

Firefighter 1 - CTAG Alignment

This document contains information about CTFI002, Career-Technical Articulation Numbers (CTANs) for the proposed Firefighter 1 Career-Technical Assurance Guide (CTAG).

Course Description:

Firefighter I

A course that prepares individuals to perform the duties wearing required protective equipment related to Firefighter 1. Topics include: fire department operations, firefighting equipment operation and maintenance, principles of combustion and fire behavior, recognition of types of fires and applying the correct methods for extinguishment, personal protective equipment, ventilation, forcible entry, loss prevention, operations level HAZMAT, fire and life safety initiatives, fire prevention and public relations.

Semester Credit Hours: 7

Advising Note: For qualification at Level 1, the Firefighter candidate shall meet the general knowledge requirements in 5.1.1; the general skill requirements in 5.1.2; and the JPRs defined in Sections 5.2 through 5.5 of this standard; and the requirements defined in Chapter 5, Core Competencies for Operations Level Responders, and Section 6.6 Mission Specific Competencies: Product Control, of NFPA 472, Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents. (General) NFPA 1001 Ch. 5.1

Prerequisite: Required NIMS 100 and 700

Alignment:

Learning Outcomes	Competencies are from Law and Public Safety Career Field Technical Content Standards of the Ohio Department of Education (January 2013)
The student will be able to:	
The training program for Firefighter 1 certification shall consist of the following training requirements: 1) A training program consisting of not less than 136 hours, which meets all objectives in NFPA 1001 firefighter I.	

<p>2) An emergency vehicle course consisting of not less than 16 hours that is approved by the charter program and meets the requirements of NFPA 1002 and 1451</p> <p>3) A four (4) hour Life Safety National Firefighter Foundation Course.</p>	
<p>1. Explain the organization, mission statement, policies, and procedures of a fire department and explain the role of a Firefighter 1 within the organization. Communicate the value of fire and life safety initiatives to reduce line of duty deaths and injuries along with the internal programs, external agencies, and documents addressing the well-being of the Firefighter 1. (General Knowledge Requirements) NFPA 1001 Ch. 5.1.1</p>	<p>5.1.1. Discuss the critical aspects of fire department's member assistance program, the critical aspects of NFPA 1500, Fire Department Occupational Safety and Health Program.</p> <p>5.1.2. State the mission of the fire service.</p> <p>5.1.3. Describe the organization of the fire department.</p> <p>5.1.4. Discuss the role of the Firefighter 1 within the organization.</p> <p>5.1.5. Explain a fire department's standard operating procedures, rules, and regulations as they apply to firefighters.</p> <p>5.1.6. Discuss the role of their agencies as they relate to the department.</p> <p>5.1.7. Discuss the value of fire and life safety initiatives supporting the fire department's mission and to reduce the line of duty deaths</p>
<p>2. Demonstrate how to: 1) don and doff personal protective clothing and prepare clothing for reuse and 2) locate information using department documents along with standards and code materials. (General Skills Requirement) NFPA 1001 Ch. 5.1.2</p>	<p>5.2.1. Perform the ability to don personal protective clothing within one minute.</p> <p>5.2.2. Perform the ability to doff personal protective clothing and prepare for reuse.</p> <p>5.2.3. Locate and clarify information in department documents, standards, and code materials.</p>
<p>3. Explain the communication process and list different ways of communicating and initiating a response. Demonstrate the use of basic fire department communication equipment to convey emergency and non-emergency information with persons inside and outside of the department. (FD Communications) NFPA 1001 Ch. 5.2-5.2.4</p>	<p>5.3.1. Explain the procedures for reporting an emergency, departmental standard operating procedures (SOPs) for taking and receiving alarms, radio codes or procedures, and information needs to dispatcher.</p> <p>5.3.2. Demonstrate the ability to operate fire department communications equipment, relay information, and record information.</p> <p>5.3.3. Discuss the fire department procedures for answering nonemergency telephone calls.</p> <p>5.3.4. Demonstrate the ability to operate fire station telephone and intercom equipment.</p> <p>5.3.5. Discuss the departmental radio procedures and etiquette for routine traffic, emergency traffic, and emergency evacuation signals.</p> <p>5.3.6. Perform the ability to operate radio equipment and discriminate between routine and emergency traffic.</p>

	<p>5.3.7. Discuss personnel accountability systems</p> <p>5.3.8. Discuss emergency communications procedures and emergency evacuation methods</p> <p>5.3.9. Demonstrate an emergency call for assistance and use alternative methods for requesting assistance</p>
<p>4. Explain knowledge of, and demonstrate the ability to: 1) wear, operate, and monitor air supply of an SCBA, 2) use emergency techniques, procedures, and built-in functions, including warning devices, in case of equipment malfunctions or activation of low air alarm, 3) exit a structure prior to air cylinder depletion, 4) wear protective equipment while mounting, riding, and dismounting fire apparatus, 5) establish and work safely in designated work areas. (Fire Ground Operation - SCBA)</p> <p>NFPA 1001 Ch. 5.3 - 5.3.3</p>	<p>5.4.1. List and discuss the components that make up the SCBA assembly including low air alarms.</p> <p>5.4.2. Convey breathing techniques while wearing SCBA.</p> <p>5.4.3. Describe the indicators for and discuss possible emergency procedures while wearing SCBA.</p> <p>5.4.4. List the physical requirements for wearing SCBA.</p> <p>5.4.5. Exit a restricted passage while wearing full personal protective equipment (PPE) and breathing air from a SCBA unit.</p> <p>5.4.6. Demonstrate the ability to control breathing while breathing air from an SCBA unit.</p> <p>5.4.7. Replace a depleted air cylinder with a full air cylinder on an SCBA unit.</p> <p>5.4.8. Demonstrate emergency procedures taken in the event of an SCBA failure or air cylinder depletion.</p> <p>5.4.9. Don all personal protective clothing and equipment correctly within two minutes, breathing air and pass device activated.</p> <p>5.4.10. Discuss the mounting and dismounting procedures for riding fire and Emergency Medical Services (EMS) apparatus.</p> <p>5.4.11. Describe the hazards and ways to avoid hazards that cause accidents associated with riding fire and EMS apparatus.</p> <p>5.4.12. List the practices that are prohibited while riding fire and EMS apparatus.</p> <p>5.4.13. List the common types of PPE used while riding on fire and EMS apparatus.</p> <p>5.4.14. Demonstrate the proper use for each piece of safety equipment provided, including wearing seat belts.</p> <p>5.4.15. Explain the potential hazards involved in operating at emergency scenes including traffic control, utilities, and environmental conditions.</p> <p>5.4.16. Describe the proper procedures for dismounting fire and EMS apparatus in traffic and at other emergency and nonemergency scenes</p> <p>5.4.17. Explain the procedures and use of different types of protective</p>

