

FT R180: WILDLAND FIRE ACADEMY

Originator

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College

Oxnard College

Discipline (CB01A)

FT - Fire Technology

Course Number (CB01B)

R180

Course Title (CB02)

Wildland Fire Academy

Banner/Short Title

Wildland Fire Academy

Credit Type

Credit

Start Term

Fall 2022

Catalog Course Description

This course provides the entry level student with the fire behavior knowledge and firefighting skills relevant to basic incident command, wildland firefighting positions, basic crew configurations, firefighter safety in wildland environments, tool, equipment and fundamental water handling, and wildland suppression strategy and tactics. Portable pumps and chainsaws are studied at length, as well as basic tools for land navigation. Leadership values and principles, transition challenges for new leaders, situational leadership, team building and ethical decision making is integrated throughout the course. Students are expected to obtain all required uniforms and safety equipment. State certification costs are the responsibility of the student. This course meets the California State Fire Training (SFT) and the National Wildfire Coordinating Group (NWCG) requirements.

Additional Catalog Notes

Students who have completed an EMT or Paramedic course at another college and have a current certification or license will need to be cleared by the FT R180 Primary Instructor to register in order to waive the EMT R109 or EMT R169 prerequisites.

Taxonomy of Programs (TOP) Code (CB03)

2133.00 - *Fire Technology

Course Credit Status (CB04)

D (Credit - Degree Applicable)

Course Transfer Status (CB05) (select one only)

B (Transferable to CSU only)

Course Basic Skills Status (CB08)

N - The Course is Not a Basic Skills Course

SAM Priority Code (CB09)

C - Clearly Occupational

Course Cooperative Work Experience Education Status (CB10)

N - Is Not Part of a Cooperative Work Experience Education Program

Course Classification Status (CB11)

Y - Credit Course

Educational Assistance Class Instruction (Approved Special Class) (CB13)

N - The Course is Not an Approved Special Class

Course Prior to Transfer Level (CB21)

Y - Not Applicable

Course Noncredit Category (CB22)

Y - Credit Course

Funding Agency Category (CB23)

A - Primarily Developed Using Economic Development Funds

Course Program Status (CB24)

1 - Program Applicable

General Education Status (CB25)

Y - Not Applicable

Support Course Status (CB26)

N - Course is not a support course

Field trips

Will be required

Faculty notes on field trips; include possible destinations or other pertinent information

Local hillsides

Grading method

(L) Letter Graded

Does this course require an instructional materials fee?

No

Repeatable for Credit

No

Is this course part of a family?

No

Units and Hours

Carnegie Unit Override

No

In-Class

Lecture

Minimum Contact/In-Class Lecture Hours

122.5

Maximum Contact/In-Class Lecture Hours

122.5

Activity

Laboratory

Minimum Contact/In-Class Laboratory Hours

157.5

Maximum Contact/In-Class Laboratory Hours

157.5

Total in-Class**Total in-Class****Total Minimum Contact/In-Class Hours**

280

Total Maximum Contact/In-Class Hours

280

Outside-of-Class**Internship/Cooperative Work Experience**

Paid

Unpaid

Total Outside-of-Class**Total Outside-of-Class****Minimum Outside-of-Class Hours**

145

Maximum Outside-of-Class Hours

145

Total Student Learning**Total Student Learning****Total Minimum Student Learning Hours**

425

Total Maximum Student Learning Hours

425

Minimum Units (CB07)

10

Maximum Units (CB06)

10

Prerequisites

FT R151 and EMT R109 or EMT R169

Limitations on Enrollment

No acrylic or long nails in clinical settings

Physical examination demonstrating general good health

Entrance Skills**Entrance Skills**

Students will demonstrate the basic knowledge delivered in Fire Protection Organizations.

Prerequisite Course Objectives

FT R151-Illustrate the various types of public and private fire protection equipment and systems.

FT R151-Explain the types of common fire department fire fighting apparatus, equipment, and personal safety equipment used for fire fighting.

FT R151-Define and describe the purpose and scope of fire departments.

FT R151-Recognize the major organizations that contribute to fire protection.

FT R151-Identify the effects of fire on the environment and the historical reactions made to protect society.

FT R151-Analyze the basic components of fire as a chemical reaction, the major phases of fire, and the main factors that influence fire spread and fire behavior.

Entrance Skills

EMT R109, EMT R169, or a currently licensed EMT or Paramedic with Instructor verification.

Prerequisite Course Objectives

EMT R109-Demonstrate the administration of auto-injectors containing atropine and pralidoxime chloride for nerve agent exposure for self or peer care

EMT R109-Identify common causative agents for the administration of naloxone

EMT R109-Identify common types of Hemostatic dressings

EMT R109-Describe and demonstrate training and use of hemostatic dressings

EMT R109-Explain the need to determine scene safety.

EMT R109-Discuss the importance of body substance isolation.

EMT R109-Describe the steps the first responder should take for personal protection.

EMT R109- Discuss the medical, legal and ethical issues in patient care.

EMT R109-Define consent and the methods of obtaining consent.

EMT R109- Explain the importance and legality of patient confidentiality.

EMT R109- Discuss issues of abandonment, negligence and battery and their implications to the first responder.

EMT R109- Describe the anatomy and functions of the body systems.

EMT R109-Define body mechanics when lifting & moving a patient.

EMT R109-Describe the indications of moving emergency and non-emergency patients.

EMT R109-Discuss the components of scene size-up.

EMT R109- Discuss methods of obtaining a primary and secondary patient assessment.

EMT R109-Discuss the components of the on-going assessment.

EMT R109- Define the components of pulmonary resuscitation and airway emergencies.

EMT R109-Explain the steps in providing emergency medical care to a patient with general medical complaint.

EMT R109- Explain the steps in providing care to a patient with a behavior or psychological crisis.

