Indiana Department of Education
Academic Standards Course Framework

FIRE AND RESCUE I

Fire and Rescue I; Every year, fires and other emergencies take thousands of lives and destroy property worth billions of dollars. Firefighters and emergency services workers help protect the public against these dangers by rapidly responding to a variety of emergencies. They are frequently the first emergency personnel at the scene of a traffic accident or medical emergency and may be called upon to put out a fire, treat injuries or perform other vital functions. The Fire and Rescue curriculum may include five Indiana state fire certifications: (1) Mandatory, (2) Firefighter I, (3) Firefighter II, (4) Hazardous Materials Awareness, (5) Hazardous Materials Operations. An additional two industry certifications may be earned by adding (6) First Responder, and (7) Emergency Medical Technician-Basic to the curriculum.

- DOE Code: 5820
- Recommended Grade Level: Grade 11-12
- Recommended Prerequisites: None
- Credits: 2-3 credits per semester, maximum of 6 credits
- Counts as a Directed Elective or Elective for the General, Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas
- This course is aligned with postsecondary courses for Dual Credit:
    - Ivy Tech
        - FIRE 100- Fire Suppression
        - FIRE 116 & 117- Firefighter I & II
        - PSAF 115-p Hazmat Awareness & Operations

Dual Credit
This course provides the opportunity for dual credit for students who meet postsecondary requirements for earning dual credit and successfully complete the dual credit requirements of this course.

Application of Content and Multiple Hour Offerings
Intensive laboratory applications are a component of this course and may be either school based or work based or a combination of the two. Work-based learning experiences should be in a closely related industry setting. Instructors shall have a standards-based training plan for students participating in work-based learning experiences. When a course is offered for multiple hours per semester, the amount of laboratory application or work-based learning needs to be increased proportionally.

Career and Technical Student Organizations (CTSOs)
Career and Technical Student Organizations are considered a powerful instructional tool when integrated into Career and Technical Education programs. They enhance the knowledge and skills students learn in a course by allowing a student to participate in a unique program of career and leadership development. Students should be encouraged to participate in SkillsUSA, the CTSO for this area.

Content Standards

Domain – Orientation/History

Core Standard 1 Students examine fire service and their role within that service to assess practices and procedures.

Standards

FRI-1.1 Describe the history and culture of the fire service

FRI-1.2 Describe the mission of the fire service

FRI-1.3 Define fire department organizational principles

FRI-1.4 Distinguish among functions of fire companies

FRI-1.5 Summarize primary knowledge and skills the firefighter must have to function effectively

FRI-1.6 Distinguish among the primary roles of fire service personnel

FRI-1.7 Distinguish among policies, procedures, and standard operating procedures (SOPs)

FRI-1.8 Summarize components of the Incident Command System (ICS)

FRI-1.9 Distinguish among the functions of the major subdivisions within the ICS structure

FRI-1.10 Define ICS terms

FRI-1.11 Discuss fire service interaction with other organizations

Domain – Firefighter Safety and Health

Core Standard 2 Students establish a basic understanding of safety with respect to the scene, the station, and places in between.

Standards

FRI-2.1 List ways to prevent firefighter injuries

FRI-2.2 Discuss National Fire Protection Association standards related to firefighter health and safety

FRI-2.3 Discuss Occupational Safety and Health Administration regulations

FRI-2.4 Summarize the IFSTA Principles of Risk Management

FRI-2.5 List the main goals of a safety program

FRI-2.6 Discuss firefighter health considerations and employee assistance and wellness programs

FRI-2.7 List guidelines for riding safely on the apparatus

FRI-2.8 Discuss safety in the fire station

FRI-2.9 Describe ways to maintain safety in training

FRI-2.10 Explain how to maintain and service equipment used in training

FRI-2.11 Discuss emergency scene preparedness

FRI-2.12 Discuss emergency scene safety

FRI-2.13 Summarize general guidelines for scene management

FRI-2.14 Explain the importance of personnel accountability

FRI-2.15 Summarize basic interior operations techniques

FRI-2.16 Describe emergency escape and rapid intervention

FRI-2.17 Respond to an incident, correctly mounting and dismounting an apparatus

FRI-2.18 Set up and operate in work areas at an incident using traffic and scene control devices

Domain – Fire Behavior

Core Standard 3 Students analyze the scientific principles behind fire to assess fire behavior and

appropriate fire fighting procedures.