	<p>equipment available to ensure the user's safety, while operating at emergency scenes and work zone designations.</p> <p>5.4.18. Demonstrate how to safely dismount apparatus, don appropriate safety equipment for the given situation, and deploy traffic and scene control devices to protect the work area.</p>
<p>5. Identify common methods and perform forcible entry techniques through various types of doors, windows, walls, and the locking mechanisms using powered and non-powered equipment and tools. (Fire Ground Operations - Forcible Entry) NFPA 1001 Ch.5.3.4</p>	<p>5.5.1. List the basic construction of typical doors, windows, and walls found within the community or service area.</p> <p>5.5.2. Explain the operation of a variety of doors, windows, and locks used within the community or service area.</p> <p>5.5.3. Convey dangers associated when forcing entry through doors, windows, walls, and locks.</p> <p>5.5.4. Demonstrate how to safely carry, operate, and use common forcible entry tools to force entry through doors, windows, walls, and locks.</p>
<p>6. Demonstrate as a team how to safely exit a hazardous environment, with zero visibility conditions, into a safe environment, without depleting your air supply and while maintaining team integrity. (Fire Ground Operations - Exit Hazardous Area) NFPA 1001 Ch.5.3.5</p>	<p>5.6.1. Define emergency radio traffic communication procedures, and emergency evacuation signals/methods.</p> <p>5.6.2. Describe personnel accountability systems, emergency escape, and what constitutes a safe haven.</p> <p>5.6.3. Describe the emergency procedures for loss of air supply.</p> <p>5.6.4. List the elements that create and/or indicate a hazardous environment.</p> <p>5.6.5. Conduct a search, as a team member, in a vision-obscured condition, using all available senses to evaluate for hazards.</p> <p>5.6.6. Exit a hazardous area by searching for and finding a guide line then following the line to a safe haven.</p> <p>5.6.7. Demonstrate methods to conserve self-contained breathing apparatus (SCBA) air.</p>
<p>7. Explain the knowledge needed, and demonstrate the skills required to select, carry, place, raise, extend, climb, and work off of ladders. (Fire Ground Operations - Ladders) NFPA 1001 Ch.5.3.6</p>	<p>5.7.1. List the parts of an extension ladder.</p> <p>5.7.2. Explain the hazards associated with setting up ground ladders.</p> <p>5.7.3. Explain what constitutes a stable foundation for ladder placement.</p> <p>5.7.4. Describe the different climbing angles needed for safe completion of various tasks along with extending fly sections, assuring the fly section is locked.</p> <p>5.7.5. Explain what constitutes a reliable structural component for tip placement.</p> <p>5.7.6. Demonstrate carries and raises for single and extension ladders along</p>

	<p>with extending fly sections, assuring the fly section is locked.</p> <p>5.7.7. Establish with certainty that a wall or roof will support a ladder and that the ladder is at the correct climbing angle for the given task.</p> <p>5.7.8. Select the correct length extension ladder for a given height and properly place the ladder addressing and avoiding safety hazards.</p> <p>5.7.9. Climb and leg lock an extension ladder.</p> <p>5.7.10. Climb and leg lock an extension ladder and work with a tool.</p>
<p>8. Explain knowledge of, and demonstrate the performance required to identify multiple hazards associated with vehicle fires, and use the correct techniques for controlling and extinguishing a vehicle fire. Force entry into all locked compartments. (Fire Ground Operations - Vehicle Fires) NFPA 1001 Ch. 5.3.7</p>	<p>5.8.1. Convey the principles of fire streams as they relate to fighting vehicle fires.</p> <p>5.8.2. List the dangerous conditions created during a vehicle fire, along with the precautions taken when advancing hose lines towards these types of fires.</p> <p>5.8.3. Describe the desired observable results of a properly applied fire stream to a vehicle fire.</p> <p>5.8.4. Identify types of alternative fueled vehicles and list the hazards associated with each vehicle type.</p> <p>5.8.5. Disclose the types of injuries associated with extinguishing vehicle fires along with procedures for avoiding these injuries.</p> <p>5.8.6. Describe how to gain entry into locked trunks, engine compartments, and passenger compartments.</p> <p>5.8.7. List procedures for conducting a safe and effective overhaul after extinguishing a vehicle fire.</p> <p>5.8.8. Perform the proper procedures while advancing a 1½" or larger diameter attack line, operating the nozzle patterns for maximum effectiveness, and extinguishing the vehicle fire while maintaining flash fire protection.</p> <p>5.8.9. Access all locked and unlocked compartments to expose and extinguish hidden fires.</p> <p>5.8.10. Identify vehicle's fuel type and use proper procedures for controlling fuel leaks.</p> <p>5.8.11. Identify dangerous conditions created during an vehicle fire</p>
<p>9. Explain the methods and demonstrate the procedures for: 1) identifying hazards of stacked or stored materials on fire, 2) controlling and extinguishing fires involving Class "A" stacked/stored materials using hand lines and master stream</p>	<p>5.9.1 Discuss types of attack lines and water streams appropriate for attacking stacked piled materials and outdoor fires.</p> <p>5.9.2 -Describe the dangers such a collapse associated with stacked and piled materials</p>