EMT R109-State the emergency medical care for internal and external bleeding.

EMT R109- Describe the emergency medical care of the patient with a soft tissue injury.

EMT R109-Describe the emergency medical care of burns.

EMT R109- Describe the function of the musculoskeletal system.

EMT R109- Describe the emergency medical care for injuries to the extremities, head and spine.

EMT R109-List the steps in the emergency medical care of the mother during pre and post-delivery.

EMT R109-Discuss the steps in caring for a newborn.

EMT R109- Describe the differences in anatomy and physiology of the infant, child, and adult patient.

EMT R109- Discuss emergency medical care of the infant and child for medical and trauma emergencies.

EMT R109-List various methods of gaining access to the patient.

EMT R109- Describe the criteria for a multiple-casualty situation.

EMT R109- Summarize the components of basic triage.

EMT R109-Summarize the indicators for the administration of epinephrine by auto injector for suspected anaphylaxis, including: common causative agents, signs and symptoms of anaphylaxis and assessment findings.

EMT R109-Demonstrate the patient management and manipulative component of epinephrine administration by auto-injector. Including, need for appropriate personal protective equipment, demonstration of aseptic technique, disposal of contaminated items, scene safety awareness and the administration process. Demonstrate the proper disposal of contaminated items and sharps

EMT R109-Summarize the pharmaceutical profile of epinephrine, including: class, mechanisms of drug action, indications, contraindications, dosage and route of administration, side/ adverse effects

EMT R109-Demonstrate administration of naloxone for suspected for suspected narcotic overdose.

EMT R109-Summarize the pharmaceutical profile of naloxone, including: indications, contraindications, side/adverse effects, routes of administration, dosages, drug action, calculating drug dosages.

EMT R109-Demonstrate the patient management and manipulative component of naloxone. Including, need for appropriate personal protective equipment, demonstration of aseptic technique, calculating drug dosages, disposal of contaminated items, scene safety awareness and the administration process. Demonstrate the proper disposal contaminated items and sharps.

EMT R169-Recognize the chain of human resources that forms the EMS system.

EMT R169-Identify how the public activates the EMS system.

EMT R169-Describe the roles and responsibilities of the EMT.

EMT R169- Define the process of EMS quality improvement.

EMT R169-Identify potential hazards and maintain scene safety.

EMT R169- Describe the kind of stress caused by involvement in EMS and the affect on you, your co-workers and your family.

EMT R169-Demonstrate the use of standard precautions and how to protect yourself from transmitted diseases.

EMT R169-Use body mechanics to lift and move patients.

EMT R169-Identify the various devices used to immobilize, move, and carry patients

EMT R169-Demonstrate when it is proper to move a patient in a safe manner.

EMT R169-Describe the scope of practice of the EMT.

EMT R169- Define the legal concepts of torts, negligence, and abandonment.

EMT R169-Describe the responsibilities of an EMT at a crime scene.

EMT R169- Define patient consent.

EMT R169-Know and define medical terminology relating the body, direction, and position.

EMT R169-Identify the structure and function of the major body systems.

EMT R169-Describe the cardiopulmonary systems and its functions, blood movement, perfusion, and shock.

EMT R169-Describe the respiratory system and its importance with oxygenation and ventilation.

EMT R169- Describe cellular metabolism and the results of alteration from injuries and illnesses.

EMT R169- Describe the physical, mental, and social characteristics of different age groups from infancy to late adulthood.

EMT R169- Recognize an adequate or inadequate airway.

EMT R169-Determine when to use airway adjuncts.

EMT R169-Describe the physiology and pathophysiology of the airway.

EMT R169-Perform proper suctioning techniques.

EMT R169- Perform proper positive pressure ventilation.

EMT R169-Describe the principles and proper techniques of oxygen administration.

EMT R169-Identify scene hazards.

EMT R169-Determine the need for additional resources.

EMT R169- Identify mechanisms of injury and how they relate to the patient condition.

EMT R169-Determine the proper approach to the primary assessment.

EMT R169-Manually stabilize the head and neck.

EMT R169-Assess mental status using AVPU.

EMT R169-Use various monitoring devices.

EMT R169-Obtain and document vital signs: pulse, respiration, blood pressure, skin, temperature, and pupils.

EMT R169- Define the components of the secondary assessment.

EMT R169-Perform detailed physical exam.

EMT R169- Observe trends for reassessment.

EMT R169- Determine the degree of secondary assessment based on mechanism of injury or illness, history, and degree of injury and consciousness.

EMT R169-Describe the legal aspects and benefits of documentation.

EMT R169-Identify the types of verbal and written communication used by emergency medical personnel.

EMT R169- Describe and demonstrate the use of radio communication.

EMT R169- Identify which medications the EMT may help administer to patients.

EMT R169-Describe the role of medical direction in medication administration.

EMT R169- Describe how the EMT may assist in IV therapy.

EMT R169-Treat a patient with breathing difficulty.

EMT R169- Assist a patient with the use of a prescribe inhaler/nebulizer.

EMT R169- Manage a cardiac arrest patient.

EMT R169-Use an AED.

EMT R169- Identify the conditions that may lead to a cardiac emergency.

EMT R169-Identify the aspects of acute cardiac syndrome.

EMT R169-Identify the causes, assessment, and care of diabetes and the emergency associated with diabetes.

EMT R169-Identify the general approaches used to assess patients with altered mental status.

EMT R169-Describe the causes and assessment of sepsis, seizure disorders, stroke, dizziness and syncope.

EMT R169-Describe how to treat a patient experiencing an allergic reaction.

EMT R169-Describe the differences between a mild reaction and anaphylaxis.

EMT R169-Identify who should be assisted with an epinephrine auto-injector.

EMT R169-Describe the treatment and care for ingested, inhaled, injected, and absorbed poisons.