Standards

FRI-3.1 Describe physical and chemical changes of matter related to fire

FRI-3.2 Discuss modes of combustion, the fire triangle, and the fire tetrahedron

FRI-3.3 Explain the difference between heat and temperature

FRI-3.4 Describe sources of heat energy

FRI-3.5 Discuss the transmission of heat

FRI-3.6 Explain how the physical states of fuel affect the combustion process

FRI-3.7 Explain how oxygen concentration affects the combustion process

FRI-3.8 Discuss the self-sustained chemical reaction involved in the combustion process

FRI-3.9 Describe common products of combustion

FRI-3.10 Distinguish among classifications of fires

FRI-3.11 Describe the stages of fire development within a compartment

FRI-3.12 Summarize factors that affect fire development within a compartment

FRI-3.13 Describe methods used to control and extinguish fire

Domain 4 - Building Construction

Core Standard 4 Students evaluate building structures and materials to assess structural integrity during a fire.

Standards

FRI-4.1 Describe common building materials

FRI-4.2 Describe construction types and the effect fire has on the structural integrity of the construction type

FRI-4.3 Identify the primary strengths and weaknesses of construction types

FRI-4.4 Describe dangerous building conditions created by a fire or by actions taken while trying to extinguish a fire

FRI-4.5 Identify indicators of building collapse

FRI-4.6 List actions to take when imminent building collapse is suspected

FRI-4.7 Describe hazards associated with lightweight and truss construction

Domain – Personal Protective Equipment

Core Standard 5 Students apply concepts of proper equipment usage and storage, to maintain and effectively utilize protective equipment.

Standards

FRI-5.1 Describe the purpose of protective clothing and equipment

FRI-5.2 Describe characteristics of protective clothing and equipment

FRI-5.3 Summarize guidelines for the care of personal protective clothing

FRI-5.4 List the four common respiratory hazards associated with fires and other emergencies

FRI-5.5 Distinguish among characteristics of respiratory hazards

FRI-5.6 Describe physical, medical, and mental factors that affect the firefighter's ability to use respiratory protection effectively

FRI-5.7 Describe equipment and air-supply limitations of SCBA

FRI-5.8 Discuss effective air management

FRI-5.9 Distinguish among characteristics of air-purifying respirators, open-circuit SCBA, and closed-circuit SCBA

FRI-5.10 Describe basic SCBA component assemblies

FRI-5.11 Discuss storing protective breathing apparatus

FRI-5.12 Summarize recommendations for the use of PASS devices

FRI-5.13 Describe precautionary safety checks for SCBA

FRI-5.14 Discuss general donning and doffing considerations for SCBA

FRI-5.15 Summarize general items to check in daily, weekly, monthly, and annual SCBA inspections

FRI-5.16 Summarize safety precautions for refilling SCBA cylinders

FRI-5.17 Discuss safety precautions for SCBA use

FRI-5.18 Describe actions to take in emergency situations using SCBA

FRI-5.19 Discuss operating in areas of limited visibility while wearing SCBA

FRI-5.20 Discuss exiting areas with restricted openings under emergency conditions while wearing SCBA

FRI-5.21 Don PPE and SCBA for use at an emergency

FRI-5.22 Doff PPE and SCBA and prepare for reuse

FRI-5.23 Inspect personal protective equipment and SCBA for use at an emergency incident

FRI-5.24 Clean and sanitize PPE and SCBA

FRI-5.25 Demonstrate procedures for filling SCBA cylinders from various systems

FRI-5.25 Fill an SCBA cylinder from a cascade system

FRI-5.26 Fill an SCBA cylinder from a compressor/purifier

FRI-5.27 Perform emergency operations procedures for an SCBA

FRI-5.28 Exit a constricted opening while wearing standard SCBA

FRI-5.29 Change an SCBA cylinder (one person)

FRI-5.30 Change an SCBA cylinder (two person)

Domain-Portable Fire Extinguishers

Core Standard 6 Students evaluate various fire extinguishers to demonstrate how and when to use them at a fire scene.