<p>devices, 3) overhauling stacked and stored materials addressing all safety concerns, 4) locating fire origin and cause, and preservation of evidence. (Fire Ground Operations - Stacked Class</p> <p>"A" Fires) NFPA 1001 Ch. 5.3.8</p>	<p>5.9.3 Explain the effects of how each extinguishing agent should perform to extinguish different materials and material configurations.</p> <p>5.9.4 List methods, along with the tools required, to break up various types of materials and the difficulties related to complete extinguishment.</p> <p>5.9.5 Describe the methods used for water application for exposure protecting and fire suppression.</p> <p>5.9.6 List the hazards (e.g., collapse, toxic fumes, hazardous materials) that may be found during fires in building, storage facilities, and containers.</p> <p>5.9.7 Disclose obvious signs of fire origin and cause and list the techniques for preserving fire cause related evidence.</p> <p>5.9.8 Perform the ability to recognize inherent hazards related to the materials configuration and operate and operate hand lines and master streams</p> <p>5.9.9 Search for hidden fire, break up materials using hand tools, apply water streams, and evaluate for complete extinguishment.</p> <p>5.9.10 Assess fire, heat, and smoke patterns for determination of fire origin while protecting physical evidence and evaluate for complete extinguishment.</p> <p>5.9.11 Operate hose lines and other water application techniques for maximum penetration and search for and expose hidden fire.</p>
<p>10. Explain the methods for, and demonstrate entering a structure using various entry points, performing a comprehensive primary search, rescue/removal of a victim found in an obscured visibility environment, and when appropriate, conducting a secondary search while using appropriate tools and equipment. (Fire Ground Operations - Search and</p> <p>Rescue) NFPA 1001 Ch. 5.3.9</p>	<p>5.10.1. List and describe the proper use of forcible entry tools used during structural rescue operations.</p> <p>5.10.2. Describe the proper placement of ground and aerial ladders during structural rescue operations.</p> <p>5.10.3. Describe the physiological effects of operating in obscured conditions and ways to manage them effectively.</p> <p>5.10.4. Describe methods to determine if an area is tenable and safe for interior operations.</p> <p>5.10.5. Describe the proper techniques to conduct a primary search.</p> <p>5.10.6. Describe the proper techniques to conduct a secondary search.</p> <p>5.10.7. List and describe each team member's roles and goals during a structural search and rescue operation.</p> <p>5.10.8. List and describe various methods to locate victims during a search and rescue operation.</p> <p>5.10.9. Describe various methods and carries used to remove victims from a structure, on various floors, during search and rescue operations.</p>

	<p>5.10.10. Demonstrate the various methods for maneuvering through restricted openings while wearing a self-contained breathing apparatus (SCBA).</p> <p>5.10.11. Demonstrate the proper placement and use of ladders during rescue operations.</p> <p>5.10.12. Demonstrate a rescue of a firefighter with a functioning SCBA.</p> <p>5.10.13. Demonstrate a rescue of a firefighter with a nonfunctioning SCBA.</p> <p>5.10.14. Demonstrate a rescue of a victim with no respiratory protection.</p> <p>5.10.15. Demonstrate the proper techniques for assessing the tenability of a given area.</p>
<p>11. Explain procedures for, and demonstrate the following: 1) deploy, extend, and replace attack lines, 2) enter a structure using various entry points, control and extinguish a fire using effective water application techniques for above grade and below grade fires, 3) maintain team integrity, 4) conduct an effective overhaul. <small>(Fire Ground Operations - Fire Control) NFPA 1001 Ch. 5.3.10</small></p> <p>NOTE: NFPA 1403 “Standard on Live Fire Training Evolutions” applies</p>	<p>5.11.1. List the various types of fire streams used for an interior fire attack.</p> <p>5.11.2. Describe the design, operation, nozzle pressure effects, and flow capabilities of various types of fog nozzles.</p> <p>5.11.3. Describe the design, operation, nozzle pressure effects, and flow capabilities of various types of smooth bore nozzles.</p> <p>5.11.4. Describe the design, operation, nozzle pressure effects, and flow capabilities of various types of specialty nozzles. .</p> <p>5.11.5. List and describe the precaution to be followed when advancing hose lines to a fire.</p> <p>5.11.6. Describe the observable results of a properly applied fire stream.</p> <p>5.11.7. Describe various dangerous building conditions created as the result of a fire.</p> <p>5.11.8. Describe the basic principles of exposure protection.</p> <p>5.11.9. List and describe the potential long-term consequences of exposure to products of combustion for a firefighter.</p> <p>5.11.10. List and describe the physical state of matter in which fuels are found.</p> <p>5.11.11. Describe common types of accidents or injuries and their causes that may occur on the fire ground.</p> <p>5.11.12. Describe the proper placement and application of a small diameter (1½” to 2”) attach line.</p> <p>5.11.13. Describe the proper placement application of a medium diameter (2½”) attach line.</p> <p>5.11.14. Describe the role of a backup team during an interior fire attack.</p> <p>5.11.15. Describe the proper fire attack methods for a grade-level fire.</p> <p>5.11.16. Describe the proper fire attack methods for an above-grade-level fire.</p>