EMT R169- Describe the assessment and care for alcohol and substance abuse.

EMT R169- Identify abdominal conditions that may cause pain or discomfort.

EMT R169- Assess a patient with abdominal pain and discomfort.

EMT R169- Describe the emergency care for behavioral and psychiatric emergencies which include attempted suicide, and hostile patients.

EMT R169- Describe the use of restraints on patient safely and effectively.

EMT R169-Identify the medical and legal considerations in behavioral and psychiatric emergencies.

EMT R169- Identify disorders of the hematologic system and its structure and function.

EMT R169-Identify disorders of the renal system and the causes and consequences of renal failure.

EMT R169- Describe special considerations for patients who have received a kidney transplant.

EMT R169- Recognize patients with complications of end-stage renal disease and dialysis.

EMT R169-Recognize arterial, venous, and capillary bleeding.

EMT R169-Demonstrate control of external bleeding.

EMT R169-Identify the signs, symptoms, and care of a patient with internal bleeding.

EMT R169- Identify the signs, symptoms, and care of a patient with shock.

EMT R169-Evaluate the severity of external bleeding.

EMT R169-Describe the differences between open and closed wounds and the emergency care for each.

EMT R169-Describe the emergency care for burns.

EMT R169- Dress and bandage wounds.

EMT R169-Describe emergency care for electrical injuries.

EMT R169-Describe mechanisms of injury commonly associated with chest and abdominal injuries.

EMT R169- Demonstrate the assessment and management of patients with blunt and penetrating abdominal injuries.

EMT R169-Describe specific chest injuries and the assessment and management of each.

EMT R169-Identify the bones, muscles, and other elements of the musculoskeletal system.

EMT R169- Describe the general guidelines for emergency care of musculoskeletal injuries.

EMT R169-Assess and care for specific injuries to the upper and lower extremities.

EMT R169-Describe the purposes and general/specific procedures for splinting.

EMT R169-Identify the anatomy of the nervous system, head and spine.
 EMT R169-Describe skull and brain injuries and the emergency care required.
 EMT R169-Describe wounds to the neck and emergency care associated with those wounds.
 EMT R169- Demonstrate immobilization techniques and spinal motion restrictions on patients with potential spine injuries.
 EMT R169-Describe spine injuries and the emergency care associated with these injuries.
 EMT R169-Determine the severity of the trauma patients condition, priority for transport, and appropriate transport destination.
 EMT R169-Select critical interventions to implement at the scene for a multiple-trauma patient.
 EMT R169- Calculate a trauma score.
 EMT R169-Describe how to balance the need for transport against the time needed for treatment.
 EMT R169- Describe the effects on the body of hypothermia and cold injuries.
 EMT R169-Identify the signs, symptoms, and treatment for drowning and other water related injuries.
 EMT R169-Assess and care for hypothermia and local cold injuries.
 EMT R169-Describe signs, symptoms, and treatment for bites and stings.
 EMT R169-Describe the effects on the body of exposure to heat and the assessment/care of heat exposure.
 EMT R169-Describe and identify the anatomy and physiology of the female reproductive system.
 EMT R169-Describe the specific care needed for: neonates, mother, and baby before, during and after childbirth.
 EMT R169-Identify gynecological emergencies.
 EMT R169- Identify the complications of delivery.
 EMT R169-Identify the anatomic and physiological characteristics of children.
 EMT R169-Assess a pediatric patient.
 EMT R169-Describe how to assess and care for various pediatric medical emergencies.
 EMT R169- Assess and care for various pediatric trauma emergencies.
 EMT R169-Describe how to deal with issues of child abuse and neglect and children with special needs.
 EMT R169-Describe the age related changes in the elderly.
 EMT R169-Describe the assessment and care for older patients.
 EMT R169- Discuss possible indications of elder abuse.
 EMT R169-Demonstrate communication techniques with the elderly patient.
 EMT R169- Describe illnesses and injuries in older patients.
 EMT R169-Describe the variety of challenges that may be faced by patients with special needs.
 EMT R169-Identify the types of disabilities and challenges patients may have.
 EMT R169-Identify the types of advanced medical devices patients may rely on.
 EMT R169-Describe congenital and acquired diseases and conditions of the patient with special challenges.
 EMT R169- Determine when and how to use air rescue.
 EMT R169- Describe the phases of an ambulance call.
 EMT R169-Describe the prep and operation of an ambulance.
 EMT R169-Demonstrate call termination and preparing the ambulance for the next call.
 EMT R169- Demonstrate transferring and transporting the patient.
 EMT R169- Identify and take appropriate action in a hazardous materials incident.
 EMT R169- Identify a multiple-casualty incident.
 EMT R169-Explain the incident command system.
 EMT R169- Define triage.
 EMT R169-Identify transportation and staging logistics.
 EMT R169-Discuss the psychological aspects of multiple-casualty incidents.
 EMT R169- Describe how to position emergency apparatus in a safe manner depending on the situation.
 EMT R169-Recognize and manage hazards at a highway rescue scene.
 EMT R169-Describe how to stabilize, gain access and disentangle a patient.
 EMT R169- Describe the types of terrorism.
 EMT R169- Identify types of threats posed by a terrorist event.
 EMT R169- Practice tactical care during a mock terrorist event drill.
 EMT R169-Describe the strategies, tactics and counter measures at a terrorist event.
 EMT R169- Describe the self-protection and safety strategies at a terrorist event.