Standards

FRI-6.1 Describe methods by which agents extinguish fire

FRI-6.2 List mechanisms by which portable extinguishers expel their contents

FRI-6.3 Distinguish among classifications of fires and the most common agents used to extinguish them

FRI-6.4 Describe types of extinguishers and their common uses

FRI-6.5 Discuss extinguishers and agents for metal fires

FRI-6.6 Explain the portable extinguisher rating system

FRI-6.7 Describe factors to consider in selecting the proper fire extinguisher

FRI-6.8 Describe items to check for immediately before using a portable fire extinguisher

FRI-6.9 Describe the PASS method of application

FRI-6.10 Summarize procedures that should be part of every fire extinguisher inspection

FRI-6.11 Discuss damaged portable fire extinguishers and obsolete portable fire extinguishers

FRI-6.12 Operate a stored pressure water extinguisher

FRI-6.13 Operate a dry chemical (ABC) extinguisher

FRI-6.14 Operate a carbon dioxide (CO_2) extinguisher

Domain-Ropes and Knots

Core Standard 7 Students demonstrate the proper procedures for inspecting, maintaining storing, and utilizing rope to create knots used in various fire and rescue operations.

Standards

FRI-7.1 Compare and contrast the characteristics of life-safety rope and utility rope

FRI-7.2 Summarize criteria for reusing life-safety rope

FRI-7.3 Describe rope materials

FRI-7.4 Describe types of rope construction

FRI-7.5 Summarize basic guidelines for rope maintenance

FRI-7.6 Explain procedures for storing life-safety rope

FRI-7.7 Describe webbing and webbing construction

FRI-7.8 Describe parts of a rope and considerations in tying a knot

FRI-7.9 Describe knot characteristics and knot elements

FRI-7.10 Describe characteristics of knots commonly used in the fire service

FRI-7.11 Select commonly used rope hardware for specific applications

FRI-7.12 Summarize hoisting safety considerations

FRI-7.13 Discuss rescue rope and harness

FRI-7.14 Inspect, clean, and store rope

FRI-7.15 Coil and uncoil a rope

FRI-7.16 Create knots as specified for various fire and rescue operations

Domain- Rescue and Extrication

Core Standard 8 Students apply and adapt search techniques to perform rescue and extrication operations.

Standards

FRI-8.1 Distinguish between rescue and extrication operations

FRI-8.2 Summarize safety guidelines for search and rescue personnel operating within a burning building

FRI-8.3 Explain the objectives of a building search

FRI-8.4 Describe primary search and secondary search

FRI-8.5 Discuss conducting search operations

FRI-8.6 Explain what actions a firefighter should take when in distress

FRI-8.7 Describe actions that should be taken by a rapid intervention crew (RIC) when a firefighter is in distress

FRI-8.8 Discuss victim removal methods

FRI-8.9 Discuss emergency power and lighting equipment

FRI-8.10 Conduct a primary and secondary search

FRI-8.11 Exit a hazardous area using appropriate procedures

FRI-8.12 Demonstrate various drag procedures used to move victims

FRI-8.13 Perform various lift/carry procedures

Domain-Forcible Entry

Core Standard 9 Students apply and adapt appropriate forcible entry techniques to enter various structures.

Standards

FRI-9.1 Select appropriate cutting tools for specific applications

FRI-9.2 Discuss manual and hydraulic prying tools

FRI-9.3 Discuss pushing/pulling tools and striking tools

FRI-9.4 Summarize forcible entry tool safety rules

FRI-9.5 Describe correct methods for carrying forcible entry tools

FRI-9.6 Summarize general care and maintenance practices for forcible entry tools

FRI-9.7 Explain items to look for in sizing up a door

FRI-9.8 Describe the characteristics of various types of swinging doors

FRI-9.10 Describe the characteristics of various types of sliding doors, revolving doors, and overhead doors

FRI-9.11 Explain how fire doors operate

FRI-9.12 Describe the characteristics of basic types of locks

FRI-9.13 Describe rapid-entry lockbox systems

FRI-9.14 Describe methods of forcible entry through doors

FRI-9.15 Describe methods of through-the-lock forcible entry for doors

FRI-9.16 Explain action that can be taken to force entry involving padlocks

FRI-9.17 Describe ways of gaining entry through gates and fences

FRI-9.18 List hazards in forcing windows

FRI-9.19 Describe types of windows and entry techniques

FRI-9.20 Describe techniques for breaching walls and floors

FRI-9.21 Clean, inspect, and maintain hand and power tools and equipment

FRI-9.22 Force entry through various doors, windows, walls and locks

FRI-9.23 Breach a hardwood floor

Domain-Ground Ladders

Core Standard 10 Students evaluate ladder construction, ladder types, carrying, raising, and climbing ladders utilizing the appropriate equipment and safety procedures.