	<p>5.11.17. Describe the proper fire attack methods for a below-grade-level fire.</p> <p>5.11.18. Describe the proper methods for locating and exposing hidden fires.</p> <p>5.11.19. Demonstrate the proper methods to prevent water hammer when shutting down nozzles.</p> <p>5.11.20. Demonstrate the ability to properly open, close, and adjust nozzle flow and patterns on various automatic and adjustable fog nozzles.</p> <p>5.11.21. Demonstrate the ability properly open and close various smooth bore nozzles.</p> <p>5.11.22. Demonstrate the proper procedures for applying water using a direct fire attack.</p> <p>5.11.23. Demonstrate the proper procedures for applying water using an indirect fire attack.</p> <p>5.11.24. Demonstrate the proper procedures for applying water using a combination fire attack.</p> <p>5.11.25. Demonstrate the proper procedure for advancing a 1½" or larger diameter hose up ladders.</p> <p>5.11.26. Demonstrate the proper procedure for advancing a 1½" or larger diameter hose up stairways.</p> <p>5.11.27. Demonstrate the proper procedure for advancing a 1½" or larger diameter hose down stairways.</p> <p>5.11.28. Demonstrate the proper methods for extending hose lines.</p> <p>5.11.29. Demonstrate the proper methods for replacing burst or broken sections of hose.</p> <p>5.11.30. Operate charged hose line of 1½" diameter or larger while secured to a ground ladder.</p> <p>5.11.31. Demonstrate the proper methods for coupling and uncoupling various size hose connections.</p> <p>5.11.32. Demonstrate the proper fire attack methods for a grade-level fire.</p> <p>5.11.33. Demonstrate the proper attack methods for an above-grade-level fire.</p> <p>5.11.34. Demonstrate the proper fire attack methods for a below-grade-level fire.</p> <p>5.11.35. Locate and suppress interior wall fires.</p>
<p>12. Identify the hazards associated with a structure needing horizontal ventilation and demonstrate various types of horizontal ventilation using natural and mechanical means to</p>	<p>5.12.1. List and describe the principles, advantages, limitations, and effects of horizontal ventilation.</p> <p>5.12.2. List and describe the principles, advantages, limitations, and effects of</p>

<p>remove smoke, heat, and toxic gasses from within the structure using appropriate tools, equipment and procedures.</p> <p>(Fire Ground Operations - Horizontal Ventilation) NFPA 1001 Ch. 5.3.11</p>	<p>mechanical ventilation.</p> <p>5.12.3. List and describe the principles, advantages, limitations, and effects of hydraulic ventilation.</p> <p>5.12.4. List and describe the safety considerations when venting a structure.</p> <p>5.12.5. Describe the behavior of fire as it relates to venting in a structure.</p> <p>5.12.6. List and explain the products of combustion found in a structure fire.</p> <p>5.12.7. List and explain the signs and cause of backdraft.</p> <p>5.12.8. List and explain the effects of a backdraft.</p> <p>5.12.9. Describe the methods to prevent a backdraft.</p> <p>5.12.10. Explain the relationship of oxygen concentration to life safety.</p> <p>5.12.11. Explain the relationship of oxygen concentration to fire growth.</p> <p>5.12.12. Demonstrate the ability to properly carry and place a ladder to the structure for ventilation.</p> <p>5.12.13. Demonstrate the ability to properly carry various ventilation tools and equipment to the location where they will be used.</p> <p>5.12.14. Demonstrate the proper procedure for safely breaking glass in a window or door and removing all obstructions.</p>
<p>13. Identify the hazards associated with a structure needing vertical ventilation and demonstrate vertical ventilation to remove smoke, heat, and toxic gasses from within the structure using the appropriate tools, equipment, and procedures. (Fire Ground Operations - Vertical Ventilation) NFPA 1001 Ch. 5.3.12</p>	<p>5.13.1. Discuss the methods of heat transfer.</p> <p>5.13.2. Describe the principles of thermal layering within the structure on fire.</p> <p>5.13.3. Discuss the techniques and safety precautions for venting flat roofs, pitched roofs, and basements.</p> <p>5.13.4. Explain the basic indicators of potential collapse or roof failure.</p> <p>5.13.5. Describe the effects of construction type and elapsed time under fire conditions on structural integrity.</p> <p>5.13.6. Discuss the advantages and disadvantages of vertical and trench/strip ventilation.</p> <p>5.13.7. Demonstrate the ability to transport and operate ventilation tools and equipment.</p> <p>5.13.8. Demonstrate the ability to hoist ventilation tools to a roof.</p> <p>5.13.9. Perform the ability to cut roofing and flooring materials to vent flat roofs, pitched roofs, and basements.</p> <p>5.13.10. Demonstrate the ability to sound a roof for integrity.</p> <p>5.13.11. Demonstrate the ability to clear an opening with hand tools.</p> <p>5.13.12. Perform the ability to select, carry, deploy, and secure ground ladders for</p>

	<p>ventilation activities.</p> <p>5.13.13. Demonstrate the deployment of a roof ladder on a pitched roof while secured to a ground ladder.</p> <p>5.13.14. Perform a carry of ventilation-related tools and equipment while ascending and descending ladders.</p>
<p>14. Explain the process and demonstrate the procedures for conducting a safe and effective overhaul, without compromising the structure, using appropriate tools, equipment, and procedures to extinguish all fire and protect possible evidence. (Fire Ground Operations - Overhaul) NFPA 1001 Ch. 5.3.13</p>	<p>5.14.1. List the types of fire attack lines and water application devices most effective for overhaul.</p> <p>5.14.2. Describe the water application methods for extinguishment that will limit water damage.</p> <p>5.14.3. List the types of tools and methods used to expose hidden fires.</p> <p>5.14.4. Discuss the dangers associated with overhaul.</p> <p>5.14.5. List the obvious signs of the area of origin, signs of arson, and reasons for protecting evidence.</p> <p>5.14.6. Demonstrate the ability to deploy and operate attack lines during overhaul.</p> <p>5.14.7. Demonstrate the steps for removing flooring, ceiling, and wall material to expose void spaces without compromising structural integrity.</p> <p>5.14.8. Perform water application for maximum effectiveness during overhaul.</p> <p>5.14.9. Demonstrate the steps for exposing and extinguishing hidden fires in walls, ceilings, and subfloor spaces.</p> <p>5.14.10. Demonstrate how to preserve evidence, detect area of origin, and evaluate for complete extinguishment.</p>
<p>15. Explain the methods and demonstrate the actions required to conduct property conservation by covering unwanted openings, covering/protecting furnishings, stopping or re-routing water flow from sprinkler systems, removing charred materials, and protecting scene evidence. Clean, inspect, fold and roll salvage covers to prepare for reuse. (Fire Ground Operations - Property Conservation) NFPA 1001 Ch. 5.3.14</p>	<p>5.15.1. Discuss the purpose of property conservation and its value to the public.</p> <p>5.15.2. Describe the methods used to protect property.</p> <p>5.15.3. List the types of and uses for salvage covers.</p> <p>5.15.4. Discuss the operations at properties protected with automatic sprinklers.</p> <p>5.15.5. Describe how to stop the flow of water from an automatic sprinkler head.</p> <p>5.15.6. Discuss the identification of main control valves on an automatic sprinkler system.</p> <p>5.15.7. Discuss forcible entry issues related to salvage.</p> <p>5.15.8. Demonstrate the ability to cluster furniture.</p> <p>5.15.9. Demonstrate how to deploy covering materials.</p> <p>5.15.10. Demonstrate how to roll and fold salvage covers for reuse.</p>