Requisite Justification

Requisite Type

Prerequisite

Requisite

FT R151

Requisite Description

Course in a sequence

Level of Scrutiny/Justification

Content review

Requisite Type

Prerequisite

Requisite

EMT R109 or EMT R169

Requisite Description

Course not in a sequence

Level of Scrutiny/Justification

Content review

Student Learning Outcomes (CSLOs)**Upon satisfactory completion of the course, students will be able to:**

- | | |
|----|---|
| 1 | Compare environmental factors of fuels, weather, and topography that affect the start and spread of wildland fires. |
| 2 | Describe contributing factors that indicate the potential for increased fire behavior that may compromise safety. |
| 3 | Explain what LCES (Lookouts, Communications, Escape Routes, and Safety Zones) system is and how it relates to the Standard Firefighting Orders. |
| 4 | Construct a fireline to required standards using various methods. |
| 5 | Extinguish the fire with or without the use of water. |
| 6 | Design, set up, operate, troubleshoot and shut down portable water delivery systems. |
| 7 | Explain basic chain saw operation, troubleshooting, maintenance and unit safety features. |
| 8 | Demonstrate the tactical application of chain saws in fireline construction and mop up operations. |
| 9 | Describe how to operate safely and effectively in a wildland urban interface incident using situation awareness, performing structure triage and citing appropriate structure protection actions. |
| 10 | Demonstrate how to interpret a topographical map to determine slope, aspect, acreage, distance and coordinates. |
| 11 | List human performance issues in an emergency situation. |
| 12 | Identify the fundamental leadership principles. |

Course Objectives**Upon satisfactory completion of the course, students will be able to:**

- | | |
|----|---|
| 1 | Explain the affects temperature, relative humidity, winds and precipitation have on wild fire behavior. |
| 2 | List the basic characteristics of topography and describe how they affect wildland fire behavior. |
| 3 | Identify the fuel types and characteristics that influence the behavior of wildland fires. |
| 4 | Compare the differences of stable and unstable atmospheres related to wild fires. |
| 5 | Link fire weather forecasts to anticipated fire behavior. |
| 6 | List fire environmental factors to consider when monitoring fire behavior. |
| 7 | Describe combined influences that cause extreme fire behavior and safety concerns. |
| 8 | Describe and define wildland firefighting terminology. |
| 9 | Explain the importance of proper use, maintenance and accountability of issued personal protective equipment (PPE). |
| 10 | Create a list of personal gear needed for extended wildland fire operations. |
| 11 | Describe the benefits of fitness, health, nutrition and adequate hydration. |
| 12 | Define an incident and describe how the incident management structure is organized. |
| 13 | List the function and responsibilities of each section of the Incident Command System. |
| 14 | Name different types of crew organizations used to suppress wild fires. |
| 15 | List and explain the importance of the 18 Watchout Situations and the 10 Standard Firefighting Orders. |
| 16 | Illustrate how Lookouts, Communications, Safety Zones and Escape Zones relate to the Standard Firefighting Orders. |
| 17 | Point out the limitations of utilizing the Incident Response Pocket Guide safety zone guidelines. |
| 18 | Explain the inspection and care, function and deployment options for a fire shelter. |

- 19 Demonstrate the correct deployment procedures for a fire shelter in 25 seconds or less.
- 20 Develop safety procedures when traveling by vehicle, boat, helicopter, fixed-wing aircraft and foot.
- 21 Demonstrate the proper inspection, maintenance and operation of wildland hand tools and firing devices used for fire suppression.
- 22 Describe hazards to the operators when using a drip torch.
- 23 Deploy hose lays utilizing all appliances, fitting and nozzles.
- 24 Perform as a team member to construct fireline with the use of hand tools.
- 25 List wildland suppression techniques and explain how each is implemented.
- 26 Give examples of control line types and discuss the hazards when existing control lines are threatened.
- 27 Describe safety procedures during retardant/water drops
- 28 Identify the hazards of working in close proximity to fireline dozers.
- 29 Illustrate systematic methods of patrolling and locating spot fires.
- 30 Differentiate between command and tactical radio frequencies
- 31 Transmit a clear and concise message using a handie talkie radio.
- 32 Describe systematic methods for mopping up a wild fire
- 33 Explain and demonstrate how to use hand tools to extinguish burning materials.
- 34 Define the ultimate goal of a water delivery system
- 35 List two reasons why portable water delivery systems are important for wildland firefighting and prescribed burning.
- 36 Identify key factors to consider when designing, setting up and operating a portable water delivery system.
- 37 Distinguish between two and four cycle engines and identify which is most important to a pump operator.
- 38 Label the parts of a commonly used portable pump.
- 39 Identify the purpose of suction or discharge hoses.
- 40 Explain the function and purpose of wildland fire appliances and nozzles.
- 41 Demonstrate how to prevent the pump motor from flooding during starting procedures.
- 42 List general guidelines for maintaining and retrieving hose.
- 43 Identify the importance of having a basic understanding of system hydraulics.
- 44 Determine flow and pump discharge pressure through appropriate system pumps
- 45 Draw a schematic of a water delivery system design, and explain its function.
- 46 Determine whether parallel or series pumping would be the best option.
- 47 Cite the sources of information for chain saw regulations and standards.
- 48 Compile a Job Hazard Analysis/Risk Assessment containing all elements related to chain saw operations.
- 49 Describe personal protective equipment required for chain saw operations.
- 50 Identify the safety components of the Situational Awareness and Individual Complexity List.
- 51 Identify basic chain saw parts, adjustments, troubleshooting, maintenance and chain saw safety features.
- 52 Demonstrate chain saw maintenance techniques.
- 53 Demonstrate chain saw transporting and starting procedures.
- 54 Demonstrate the use of tools and supplies that support chain saw operations.
- 55 List the duties and responsibilities of the chain saw operator and the swamper.
- 56 Explain the tactical application of chain saws in fireline construction and mop up operations.
- 57 Compare methods of saw team deployment used in fireline tactics.
- 58 Discuss methods of mop up and fireline rehabilitation.
- 59 Show proper chain saw handling techniques
- 60 Describe the proper procedure and hazard assessment for bucking to include the types of binds and bucking methods.
- 61 Explain the proper procedures and hazard assessments for limbing, brushing and slashing.
- 62 Demonstrate competence in safely handling bucking, limbing and brushing and slashing in the least complex situations.
- 63 Demonstrate safe cutter and swamper interaction
- 64 Identify the elements of the tree felling process