Standards

FRI-10.1 Describe parts of a ladder

FRI-10.2 Describe types of ground ladders used in the fire service

FRI-10.3 Discuss materials used for ladder construction

FRI-10.4 Discuss ladder maintenance and cleaning

FRI-10.5 Summarize items to check for when inspecting and service testing ladders

FRI-10.6 Summarize factors that contribute to safe ladder operation

FRI-10.7 Discuss selecting the proper ladder for the job

FRI-10.8 Summarize items to consider before removing and replacing ladders on apparatus

FRI-10.9 Describe proper procedures to follow when lifting and lowering ground ladders

FRI-10.10 Describe various types of ladder carries

FRI-10.11 Explain proper procedures for positioning ground ladders

FRI-10.12 Explain precautions to take before raising a ladder

FRI-10.13 Describe various types of ladder raises

FRI-10.14 Describe procedures for moving ground ladders

FRI-10.15 Describe heeling and tying in ground ladders

FRI-10.16 Apply guidelines for climbing ladders

FRI-10.17 Describe methods for lowering conscious or unconscious victims down ground ladders

FRI-10.18 Clean, inspect, and maintain a ladder

FRI-10.19 Tie the halyard

FRI-10.20 Raise a ladder using various methods and procedures

FRI-10.21 Deploy a roof ladder — One-firefighter method

FRI-10.22 Pivot a ladder — Two-firefighter method

FRI-10.23 Shift a ladder — One-firefighter method

FRI-10.24 Shift a ladder — Two-firefighter method

FRI-10.25 Leg lock on a ground ladder

FRI-10.26 Assist a conscious victim down a ground ladder

FRI-10.27 Remove an unconscious victim down a ground ladder

FRI-10.28 Select, carry and raise a ladder properly for various types of activities

Domain-Ventilation

Core Standard 11 Students apply and adapt ventilation procedures using appropriate equipment to fight fires.

Standards

FRI-11.1 Describe reasons for fireground ventilation

FRI-11.2 List considerations that affect the decision to ventilate

FRI-11.3 Discuss factors that are taken into account when deciding the need for ventilation

FRI-11.4 Discuss vertical ventilation

FRI-11.5 List safety precautions to observe when undertaking vertical ventilation

FRI-11.6 List warning signs of an unsafe roof condition

FRI-11.7 Discuss roof coverings and using existing roof openings for vertical ventilation purposes

FRI-11.8 Discuss ventilation considerations for various types of roofs

FRI-11.9 Describe trench or strip ventilation

FRI-11.10 Explain procedures for ventilation of a conventional basement

FRI-11.11 List factors that can reduce the effectiveness of vertical ventilation

FRI-11.12 Discuss horizontal ventilation

FRI-11.13 Distinguish between advantages and disadvantages of of forced ventilation

FRI-11.15 Discuss negative and positive-pressure ventilation

FRI-11.16 Compare and contrast positive pressure and negative pressure ventilation

FRI-11.17 Describe hydraulic ventilation

FRI-11.18 List disadvantages to the use of hydraulic ventilation

FRI-11.19 Explain the effects of building systems on fires or ventilation

FRI-11.20 Ventilate a flat roof

FRI-11.21 Ventilate a pitched roof

FRI-11.22 Demonstrate mechanical positive-pressure ventilation

FRI-11.23 Demonstrate horizontal hydraulic ventilation

Domain-Water Supply

Core Standard 12 Students apply concepts to accessing available water reserves to fight fires on scene.