	<ul style="list-style-type: none"> 5.15.11. Demonstrate how to construct water chutes and catch-alls. 5.15.12. Demonstrate the procedures for removing water. 5.15.13. Demonstrate how to cover building openings, including doors, windows, floor openings, and roof openings. 5.15.14. Perform the steps to separate, remove, and relocate charred material to a safe location while protecting the area of origin for fire cause determination. 5.15.15. Demonstrate how to stop the flow of water from a sprinkler head with sprinkler wedges or stoppers. 5.15.16. Operate a main control valve on an automatic sprinkler system. 5.15.17. Discuss procedures for protecting possible areas of origin and potential evidence
<p>16. Explain the steps and demonstrate the procedures for: 1) connecting supply hose to a hydrant and making a forward and reverse lay, 2) operating a hydrant, 3) obtaining water from a suitable static water source that includes drafting from a portable water tank. (Fire Ground Operations - Water Supply) NFPA 1001 Ch. 5.3.15</p>	<ul style="list-style-type: none"> 5.16.1. Discuss loading and offloading procedures for mobile water supply apparatus. 5.16.2. Describe fire hydrant operations. 5.16.3. Discuss procedures and protocol for connecting to suitable static water supply sources. 5.16.4. Perform the ability to hand lay a supply hose. 5.16.5. Demonstrate how to connect and place hard suction hose for drafting operations. 5.16.6. Operate the deployment of portable water tanks as well as the equipment necessary to transfer water between and draft from them. 5.16.7. Perform hydrant-to-pumper hose connections for forward and reverse lays. 5.16.8. Connect supply hose to a hydrant and fully open and close the hydrant.
<p>17. Identify Class A, B, C, and K type fires and relate the fire to the appropriate type of fire extinguisher. Select the correct fire extinguisher then extinguish a Class A, B, and C type incipient fire. (Fire Ground Operations - Portable Fire Extinguisher) NFPA 1001 Ch. 5.3.16</p>	<ul style="list-style-type: none"> 5.17.1. List the different classifications of fire. 5.17.2. List the types of rating system for each classification of fire. 5.17.3. List the risks associated with each classification of fire. 5.17.4. Describe the operating methods of a portable extinguisher. 5.17.5. Describe the limitations of a portable extinguisher. 5.17.6. Demonstrate the ability to operate a portable extinguisher. 5.17.7. Demonstrate how to approach fire with a portable extinguisher.

	<p>5.17.8. Demonstrate how to select an appropriate extinguisher based on the size and type of fire.</p> <p>5.17.9. Demonstrate how to safely carry a portable extinguisher.</p>
<p>18. Explain the process for choosing the appropriate lighting system and placement of the lights for a given fire scene. Demonstrate the procedures by choosing, deploying, and safely illuminating a fire scene scenario. (Fire Ground Operations - Scene Illumination) NFPA 1001 Ch. 5.3.17</p>	<p>5.18.1. Discuss the safety principles and practices for using lighting equipment.</p> <p>5.18.2. Describe power supply capabilities and limitations.</p> <p>5.18.3. List the methods of light deployment.</p> <p>5.18.4. Demonstrate the ability to operate department power supply units (e.g., generators, power take-off [PTO]).</p> <p>5.18.5. Demonstrate the ability to operate lighting equipment (e.g., tripods, masts).</p> <p>5.18.6. Demonstrate how to select and setup cords and connectors.</p> <p>5.18.7. Demonstrate how to reset ground fault interrupter (GFI) devices and apparatus breakers.</p> <p>5.18.8. Demonstrate how to position lighting for optimal safety and effect.</p>
<p>19. Identify the safety concerns and procedures for turning off the gas, electric, and water supplies to a structure. Demonstrate the procedures for shutting off the utilities. (Fire Ground Operations - Turn Off Utilities) NFPA 1001 Ch. 5.3.18</p>	<p>5.19.1. List the properties and principles for utilities likely encountered (i.e., electricity, gas, water, hydraulic, pneumatic systems).</p> <p>5.19.2. List the safety concerns for utilities likely encountered (i.e., electricity, gas, water, hydraulic, pneumatic systems).</p> <p>5.19.3. List the methods for rendering utilities likely encountered safe (e.g., shutoff, disconnection, lockout).</p> <p>5.19.4. Describe the associated dangers related to rendering utilities safe.</p> <p>5.19.5. Describe the use of required safety equipment in rendering utilities safe.</p> <p>5.19.6. Demonstrate the ability to identify utility control devices.</p> <p>5.19.7. Demonstrate the ability to operate utility-related control valves or switches.</p> <p>5.19.8. Demonstrate the ability to perform an assessment for utility-related hazards.</p>
<p>20. Identify the hazards associated with ground cover fires, identify types and features of ground cover fires, and demonstrate controlling/extinguishing fires using the appropriate fire lines, hose, tools, and water application. (Fire Ground Operations - Ground Cover Fires) NFPA 1001 Ch. 5.3.19</p>	<p>5.20.1. List the fuel classifications as they relate to wildland fires.</p> <p>5.20.2. List the parts of a wildland fire.</p> <p>5.20.3. Discuss the methods used to approach and attack wildland fires for containment or suppression.</p> <p>5.20.4. Discuss the safety principles and practices commonly used for wildland fire containment and suppression.</p>