- 65 Describe felling techniques and list the steps for felling a tree.
- 66 Explain the methods used to mitigate leaner and tree hangups.
- 67 Show how to analyze a stump to include all elements of the evaluation
- 68 Describe operating principles and unique safety concerns to firefighters in the interface.
- 69 Describe escape routes, temporary refuge areas and safety zones as they apply to firefighting in the interface.
- 70 Discuss how preparing for and responding to interface fires is a shared responsibility as outlined in the Federal Wildland Fire Policy.
- 71 Compare human factors encountered in the interface as they relate to decision making for firefighter and public safety.
- 72 Explain the value of the Incident Command System and mutual aid as they apply to an interface incident.
- 73 Name the resources used for pre-incident planning.
- 74 Categorize the items to consider when sizing up an interface fire.
- 75 List the items to consider when developing an initial strategy for suppression operations
- 76 Cite the structure triage categories.
- 77 Explain the factors upon which to base structure triage decisions and give an example of each.
- 78 Identify the conditions which may indicate a structure cannot be saved.
- 79 List the seven structure protection tactical actions.
- 80 List three examples of how to reference a map during an incident.
- 81 Describe key points when using a map with a compass or GPS receiver.
- 82 Given a specific scenario, indicate the most appropriate type of map to be used.
- 83 List the reference coordinates for latitude/longitude and UTM.
- 84 Explain how latitude/longitude is measured on a map.
- 85 Determine acreage of area using a map.
- 86 Demonstrate storing and naming waypoints and tracks using a GPS receiver.
- 87 List 3 ways to prevent making user mistakes while using a GPS receiver.
- 88 Describe the guidelines for naming waypoints.
- 89 Using a given map, identify plot the specified latitude/longitude.
- 90 Name 4 standards to be incorporated into preparing field maps.
- 91 Identify pertinent information for field notes
- 92 Agree that firefighters have a responsibility to learn and improve their performance.
- 93 Describe the relationship between situational awareness and reality and perception.
- 94 Describe the role of a leader and the motivation for wanting to lead.
- 95 Identify leadership values and their supporting principles
- 96 Create a leadership self-development plan
- 97 Name common leadership pitfalls and develop strategies to avoid them.
- 98 List basic leadership styles and appropriate situations for their use
- 99 Describe techniques leaders can use to build and maintain team cohesion

Course Content

Lecture/Course Content

1. Wildland Fire Behavior
 - a. Basic Concepts of Wildland Fire
 - Principles of Wildland Fire Behavior
 - Wildland Fire Behavior and Safety
2. Basic Wildland Firefighting
 - a. Firefighter Preparedness
 - b. Incident Command System
 - c. Resource Types
 - d. Risk Management
 - e. Transportation Safety

- f. Hand Tools
- g. Firing Devices
- h. Use of Water
- i. Suppression
- j. Patrolling and Communications
- k. Mop Up and Securing the Fire Line
- 3. Portable Pumps and Water Delivery
 - a. Portable Water Delivery Systems
 - b. Equipment
 - c. Operational Responsibilities
 - d. System Design and Hydraulics
- 4. Chainsaw Operations during Wildland Incidents
 - a. Chainsaw Safety Requirements
 - b. Chainsaw Parts, Maintenance and Operation
 - c. Fireline Construction and Mop Up
 - d. Chainsaw Tasks and Techniques
- 5. Wildland Urban Interface
 - a. Firefighter Safety in the Interface
 - b. Managing Human Factors in the Interface
 - c. Pre-Incident Planning Size up and Initial Strategy
 - d. Structure Triage Structure Protection Overview
 - e. Tactics in the Interface
 - f. Tactical Operations and Resource Use in the Interface
 - g. Action Assessment, Plan Update and After Action Review
- 6. Basic Land Navigation
 - a. Overview of Maps
 - b. Reading Topographic Maps and Making Calculations
 - c. Geographic Location Systems
 - d. Using a Compass and Clinometer
 - e. Global Positioning Systems
 - f. Navigating and Field Mapping
- 7. Human Factors in the Wildland Fire Service
 - a. Working in the Wildland Fire Service
 - b. Communication
 - c. Barriers to Situation Awareness
 - d. Decision Making
 - e. Team Cohesion
- 8. Followership to Leadership
 - a. The Art of Leadership
 - b. Foundations of Leadership
 - c. The Follower to Leadership Transition
 - d. Situational Leadership
 - e. Team Cohesion
 - f. Ethical Decisions
 - g. Leadership in Action – The After Action Review
 - h. Putting It in Practice
- 9. Basic ICS
 - a. ICS organization
 - b. ICS components
 - c. ICS Positions
 - d. ICS structure
- 10. Firefighter Safety
 - a. 18 situations that shout watchout
 - b. 10 Standard Fire Orders
 - c. Lookouts, Communications, Escape Routes, and Safety Zones
 - d. Downhill Line Construction Safety
 - e. Fatality case studies
- 11. Wildland Hand crew Training

- a. Structure of crew
 - b. Tactics and strategy
 - c. Hand crew Tools
 - d. Crew Carrying Vehicle safety and use
 - e. Behavior Standards
12. Basic wildland firefighting air operations
- a. Types of aircraft
 - b. uses of aircraft
 - c. aircraft safety
 - d. working around aircraft