Standards

FRI-12.1 Describe dry-barrel and wet-barrel hydrants

FRI-12.2 Discuss fire hydrant marking and location

FRI-12.3 Summarize potential problems to look for when inspecting fire hydrants

FRI-12.4 Explain the process of fire hydrant testing

FRI-12.5 Discuss alternative water supplies

FRI-12.6 Discuss rural water supply operations

FRI-12.7 Operate a hydrant

FRI-12.8 Make soft-sleeve and hard suction hydrant connections

FRI-12.9 Connect and place a hard suction hose for drafting from a static water source

FRI-12.10 Deploy a portable water tank

Domain-Fire Hose

Core Standard 13 Student evaluate the various types of hoses used in the fire service and the safe and effective methods to move and store hoses.

Standards

FRI-13.1 Discuss fire hose sizes

FRI-13.2 Describe types of fire hose damage and practices to prevent such damage

FRI-13.3 Distinguish between characteristics of threaded couplings and nonthreaded couplings

FRI-13.4 Discuss care of fire hose couplings

FRI-13.5 List general hose loading guidelines

FRI-13.6 Describe common hose loads

FRI-13.7 Describe hose load finishes

FRI-13.8 Discuss preconnected hose loads for attack lines

FRI-13.9 List guidelines when laying hose

FRI-13.10 Describe the basic hose lays for supply hose

FRI-13.11 Describe procedures for handling preconnected and other hose

FRI-13.12 List general safety guidelines that should be followed when advancing a hoseline into a burning structure

FRI-13.13 Discuss procedures for advancing hose

FRI-13.14 Describe techniques for operating hoselines

FRI-13.15 Inspect and maintain hose

FRI-13.16 Make specified hose rolls

FRI-13.17 Demonstrate coupling and uncoupling procedures for hoses

FRI 13.18 Make various specified hose loads

FRI-13.19 Connect to a hydrant using a forward lay

FRI-13.20 Make the reverse hose lay

FRI-13.21 Differentiate between advancement procedures for various hose loads

FRI-13.22 Show various methods for advancing hoses

FRI-13.23 Advance a line into a structure

FRI-13.24 Advance a line up and down an interior stairway

FRI-13.25 Demonstrate procedures for advancing charged and uncharged lines up a ladder into a window

FRI-13.26 Extend a hoseline

FRI-13.27 Simulate the procedure for controlling a loose hoseline

FRI-13.28 Replace a burst line

FRI-13.29 Operate a charged attack line from a ladder

Domain-Fire Streams

Core Standard 14 Students analyze the various types of nozzles, water application, and water sources to extinguish fires at a fire scene.

Standards

FRI-14.1 List methods that are used with fire streams to reduce the heat from a fire and provide protection to firefighters and exposures

FRI-14.2 Discuss the extinguishing properties of water

FRI-14.3 Describe friction loss

FRI-14.4 Define water hammer

FRI-14.5 Distinguish among characteristics of fire stream sizes

FRI-14.6 Discuss types of streams and nozzles

FRI-14.7 Discuss handling handline nozzles

FRI-14.8 Describe types of nozzle control valves

FRI-14.9 List checks that should be included in nozzle inspections

FRI-14.10 Operate various nozzles

Domain –Fire Control

Core Standard 15 Students apply and adapt fire fighting techniques to battle specific blazes.

Standards

FRI-15.1 Describe initial factors to consider when suppressing structure fires

FRI-15.2 Summarize considerations prior to entering a burning building

FRI-15.3 Explain the gas cooling technique

FRI-15.4 Describe direct attack, indirect attack, and combination attack

FRI-15.5 Discuss deploying master stream devices

FRI-15.6 Describe aerial devices used to deliver elevated master streams

FRI-15.7 Describe actions and hazards associated with suppressing Class C fires

FRI-15.8 List electrical hazards and guidelines for electrical emergencies

FRI-15.9 Discuss responsibilities of companies in structural fires

FRI-15.10 Explain actions taken in attacking fires in different levels of structures

FRI-15.11 Discuss structure fires in properties protected by fixed systems

FRI-15.12 Select appropriate actions to take when attacking fires in various scenarios

FRI-15.13 Summarize influences on wildland fire behavior: fuel, weather, and topography

FRI-15.14 Describe parts of a wildland fire

FRI-15.15 List wildland protective clothing and equipment

FRI-15.16 Describe methods used to attack wildland fires

FRI-15.17 List ten standard fire fighting orders when fighting wildland fires

FRI-15.18 Attack a structure fire — Exterior attack

FRI-15.19 Deploy and operate a master stream device

FRI-15.20 Turn off building utilities

FRI-15.21 Attack a structure fire (Above, Below, and Grade Level) — Interior attack

FRI-15.22 Demonstrate procedures for battling fires in various scenarios

Domain-Fire Detection, Alarm, and Suppression Systems

Core Standard 16 Students analyze various fire detection, alarm, and suppression systems to properly utilize them on fire scenes.