	<p>5.20.5. Demonstrate the steps to determine exposure threats based on wildland fire spread.</p> <p>5.20.6. Demonstrate how the exposures are protected from spreading wildland fires.</p> <p>5.20.7. Demonstrate the steps to construct a fire line.</p> <p>5.20.8. Demonstrate the steps to extinguish a wildland fire using hand tools.</p> <p>5.20.9. Demonstrate the steps n to maintain the integrity of established fire lines against a spreading wildland fire.</p> <p>5.20.10. Demonstrate the steps to suppress a contained wildland fire with water.</p>
<p>21. Explain the differences, care, maintenance, inspection, and uses for life safety rope compared to utility rope and demonstrate hoisting tools using the appropriate knots. (Fire Ground Operations NFPA 1001 Ch. 5.3.20)</p>	<p>5.21.1 Discuss knot types and usages.</p> <p>5.21.2 Describe the differences between life safety and utility rope.</p> <p>5.21.3 Explain the reasons for placing rope out of service.</p> <p>5.21.4 Discuss how the different types of knots are used for given tools, ropes, or situations.</p> <p>5.21.5 Discuss how rope is used to support response activities.</p> <p>5.21.6 Demonstrate the hoisting methods for tools and equipment.</p> <p>5.21.7 Demonstrate hoisting tools and equipment using ropes and the correct knot.</p>
<p>22. Explain and demonstrate the proper methods for inspecting, cleaning, maintaining and record keeping for: 1) basic tools and equipment, 2) ladders and ropes, 3) ventilation equipment and hose, 4) SCBA. Prepare hose for reuse by rolling and reloading into the hose bed. (Preparedness And Maintenance NFPA 1001 Ch. 5.5 - 5.52)</p>	<p>5.22.1 Describe the process for cleaning, inspection, maintenance, and record keeping for ladders following manufacturer’s or department guidelines.</p> <p>5.22.2 Describe the process for cleaning, inspection, maintenance, and record keeping for ventilation equipment following manufacturer’s or department guidelines.</p> <p>5.22.3 Describe the process for cleaning, inspection, maintenance, and record keeping for SCBA following manufacturer’s or department guidelines.</p> <p>5.22.4 Describe the process for cleaning, inspection, maintenance, and record keeping for ropes following manufacturer’s or department guidelines.</p> <p>5.22.5 Describe the process for cleaning, inspection, maintenance, and record keeping for salvage equipment following manufacturer’s or department guidelines.</p> <p>5.22.6 Describe the process for cleaning, inspection, maintenance, and record keeping for hand tools following manufacturer’s or department guidelines.</p>

	<p>5.22.7 Demonstrate cleaning, inspection, basic maintenance, and record keeping for ladders in accordance with manufacturer’s or department guidelines.</p> <p>5.22.8 Demonstrate cleaning, inspection, basic maintenance, and record keeping for ventilation equipment in accordance with manufacturer’s or department guidelines.</p> <p>5.22.9 Demonstrate cleaning, inspection, basic maintenance, and record keeping for SCBA in accordance with manufacturer’s or department guidelines.</p> <p>5.22.10 Demonstrate cleaning, inspection, basic maintenance, and record keeping for ropes in accordance with manufacturer’s or department guidelines.</p> <p>5.22.11 Demonstrate cleaning, inspection, basic maintenance, and record keeping for salvage equipment in accordance with manufacturer’s or department guidelines.</p> <p>5.22.12 Demonstrate cleaning, inspection, basic maintenance, and record keeping for hand tools in accordance with manufacturer’s or department guidelines.</p>
<p>23. Identify and respond to hazardous materials incidents. The firefighter candidate shall meet the requirements defined in Chapter 5, Core Competencies for Operations Level Responders, and 6.6, Mission-Specific Competencies Product Control, of NFPA 472, Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents.</p>	<p>5.36.1 Identify different forms of hazardous materials.</p> <p>5.36.2 Identify agencies that have resources to assist in hazards material incidents (e.g., Emergency Management Agency [EMA], Environmental Protection Agency [EPA], <i>Federal</i> Emergency Management Agency [FEMA]).</p> <p>5.36.3 Identify and interpret hazards material labels and placards using the U. S. Department of Transportation [DOT] Emergency Response Guidebook.</p> <p>5.36.4 Read and interpret Material Safety Data Sheet (MSDS) forms and shipping documents.</p> <p>5.36.5 Identify sources of information on procedures for the safe cleanup, storage, and disposal of hazardous materials (e.g., CHEMTREC).</p> <p>5.36.6 Describe the purpose of a hazardous materials safety plan.</p>

Career Firefighter 1 and 2 - CTAG Alignment

This document contains information about CTFFI003, the Career-Technical Articulation Numbers (CTANs) for the Career Firefighter I and II Career-Technical Assurance Guide (CTAG). The CTAG is:

Course Description:

Career Firefighter I and II:

This course prepares individuals to assume and transfer command within an incident management system. Persons will learn how to perform assigned duties in conformance with applicable NFPA and other safety regulations and Authority Having Jurisdiction (AHJ) procedures. The role and responsibilities of the Career Firefighter I and II will be covered.

