Hazardous Materials, Wildland S-130, Wildland S-190, Firefighter Survival, ICS-200 and Confined Space Rescue Awareness. Students take these individual written exams or skills assessments that assess their knowledge in effective use firefighting equipment and techniques. The overarching catalyst is their ability to extinguish fires, rescue people, protect the environment and save property all in a safe yet aggressive manner. The state requires 80% accuracy in these areas in order to issue a certificate.

CSLO 4: Inspect, operate and maintain firefighting equipment in a safe and approved manner

Assessment: Students take unit/chapter quizzes, midterm, final exam and manipulative field exams that assess their knowledge of how to safely inspect, operate and maintain firefighting equipment.

Description: Students are assessed as they identify, discuss and present approved inspection, operation and maintenance procedures of specific fire equipment.

Field Exam: Students are given equipment and asked to inspect operate and maintain that piece of equipment. They are assessed on their ability to perform equipment inspection, operation and maintenance per NFPA and Manufacturer's maintenance manuals. The ability to inspect, use and maintain fire equipment is consistent with common practices utilized in the industry.

EXAMPLES – Safely inspect and start a chain saw per the NFPA and IFSTA standards and Manufacturer's manuals

Method of Evaluation/Grading:

1. Written Examinations (ONLINE) testing / written assessments
2. Online homework, discussions, field exercises, problem based learning and other course work as assigned by the lead instructor.
3. Manipulative skills testing and capstone practical and written computerized test will be administered under the auspice of SFT in conjunction with Pro-board and IFSAC accrediting agencies.
4. Student behavior, interpersonal skills, adherence to SOG/SOPs, uniform décor, physical battery tests will also be tested and/or assessed throughout this course.

EVALUATION:

CSLO #1: Describe and explain roles, functions, duties and responsibilities of a professional firefighter (PSLO 1, 3). **A-level student work** is characterized by: clear proficiency in knowledge of the roles, responsibilities, and professional expectations of an entry level Firefighter as demonstrated by achievement of **a score of 90% or better** on the written final exam; evidence of professionalism, respect, dedications in fire ground evolutions and evaluations of being on-time and prepared, arriving in the proper uniform, meeting the affiliated agency's grooming standards, eagerness to participate and learn, and application of the roles and responsibilities of an Entry Level Firefighter in a working environment, as indicated by excellent evaluations during the fire cadets participation during the duration of the Fire Academy.

Course Outline of Record

Los Medanos College

2700 East Leland Road

Pittsburg CA 94565

Course Title: Firefighter 1 Academy

Subject Area/Course Number: FIRE-120

B-level student work is characterized by: basic competence in knowledge of the roles, responsibilities, and professional expectations of an entry level Firefighter, as demonstrated by achievement of a score of 80% to 89.9% on the written final exam; evidence of professionalism, some dedication and some drive during fire ground evolutions based on the evaluations of being on-time and prepared, arriving in the proper uniform, meeting the affiliated agency's grooming standards with minor problems, a willingness to participate and learn, and application of the roles and responsibilities of an entry level Firefighter in a working environment with few problems, as indicated by acceptable evaluations during their participation and duration of the fire academy.

F-level student work (failure) is characterized by: lack of a basic knowledge of the roles, responsibilities, and professional expectations of an entry level Firefighter, as demonstrated by failure to achieve a minimum passing score of 80% on the written final exam, failure to abide by basic safety rules and/or failure to achieve a passing score after any of the manipulative evolutions.

CSLO #2: Display leadership and interpersonal skills and adhere to all rules and regulations found in the Fire Cadet Recruit Manual.

A-Level Student Work is characterized by a clear, concise and superior understanding of all the rules and regulations found in the Fire Cadet manual, as well as strict adherence to these rules by the cadet, as demonstrated in daily notes and in periodical review of the cadet performance as evidence of a strong work ethic, initiative, drive and flawless uniform inspections results. Consistently exceeds all expectations from Fire Academy and Staff.

B-level student work: Acceptable, basic understanding of rules and regulations, cadet is on time most of the time and performs in an acceptable manner during uniform inspections. Cadet can meet the standard in all phases of his/her training but does not exceed expectations of Fire Academy and staff.