Standards

FRI-16.1 List functions of fire detection, alarm, and suppression systems

FRI-16.2 Discuss general automatic sprinkler protection and types of coverage

FRI-16.3 Describe control valves and operating valves used in sprinkler systems

FRI-16.4 Describe major applications of sprinkler systems

FRI-16.5 Discuss operations at fires in protected properties

FRI-16.6 Operate a sprinkler system control valve

FRI-16.7 Manually stop the flow of water from a sprinkler

FRI-16.8 Connect hoseline to a sprinkler system FDC

Domain-Loss Control

Core Standard 17 Students apply and adapt salvage and overhaul procedures to ensure that structural integrity is not compromised, all hidden fires are discovered and extinguished, fire cause evidence is preserved and all debris and routing water is removed from structure.

Standards

FRI-17.1 Explain the philosophy of loss control

FRI-17.2 Discuss planning and procedures for salvage operations

FRI-17.3 Describe salvage covers, salvage cover maintenance, and equipment used in salvage operations

FRI-17.4 Summarize basic principles of salvage cover deployment

FRI-17.5 Summarize methods used to catch and route water from fire fighting operations and cover openings using salvage covers

FRI-17.6 Discuss overhaul operations

FRI-17.7 Describe tools and equipment used in overhaul

FRI-17.8 Discuss fire safety during overhaul

FRI-17.9 Discuss locating hidden fires

FRI-17.10 Summarize the overhaul process

FRI-17.11 Clean, inspect, and repair a salvage cover

FRI-17.12 Perform various salvage cover operations

FRI-17.13 Construct a water chute with and without pike poles

FRI-17.14 Construct a catchall

Domain-Protecting Fire Scene Evidence

Core Standard 18 Students establish security procedures to identify and correctly process evidence at a fire scene.

Standards

FRI-18.1 Describe signs and indications of an incendiary fire

FRI-18.2 Summarize important observations to be made en route, after arriving at the scene, and during fire fighting operations

FRI-18.3 Discuss firefighter conduct and statements at the scene

FRI-18.4 Explain firefighter responsibilities after the fire

FRI-18.5 Discuss protecting and preserving evidence

Domain-Fire Department Communications

Core Standard 19 Students initiate responses to an emergency incident using fire department operating

procedures and equipment to ensure report is accurate and promptly relayed.

Standards

FRI-19.1 Describe communication responsibilities of the firefighter

FRI-19.2 Summarize necessary skills for fire department communications

FRI-19.3 Describe basic communications equipment used in telecommunications centers

FRI-19.4 Describe basic business telephone courtesies

FRI-19.5 Explain how a firefighter should proceed when receiving emergency calls from the public

FRI-19.6 Describe types of public alerting systems

FRI-19.7 Describe procedures that the public should use to report a fire or other emergency

FRI-19.8 Discuss ways of alerting fire department personnel to emergencies

FRI-19.10 Summarize guidelines for radio communications

FRI-19.11 Describe information given in arrival and progress reports

FRI-19.12 Explain the purpose of tactical channels

FRI-19.13 Discuss calls for additional resources and emergency radio traffic

FRI-19.14 Discuss evacuation signals and personnel accountability reports

FRI-19.15 Use a portable radio for routine and emergency traffic

FRI-19.16 Handle business calls and reports of emergencies

Domain-Basic Pre-Hospital Emergency Care

Core Standard 20 Students apply emergency care concepts to properly diagnose and treat victims at fire scenes.