Semester Credit Hours: 11, unless previous credit was earned for Firefighter 1 in which case the balance of 11 semester hours will be awarded (see Firefighter 1 CTAG for credit hour value). For example, a person holding Firefighter I certification and who has received 7 semester hours of credit would be awarded four (4) semester hours of credit for completing an additional 104 hours of training for Firefighter II.

Advising note: For qualification at Level II, the Firefighter 1 shall meet the general knowledge requirements in 6.1.1, the general skill requirement in 6.1.2, the JPRs defined in Sections 6.2 through 6.5 of this standard, and the requirements defined in Chapter 5. (General) NPFA 1001 Ch.

6.1

Alignment:

Learning Outcomes	Competencies are from Law and Public Safety Career Field Technical Content Standards of the Ohio Department of Education
The student will be able to:	
<p>A training program for Career Firefighter 1 and 2 certification shall consist of:</p> <ul style="list-style-type: none"> -A training program of not less than 260 hours which covers all objectives in NFPA 1001 standards for Career Firefighter 1 and 2. <p>Such a program will meet all aspects of the training for Firefighter I @ 156 hours plus an additional 104 hours.</p>	

<p>1. Explain and apply the actions required within the Incident Management System (IMS) for: 1) distinguish the need for organizing, assuming, and transferring command, 2) apply all applicable NFPA, department, and AHJ safety procedures while assuming an assigned roll within the IMS system.</p> <p>(General Knowledge Requirements) NFPA 1001 Ch. 6.1.1-6.1.2</p>	<p>5.23.1 Define the role and responsibilities of a Firefighter 2</p> <p>5.23.2 Describe the roles and responsibilities for assuming and transferring command within IMS.</p> <p>5.23.3 Discuss the responsibilities of the first-arriving Firefighters.</p> <p>5.23.4 Define the applicable NFPA and other safety regulations.</p> <p>5.23.5 Define the applicable NFPA standards and other safety regulations.</p> <p>5.23.6 Demonstrate the ability to determine the need for command.</p> <p>5.23.7 Organize and coordinate an IMS until command is transferred.</p> <p>5.23.8 Function within an assignment role within an ICS.</p>
<p>2. Identify the information required for completing incident reports and explain the reasons for completing thorough, accurate reports. Demonstrate how to obtain pertinent, accurate information while completing a written or electronically generated incident report. (Department Communications) NFPA 1001 Ch. 6.2-6.2.1</p>	<p>5.24.1 Describe the steps in processing and initiating an emergency response.</p> <p>5.24.2 List the information that should be included in a basic incident report.</p> <p>5.24.3 Explain the purpose and usefulness of accurate reports.</p> <p>5.24.4 Discuss the consequences of inaccurate reports.</p> <p>5.24.5 List how to obtain the necessary information and the required coding procedures.</p> <p>5.24.6 Demonstrate the ability to determine necessary codes.</p> <p>5.24.7 Demonstrate the ability to proof reports and the technology necessary to complete reports.</p>
<p>3. Explain and demonstrate providing radio communications addressing the progress and needs of the team/company. (Department Communications) NFPA 1001 Ch. 6.2.2</p>	<p>5.25.1 Discuss the standard operating procedures for alarm assignments and fire department radio communication procedures.</p> <p>5.25.2 Demonstrate the ability to operate fire department communication equipment.</p>
<p>4. Explain and demonstrate: 1) choosing the correct type of foam, 2) using the appropriate method and rate of foam application to extinguish given fires, 3) generating and applying foam to reduce hazards, 4) selecting and operating various types of nozzles to apply foam. (Fireground Operations-Foam) NFPA 1001 Ch. 6.3.1</p>	<p>5.26.1 List the methods by which foam prevents or controls a hazard.</p> <p>5.26.2 Describe the principles by which foam is generated.</p> <p>5.26.3 Discuss the causes for poor foam generation and corrective measures.</p> <p>5.26.4 Describe the difference between hydrocarbon and polar solvent fuels and the concentrates that work on each.</p> <p>5.26.5 Describe the characteristics, uses, and limitations of firefighting foams.</p> <p>5.26.6 List the advantages and disadvantages of using fog nozzles versus foam nozzles for foam application.</p> <p>5.26.7 Discuss the techniques for foam stream application.</p> <p>5.26.8 Describe the hazards associated with foam usage.</p> <p>5.26.9 List the methods used to reduce or avoid hazards.</p>

	<p>5.26.10 Demonstrate the ability to prepare a foam concentrate supply for use.</p> <p>5.26.11 Assemble foam stream components.</p> <p>5.26.12 Demonstrate how to approach and retreat from spills as part of a coordinated team.</p>
<p>5. Evaluate the fire scene and structure stability, select the appropriate tools and equipment, demonstrate an interior attack on a structure fire, maintaining communication with your team and incident command, performing ventilation, search and rescue of victims, and extinguishing fire located on various levels and grades of the structure. (Fireground Operations- Structure Fires) NFPA 1001 Ch. 6.3.2</p> <p>NOTE: NFPA 1403 “Standard on Live Fire Training Evolutions” applies.</p>	<p>5.27.1 Discuss the selection of nozzle and hose for fire attack given different fire situations.</p> <p>5.27.2 Discuss the selection of adapter and appliances to be used for specific fire ground situations.</p> <p>5.27.3 Describe the dangerous building conditions created by the fire and fire suppression activities.</p> <p>5.27.4 List the indicators of a building collapse.</p> <p>5.27.5 Discuss the effects of fire and fire suppression on wood, masonry (brick, block, stone), cast iron, steel, reinforced concrete, gypsum, wallboard, glass, plaster on lath.</p> <p>5.27.6 Describe search and rescue and ventilation procedures.</p> <p>5.27.7 List the indicators of structural instability.</p> <p>5.27.8 Discuss the suppression approaches and practices for various types of structural fires.</p> <p>5.27.9 Describe the association between specific tools and special forcible entry needs.</p> <p>5.27.10 Demonstrate the ability to assemble a team, choose attack techniques for various levels of fire (e.g., attic, grade-level, upper-level, basement), and evaluate and forecast a fire’s growth and development.</p> <p>5.27.11 Select tools for forcible entry.</p> <p>5.27.12 Demonstrate how to incorporate search and rescue procedures and ventilation procedures in the completion of the attack team efforts.</p> <p>5.27.13 Identify developing hazardous building or fire conditions.</p>
<p>6 Explain the procedures and identify hazards, and demonstrate the skills required for: 1) evaluating safety concerns, cylinder contents, and cylinder integrity of a cylinder on fire, 2) identifying safe havens, and evacuation procedures, 3) selecting the appropriate tools, equipment, and water application techniques</p>	<p>5.28.1 Discuss the characteristics of pressurized flammable gases.</p> <p>5.28.2 Describe the elements of a gas cylinder and the effects of heat and pressure on closed cylinders.</p> <p>5.28.3 Describe the boiling liquid expanding vapor explosion (BLEVE) signs and effects.</p>