F-level student work: Cadet is not familiar or shows poor to no understanding with the rules and regulations found in the Cadet's Manual. Cadet is consistently late, shows no initiative or drive and is out of uniform and/or lacks basic personal hygiene expected of a professional firefighter. Cadet is chronically absent and shows disregard for attendance guidelines as enumerated in the Cadet's handbook. Cadet consistently fails to show professional conduct expected of a professional Firefighter.

CSLO #3: Identify and use firefighting equipment and firefighting techniques to effectively extinguish fires, rescue victims, protect the environment and save property. (PSLO 3, 4, 5)

A-Level Student Work: is characterized by a clear and superior understanding of the operation of firefighter equipment and the correct application of any firefighting techniques. Skills testing shows superior application, evaluation and synthesis of all the cognitive and psychomotor knowledge and skills required to operate firefighter equipment and a flawless demonstration of practical skills when assessed. Written assessments show mastery of critical concepts as evidence by obtaining a score of 90%-100% on any cognitive assessment and by first time passing on any hands-on skills or demonstrations.

B-Level Student Work: is characterized by a basic and acceptable understanding of the core concepts regarding the correct application and operation of firefighting equipment and application of firefighting techniques. Skills testing shows an acceptable level of competence as evidence by successful performance during skill testing sessions and/or certification testing after the second attempt. Written scores on any and all examinations are within the ranges of 80% to 89.9%.

F-level Student Work: inability or unwillingness to achieve a score of 80% or higher during any and all written/online examinations. Inability to achieve a passing score as evidence by acceptable performance of any firefighting skill during skill testing sessions after a second attempt. Failure to grasp basic firefighting concepts and firefighting techniques, this might include any safety violations or critical failures.

CSLO#4: Inspect, operate and maintain firefighting equipment in a safe and approved manner (PSLO 1,2)

A-Level Student Work: is characterized by a clear and superior understanding of the operation of firefighter equipment and the correct application of any firefighting techniques. Skills testing shows superior application, evaluation and synthesis of all the cognitive and psychomotor knowledge and skills required to operate and to properly maintain firefighter equipment. Written examinations fall between 90%-100% and skills testing shows a flawless performance with minimal errors and no safety violations or critical failures.

B-Level Student Work: is characterized by an acceptable level of competence as evidence by the ability of the Fire Cadet to score between 80%-89.9% during all written examinations. Skills testing shows an acceptable performance with no critical failures or safety violations.

F-Level Student Work: is characterized by the failure of the cadet to demonstrate an acceptable level of competence in all skills tested during the fire academy. A written score of less than 80% and the failure of the cadet to successfully

Course Outline of Record

Los Medanos College

2700 East Leland Road

Pittsburg CA 94565

Course Title: Firefighter 1 Academy

Subject Area/Course Number: FIRE-120

achieve a passing score after the second attempt at any skill including the proper maintenance and inspection of all fire equipment.

Additional/Standard: Cadets can remediate any weekly quiz in which a cadet has not achieved the minimum passing score of 80%. In doing so a cadet may take a makeup quiz covering the same information, however, a cadet must achieve a minimum passing score of 80% or higher on the retake. Cadets may only retake any quiz once and they cannot exercise this provision more than 3 times throughout the whole academy. Cadets not achieving minimum passing scores on the 3 re-take of quizzes, manipulative and or field exams are dismissed from the fire academy. Cadets not achieving the minimum passing score of 80% on the midterm or the final exam are dismissed from the fire academy, additionally any Cadet not meeting physical conditioning standards and/or any absence more than 18 hours for any reason shall be dismissed from the Fire Academy.

HOMEWORK- Cadets will be completing online testing/homework, and will be required to take a capstone exam which includes both written and practical skills following IFSAC and Pro-Board certification testing standards.