Laboratory or Activity Content

1. Wildland Response
 - a. Assemble and prepare for response
2. Wildland Personal Protective Equipment
 - a. Don and doff wildland personal protective equipment
 - b. Deploy fire shelter lying down method
 - c. Deploy fire shelter-standing to sitting method
 - d. Deploy fire shelter-standing drop down method
 - e. Inspect and maintain wildland personal protective equipment
 - f. Assemble, attach, and maintain a head lamp
3. Wildland Tools and Equipment
 - a. Assemble and use a back pump
 - b. Inspect, use, maintain and sharpen a brush hook
 - c. Inspect, use, maintain and sharpen a shovel
 - d. Inspect, use, maintain and sharpen an axe
 - e. Inspect, use, maintain and sharpen a Pulaski
 - f. Inspect, use, maintain and sharpen a McLeod
 - g. Inspect, use, maintain and sharpen a rhino tool
 - h. Inspect, use, maintain and sharpen a combi tool
 - i. Inspect, use, maintain and sharpen a wire broom
4. Wildland Safety
 - a. Assume the safe position for an airtanker drop
 - b. Use the Incident Response Pocket Guide (IRPG)
 - c. Use fireline flagging
5. Human Factors on the Fireline
 - a. Demonstrate basic verbal communications
6. Wildland Suppression
 - a. Use handtools to construct a fireline
 - b. Perform mobile pumping
 - c. Carry and pass handtools
 - d. Build a control line using the bump up or one lick method
 - e. Build a cup or trench while constructing a fireline
 - f. Retrieve a fire hose using single section drain and carry
 - g. Retrieve a fire hose using a figure 8 drain and carry
 - h. Perform a progressive hose lay
 - i. Demonstrate fire stream practices, water use and agent application
 - j. Perform a simple hose lay single person 300'
7. Reinforcing a Fireline
 - a. Ignite and extinguish road flares and fuses
 - b. Assemble and use a drip torch
 - c. Demonstrate follow-up procedures for wet line, retardant line or treated area
8. Wildland Urban Interface
 - a. Prep and defend a structure in the wildland urban interface
9. Mop Up Operations
 - a. Use basic tools
 - b. Perform wet mop up
 - c. Perform dry mop up
10. Conduct Patrols

- a. Demonstrate patrol principles, techniques and standards
- 11. Portable Pumps and Water Use
 - a. Participate in portable water delivery system set up, operation, troubleshooting and shut down.
 - b. Demonstrate appropriate risk management of wearing PPE and fuel handling techniques.
- 12. Wildland Fire Chainsaws
 - a. Students will practice on hillsides with steep slopes, the entire downhill side will be included in the protected work area.
 - b. Demonstrate approved chain saw starting methods.
 - c. Demonstrate the ability to analyze and mitigate overhead and ground hazards associated with limbing, bucking, and brushing and slashing.
 - d. Given a standing tree with low lying limbs in a closed stand of timber, the student will properly size up and clear the work area and limb the tree to the height of their head.
 - e. Given a brush field, the student will properly size up, clear the work area and cut and remove a strip of brush to near ground level 6' wide by 20' long.
 - f. Given a downed tree on a slope up to 30%, the student will properly size up, clear the work area and buck and the tree into lengths suitable for hand removal.
 - g. For the above Sawyer actions, students will demonstrate Safe Cutter and Swamper Interaction.
 - i. The primary Swamper will concentrate on clearing cut material away from the Sawyer's path.
 - ii. A pre-established communication procedure will be set to include verbal and non-verbal tactics.
 - h. Demonstrate making accurate tree felling undercuts on High stump or Stand-up stump props
 - i. Demonstrate the ability to determine and prepare a safe felling area and maintain cutting area control
 - j. Demonstrate the ability to correctly identify and mitigate overhead and ground hazards associated with tree felling
 - k. Given a sound tree or snag prop, up to 20" in diameter at breast height in a closed stand of timber on slopes less than 30%, the student will correctly size up the tree, prepare the intended lay and escape routes and fell the tree within 15' of the center of the intended lay measured at the top of the tree.
 - l. Demonstrate the ability to complete a stump analysis of the student's evaluation tree.
- 13. Physical Training
 - a. Cardiovascular endurance & fitness
 - b. Muscular strength, endurance & conditioning
 - c. Flexibility
 - d. Injury prevention

Methods of Evaluation

Which of these methods will students use to demonstrate proficiency in the subject matter of this course? (Check all that apply):

Problem solving exercises
Skills demonstrations

Methods of Evaluation may include, but are not limited to, the following typical classroom assessment techniques/required assignments (check as many as are deemed appropriate):

Group projects
Individual projects
Objective exams
Oral analysis/critiques
Oral presentations
Performances
Problem-solving exams
Quizzes
Reports/papers
Research papers
Role playing
Simulations
Skills demonstrations
Skills tests or practical examinations
Projects
Problem-Solving Assignments

Instructional Methodology

Specify the methods of instruction that may be employed in this course

Audio-visual presentations
Case studies
Class activities
Class discussions

Collaborative group work
 Computer-aided presentations
 Demonstrations
 Distance Education
 Field trips
 Group discussions
 Guest speakers
 Instructor-guided interpretation and analysis
 Instructor-guided use of technology
 Laboratory activities
 Lecture
 Observation
 Role-playing
 Small group activities
 Web-based presentations

Describe specific examples of the methods the instructor will use:

1. Lecture using nationally recognized wildland firefighting curriculum from NWCG using PowerPoint's, pictures, videos, diagrams, and props.
2. Guest Lectures from wildland firefighting agencies on hiring process, agency equipment, and agency specific policies.
3. Oral terminology drills: Student recital of 10 Standard Fire Orders and 18 Watchout Situations.
4. Review and discussion in class of reports on published research of fatal wildland fire case studies
5. Online student discussions using Canvas.
6. Instructor demonstrations in class on proper use of tools and equipment.
7. Instructor lead group discussions on Leadership in the Fire Service (small group breakouts)
8. Use of Simlab for wildland fire simulations
9. Skills instruction and student skills practice on wildland firefighting tools and equipment including hoselays, fireline construction, and tree falling.
10. Instructor assigned written homework and reading assignments.
11. Use of chalkboard by instructor as aid in teaching
12. Instructor guided use of technology for mapping exercises, online video review, homework, quizzes, and test.
13. Web based presentations and assignments such as NIMS IS-100a, IS-200b, IS-700c and IS-800d.
14. Demonstration and student practice with digital devices such as GPS receivers, handheld weather devices, handheld radios, wildland fire related phone apps.
15. Use of radio transmission recordings during case study of intense wild fire situations
16. Observation of students completing practical skills such as hoselays, fireline construction, set up of portable pumps, set-up and maintenance of tools, and tree falling.
17. Coaching: special assistance provided for students having difficulty in the course
18. Instructor guided interpretation and analysis sessions in small groups to determine appropriate wild fire suppression strategy and tactics for a given wildland urban interface area fire.
19. Field trips to local wildland areas for hiking, mapping exercises, fireline construction, and hoselays.
20. Field trip to Camarillo Airport for demonstration and instruction on wildland firefighting air operations.

Representative Course Assignments

Writing Assignments

1. Wildland fire incident green sheets - Formal investigations and resulting conclusions on wildland fires involving line of duty deaths.
2. Writing assignments explaining the student's opinion of how human factors influenced crew member actions on given wildland fires involving line of duty deaths.

Critical Thinking Assignments

Scenario based simulations and role playing exercises.

Reading Assignments

1. Wildland fire incident green sheets - Formal investigations and resulting conclusions on wildland fires involving line of duty deaths.

Skills Demonstrations

In addition to mandatory manipulative testing of basic wildland firefighting skills, student will be required to perform a qualified work capacity test consisting of hiking 3 miles while carrying a 45 pound back pack. The hike must be completed within 45 minutes.

Other assignments (if applicable)

1. Day hikes to improve physical fitness and stamina on the hillsides.

Outside Assignments

Representative Outside Assignments

1. Wildland fire incident green sheets - Formal investigations and resulting conclusions on wildland fires involving line of duty deaths.
2. Structure fire incident blue sheets - Formal investigations and resulting conclusions on urban/interface structure fires involving line of duty deaths and injuries.
3. Writing assignments explaining the student's opinion of how human factors influenced crew member actions on given wildland fires involving line of duty deaths.
4. Day hikes to improve physical fitness and stamina on the hillsides.
5. Case study of recent brush fire incidents.
6. Reading assignments including chapter tests, a mid-term and a final exam.
7. Research a local fire department to determine minimum qualifications, core values, staffing, traditions and hiring practices.
8. Cadets are issued personal protective equipment and are expected to practice donning this equipment on a daily basis..
9. Cadets will choose one wildland fire hand tool and develop a presentation for class delivery.
10. Students will read chapters from the NWCG text on small fire pumps and answer questions at end of each chapter.
11. Students will identify locale alternate water supplies including lakes, golf courses and swimming pools for drafting operations.

District General Education

- A. Natural Sciences**
- B. Social and Behavioral Sciences**
- C. Humanities**
- D. Language and Rationality**
- E. Health and Physical Education/Kinesiology**
- F. Ethnic Studies/Gender Studies**

CSU GE-Breadth

- Area A: English Language Communication and Critical Thinking**
- Area B: Scientific Inquiry and Quantitative Reasoning**
- Area C: Arts and Humanities**
- Area D: Social Sciences**
- Area E: Lifelong Learning and Self-Development**
- Area F: Ethnic Studies**

CSU Graduation Requirement in U.S. History, Constitution and American Ideals:

IGETC

- Area 1: English Communication**
- Area 2A: Mathematical Concepts & Quantitative Reasoning**
- Area 3: Arts and Humanities**
- Area 4: Social and Behavioral Sciences**
- Area 5: Physical and Biological Sciences**
- Area 6: Languages Other than English (LOTE)**

Textbooks and Lab Manuals

Resource Type

Textbook

Description

Department of Transportation (2016). *Emergency Response Guide, ERG* (2016). Department of Transportation.

Resource Type

Textbook

Description

National Wildland Coordinating Group, NWCG (2013). *Fire Operations in the Wildland Urban Interface* (S-215). National Fire Equipment Systems.

Resource Type

Textbook

Description

National Wildland Coordinating Group, NWCG (2013). *Water Handling Equipment Guide* (PMS447-1 6th). National Fire Equipment Systems.

Resource Type

Textbook

Description

National Wildland Coordinating Group, NWCG (2012). *Wildland Fire Chain Saws* (S-212). National Fire Equipment Systems.

Resource Type

Textbook

Description

National Wildland Coordinating Group, NWCG (2012). *Portable Pumps and Water* (S-211). National Fire Equipment Systems.

Resource Type

Textbook

Description

National Wildland Coordinating Group, NWCG (2007). *Intermediate Wildland Fire Behavior* (S-290). National Fire Equipment Systems.

Resource Type

Textbook

Description

National Wildland Coordinating Group, NWCG (2004). *Firefighter Type I Training* (S-131). National Fire Equipment System.

Resource Type

Textbook

Description

National Wildland Coordinating Group, NWCG (2003). *Basic Wildland Firefighter Training* (S-130). National Fire Equipment System.

Resource Type

Textbook

Description

National Wildland Coordinating Group, NWCG (2009). *Fitness and Work Capacity* (PMS304-2). National Fire Equipment System.

Resource Type

Textbook

Description

National Wildland Coordinating Group, NWCG (2008). *Followership to Leadership* (L-280). National Fire Equipment System.