Standards

FRI-20.1 Discuss the importance of body substance isolation (BSI)

FRI-20.2 Describe the components of personal protective equipment

FRI-20.3 Discuss diseases of concern

FRI-20.4 Describe laws that relate to infection control

FRI-20.5 Explain the importance of immunizations

FRI-20.6 Asssess the causes, types, symptoms and ways of dealing with stress

FRI-20.7 Describe scene safety considerations at hazardous materials incidents and rescue operations

FRI-20.8 Describe actions required when responding to scenes involving violent or dangerous situations

FRI-20.9 Discuss the circulatory system

FRI-20.10 List the links in the chain of survival

FRI-20.11 Explain actions to be taken before resuscitation

FRI-20.12 Discuss rescue breathing

FRI-20.13 Describe the steps of cardiopulmonary resuscitation (CPR)

FRI-20.14 Desribe CPR techniques for individuals ranging from infant to adult

FRI-20.15 Discuss indications of effective CPR and when CPR may be interrupted

FRI-20.16 Summarize when not to begin or to terminate CPR

FRI-20.17 Summarize actions taken when clearing an airway obstruction

FRI-20.18 Describe the main components of the circulatory system

FRI-20.19 Differentiate between arterial, venous, and capillary bleeding

FRI-20.20 Describe the steps for controlling external bleeding

FRI-20.21 Discuss internal bleeding

FRI-20.22 Describe types and signs of shock

FRI-20.23 Describe the steps for managing shock

Domain- Hazardous Materials

Core Standard 21 Students analyze hazardous materials to identify them and prescribe appropriate actions at a fire scene.

Standards

FRI-21.1 Summarize Awareness-Level and Operations-Level responsibilities at hazardous materials incidents

FRI-21.2 Describe types of respiratory protection

FRI-21.3 Summarize respiratory equipment limitations

FRI-21.4 Describe types of protective clothing

FRI-21.5 Discuss U.S. EPA levels of protective equipment

FRI-21.6 Describe NFPA 1994 PPE ensemble classifications

FRI-21.7 Describe the U.S. military mission-oriented protective posture (MOPP) ensembles

FRI-21.8 Discuss PPE selection factors

FRI-21.9 Discuss health and safety issues when wearing PPE

FRI-21.10 Explain proper procedures for inspection, testing, and maintenance of protective clothing and equipment

FRI-21.11 Describe health and physical hazards that may be present at haz mat incidents

FRI-21.12 Describe physical properties of hazardous materials

FRI-21.13 Explain how the General Hazardous Materials Behavior Model (GEBMO) can help firefighters understand the likely course of an incident

FRI-21.14 Explain locations or occupancies clues to the presence of hazardous materials

FRI-21.15 Explain container shapes clues to the presence of hazardous materials

FRI-21.16 Explain transportation placards, labels, and markings clues to the presence of hazardous materials

FRI-21.17 Explain other markings and colors (non-transportation) clues to the presence of hazardous materials

FRI-21.18 Explain how written resources can be used to assist firefighters in identifying hazardous materials

FRI-21.19 Explain how the senses can provide clues to the presence of hazardous materials

FRI-21.20 Explain how monitoring and detection devices can provide clues to the presence of

hazardous materials

FRI-21.21 Summarize indicators of terrorist attacks

FRI-21.22 Discuss identifying illicit laboratories

FRI-21.23 Discuss secondary attacks

FRI-21.24 Obtain information about a hazardous material using the Emergency Response Guide (ERG)

Core Standard 22–Hazardous Materials Operations - Students apply concepts of hazardous material identification and removal to safely perform operations in chemically toxic environments.

Standards

FRI-22.1 Summarize incident priorities for all haz mat and terrorist incidents

FRI-22.2 Discuss the management structure at haz mat or terrorist incidents

FRI-22.3 Describe the problem-solving stages at haz mat and terrorist incidents

FRI-22.4 Identify various strategic goals and explain how they're achieved

FRI-22.5 Summarize general guidelines for decontamination operations

FRI-22.6 Describe the three types of decontamination

FRI-22.7 Discuss implementing decontamination procedures

FRI-22.8 Discuss rescue at haz mat incidents

FRI-22.9 Explain how the strategic goal of spill control and confinement is achieved

FRI-22.10 Discuss crime scene management and evidence preservation

FRI-22.11 Explain actions taken during the recovery and termination phase of a haz mat or terrorist incident

FRI-22.12 Perform emergency decontamination

FRI-22.13 Perform various specified defensive control functions