Course Content:

Unit 1: Introduction

Topic 1-1: Orientation and Administration

Topic 1-2: Fire Fighter 1 and 2 Certification Process

Topic 1-3: Fire Fighter 1 Roles and Responsibilities

Topic 1-4: Fire Fighter 2 Roles and Responsibilities

Unit 2: Fire Fighter Safety

Topic 2-1: Operating within the Incident Command System

Topic 2-2: Health and Safety Awareness

Topic 2-3: Behavioral Health and Cancer Awareness

Topic 2-4: Structural Personal Protective Ensemble

Topic 2-5: Self-Contained Breathing Apparatus

Topic 2-6: Using SCBA During Emergency Operations

Topic 2-7: Doffing SCBA and PPE for Gross Decontamination

Topic 2-8: Responding on an Apparatus to an Emergency Scene

Topic 2-9: Establishing and Operating in Work Areas at Emergency Scenes

Unit 3: Communications

Topic 3-1: Receiving a Non-Emergency Telephone Call

Topic 3-2: Initiating a Response to a Reported Emergency

Topic 3-3: Transmitting and Receiving Messages Via Radio

Topic 3-4: Completing a Basic Incident Report

Topic 3-5: Communicating the Need for Team Assistance

Unit 4: Fire Tools and Equipment

Topic 4-1: Utilizing Ropes and Knots

Topic 4-2: Utilizing Hand and Power Tools

Topic 4-3: Operating Emergency Scene Lighting

Topic 4-4: Operating an Air-Monitoring Instrument

Topic 4-5: Maintaining Power Plants, Power Tools, and Lighting Equipment

Unit 5: Structural Fire Suppression

Topic 5-1: Building Construction

Topic 5-2: Fire Behavior

Topic 5-3: Extinguishing Fire with Fire Extinguishers

Topic 5-4: Water Supply Systems

Topic 5-5: Cleaning, Inspecting, and Returning Fire Hose to Service

Topic 5-6: Performing an Annual Service Test on Fire House

Topic 5-7: Deploy and Connect Fire Hose

Topic 5-8: Utility Control at Emergencies

Topic 5-9: Cleaning, Inspecting, and Maintaining Fire Service Ladders

Topic 5-10: Ground Ladder Operations

Topic 5-11: Forcing Entry into a Structure

Course Outline of Record

Los Medanos College

2700 East Leland Road

Pittsburg CA 94565

Course Title: Firefighter 1 Academy

Subject Area/Course Number: FIRE-120

Topic 5-12: Conducting a Search and Rescue Operation in a Structure

Topic 5-13: Attacking an Interior Structure Fire

Topic 5-14: Coordinating an Interior Attack Line

Topic 5-15: Horizontal Ventilation Operations

Topic 5-16: Vertical Ventilation Operations

Topic 5-17: Conserving Property

Topic 5-18: Overhauling a Fire Scene

Unit 6: Fire Fighter Survival

Topic 6-1: Structural Fire Fighter Survival

Unit 7: Suppression of Fires Outside of a Structure

Topic 7-1: Extinguishing Fires in Exterior Class A Materials

Topic 7-2: Attacking a Passenger Vehicle Fire

Topic 7-3: Combatting a Ground Cover Fire

Topic 7-4: Extinguishing an Ignitable Liquid Fire

Topic 7-5: Controlling a Flammable Gas Cylinder Fire

Unit 8: Rescue Operations

Topic 8-1: Extricating a Victim Entrapped in a Motor Vehicle

Topic 8-2: Assisting Rescue Operation Teams

Unit 9: Fire and Life Safety

Topic 9-1: Performing a Fire Safety Survey in an Occupied Structure

Topic 9-2: Presenting Fire Safety Information to Station Visitors or Small Groups

Topic 9-3: Preparing a Pre-incident Survey

Lab By Arrangement Activities (If Applicable): n/a

Instructional Methods:

- Lecture
- Lab
- Activity
- Problem-based Learning/Case Studies
- Collaborative Learning/Peer Review
- Demonstration/Modeling
- Role-Playing
- Discussion
- Computer Assisted Instruction
- Other: Community service projects

Textbooks:

Jones and Bartlett, Fundamentals of Fire Fighter Skills and Hazardous Materials Response, 4th Edition
(Navigate 2) Web enhanced textbook (E-textbook)
ISBN # 9781284151428 (2019)

Teie, William, Firefighter's Handbook on Wildland Firefighting, 4th Edition
ISBN # 978-0-87939-676-3 (2018)

First Responder Operations Hazmat/WMD Participant Guide by IAFF/ CSTI or similar (2020)