Resource Type

Textbook

Description

National Wildland Coordinating Group, NWCG (2008). *Human Factors in the Wildland Fire Service* (L-180). National Fire Equipment System.

Resource Type

Textbook

Description

National Wildland Coordinating Group, NWCG (2016). *Incident Response Pocket Guide, IRPG* (PMS461). National Fire Equipment System.

Resource Type

Textbook

Description

National Wildland Coordinating Group, NWCG (2016). *Basic Land Navigation* (PMS475). National Fire Fighting System.

Resource Type

Other Instructional Materials

Description

Owner/Operator Manuals for: 1. Wick water pump 100-4H Honda, Mercedes Textiles 2. Wick water pump 80-4H, Honda, Mercedes Textiles 3. STIHL Rescue Chainsaw 460.

Description

National Wildland Coordinator Group NWCG (2012) S-270 Basic Air Operations

Library Resources**Sufficient Library Resources exist**

Yes

Distance Education Addendum**Definitions****Distance Education Modalities**

Hybrid (1%–50% online)
Hybrid (51%–99% online)
100% online

Faculty Certifications

Faculty assigned to teach Hybrid or Fully Online sections of this course will receive training in how to satisfy the Federal and state regulations governing regular effective/substantive contact for distance education. The training will include common elements in the district-supported learning management system (LMS), online teaching methods, regular effective/substantive contact, and best practices.

Yes

Faculty assigned to teach Hybrid or Fully Online sections of this course will meet with the EAC Alternate Media Specialist to ensure that the course content meets the required Federal and state accessibility standards for access by students with disabilities. Common areas for discussion include accessibility of PDF files, images, captioning of videos, Power Point presentations, math and scientific notation, and ensuring the use of style mark-up in Word documents.

Yes

Regular Effective/Substantive Contact

Hybrid (1%–50% online) Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
Asynchronous Dialog (e.g., discussion board)	Regular use of asynchronous discussion boards will encourage various types of interaction and critical thinking skills among all course participants. Questions and topics posed will allow students to discuss, compare and contrast, identify, and analyze elements of the course content. Other discussion boards may be used for Q&A and general class discussion by students and instructor to facilitate student success and strengthen student learning outcomes. Student to student interaction will be encouraged via inter student messages and by responding to other students posts.
Synchronous Dialog (e.g., online chat)	A set time each week may be provided when the instructor is available for synchronous live lectures via Zoom and to chat to answer questions. Students will share their thoughts of the online lecture in an online chat with their classmates.

Hybrid (51%–99% online) Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
Asynchronous Dialog (e.g., discussion board)	Regular use of asynchronous discussion boards will encourage various types of interaction and critical thinking skills among all course participants. Questions and topics posed will allow students to discuss, compare and contrast, identify, and analyze elements of the course content. Other discussion boards may be used for Q&A and general class discussion by students and instructor to facilitate student success and strengthen student learning outcomes. Student to student interaction will be encouraged via inter student messages and by responding to other students posts.
Synchronous Dialog (e.g., online chat)	A set time each week may be provided when the instructor is available for synchronous live lectures via Zoom and to chat to answer questions. Students will share their thoughts of the online lecture in an online chat with their classmates.
Other DE (e.g., recorded lectures)	A variety of ADA compliant tools and media integrated within the learning management system to help students reach competency. Tools may include: recorded lectures, narrated slides, screencasts, online library resources, 3rd party (publisher-created) tools, websites and blogs, multimedia and streaming platforms like YouTube, Films on Demand, 3CMedia, Khan Academy, etc.

100% online Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
Asynchronous Dialog (e.g., discussion board)	Regular use of asynchronous discussion boards will encourage various types of interaction and critical thinking skills among all course participants. Questions and topics posed will allow students to discuss, compare and contrast, identify, and analyze elements of the course content. Other discussion boards may be used for Q&A and general class discussion by students and instructor to facilitate student success and strengthen student learning outcomes. Student to student interaction will be encouraged via inter student messages and by responding to other students posts.
Other DE (e.g., recorded lectures)	A variety of ADA compliant tools and media integrated within the learning management system to help students reach competency. Tools may include: recorded lectures, narrated slides, screencasts, online library resources, 3rd party (publisher-created) tools, websites and blogs, multimedia and streaming platforms like YouTube, Films on Demand, 3CMedia, Khan Academy, etc.

Synchronous Dialog (e.g., online chat)

A set time each week may be provided when the instructor is available for synchronous live lectures via Zoom and to chat to answer questions. Students will share their thoughts of the online lecture in an online chat with their classmates.

Examinations

Hybrid (1%–50% online) Modality

On campus
Online

Hybrid (51%–99% online) Modality

On campus
Online

Primary Minimum Qualification

FIRE TECHNOLOGY

Additional local certifications required

S-130: Fire Fighter Training S-131: Advanced Fire Fighter Training S-190: Introduction To Wildland Fire Behavior. S-212: Wildland Fire Chain Saws S-215: Fire Operations In The Wildland/Urban Interface: S-290: Intermediate Wildland Fire Behavior, S-211; Wildland Portable Pumps, S-270 Basic Air Operations, S-230 Crew Boss Single resource, S-339 Division Group Supervisor, L-180 Human Factors on the Fire Line, L-280 Followership to Leadership, S-110 Wildland Fire Basic Orientation

Candidate needs to have successfully completed an EMR, Public Safety First Aid, or EMT course.

Review and Approval Dates

Department Chair

08/25/2021

Dean

08/25/2021

Technical Review

09/08/2021

Curriculum Committee

09/08/2021

DTRW-I

09/09/2021

Curriculum Committee

10/13/2021

Board

12/14/2021

CCCCO

MM/DD/YYYY

Control Number

CCC000588020

DOE/accreditation approval date

MM/DD/YYYY