<p>and flow requirements, 3) evaluating, controlling and extinguishing a flammable cylinder fire. (Fireground Operations-Flammable Cylinder Fire) NFPA 1001 Ch. 6.3.3</p>	<p>5.28.4 List the methods for identifying content and how to identify safe havens before approaching flammable gas cylinder fires.</p> <p>5.28.5 Discuss the water stream usage and demands for pressurized cylinder fires.</p> <p>5.28.6 Discuss what to do if the fire is prematurely extinguished.</p> <p>5.28.7 Describe the valve types and their operation.</p> <p>5.28.8 Explain the alternate actions related to various hazards and when to retreat.</p> <p>5.28.9 Demonstrate the ability to execute effective advances and retreat.</p> <p>5.28.10 Demonstrate the applicability of various techniques for water application.</p> <p>5.28.11 Demonstrate the ability to assess cylinder integrity and changing cylinder conditions, operate control valve, and choose effective procedures when conditions change.</p>
<p>7 Explain the measures taken and demonstrate the steps required for identifying the origin and cause of a fire, and protecting possible evidence of arson. (Fireground Operations-Protecting Evidence) NFPA 1001 Ch. 6.3.4</p>	<p>5.29.1 Discuss the methods to assess origin and cause, type of evidence, and means to protect various types of evidence.</p> <p>5.29.2 Describe the role and the relationship of Firefighter 1, criminal investigators, and insurance investigators in fire investigations.</p> <p>5.29.3 Describe the effects and problems associated with removing property or evidence from the scene.</p> <p>5.29.4 Demonstrate the ability to locate the fire origin area, recognize possible causes, and protect the evidence.</p>
<p>8 Explain and perform the following: 1) assessing scene safety and stabilization of a vehicle involved in an accident, 2) assessing the vehicle's strong, weak, and access points, 3) using extrication tools and equipment to remove vehicle components to disentangle a victim, 4) assisting a technical rescue team by retrieving equipment and/or tools and recognizing inherent hazards associated with various types of rescues. (Rescue Operations) NFPA 1001 Ch. 6.4-6.4.2</p>	<p>5.30.1 Describe the fire department's role at a vehicle accident</p> <p>5.30.2 Discuss the points of strength and weakness of an automobile body</p> <p>5.30.3 Discuss the dangers associated with vehicle components and systems</p> <p>5.30.4 Discuss the safety procedures, uses, and limitations of hand and power tools used for extrication</p> <p>5.30.5 Describe the firefighter's role at technical rescue operations</p> <p>5.30.6 Discuss the hazards associated with technical rescues</p> <p>5.30.7 Discuss the tools used for technical rescue and their uses included good practice</p> <p>5.30.8 Demonstrate how to operate hand and power tools used in forcible entry of vehicles</p> <p>5.30.9 Demonstrate the usage of cribbing and shoring materials</p> <p>5.30.10 Choose and apply techniques for removing vehicle roofs, doors, windshields, windows, steering wheels and columns, and dash boards.</p>

	<p>5.30.11 Demonstrate how to identify and retrieve various types of rescue tools for technical rescues</p> <p>5.30.12 Demonstrate how to set up effective public barriers</p> <p>5.30.13 Assist a rescue team as a member when assigned</p>
<p>9 Explain current programs and procedures that target reducing fires and life safety hazards through inspections, education, and public relations. Prepare a fire safety survey on an occupied structure generating recommendations for reducing possible hazards. (Fire and Life Safety Initiatives, Preparedness, and Maintenance) NFPA 1001 Ch. 6.5-6.5.1</p>	<p>5.31.1 Describe organizational policies and procedures.</p> <p>5.31.2 Discuss the common causes of fire and their prevention.</p> <p>5.31.3 Explain the importance of public safety survey and public fire education programs to a fire department public relations and the community, including referral procedures.</p> <p>5.31.4 Demonstrate the ability to complete forms, recognize hazards, match findings to pre-approved recommendations, and effectively communicate findings to occupants or referrals.</p>
<p>10 Discuss the basic presentation skills and knowledge requirements needed for conducting a safety presentation using prepared materials. Demonstrate a safety presentation to a small group of people during a station tour. (Fire and Life Safety Initiatives, Preparedness, and Maintenance) NFPA 1001 Ch. 6.5.2</p>	<p>5.32.1 Describe parts of informational materials and how to use them.</p> <p>5.32.2 Discuss basic presentation skills and departmental standard operating procedures for giving fire station tours.</p> <p>5.32.3 Demonstrate the ability to document presentation and to use prepared materials.</p>
<p>11 Explain the procedures for conducting a pre-incident survey and prepare a pre-incident report, use appropriate forms, prepare a diagram of the structure, using common symbols to designate the water supply, fire detection and suppression systems, construction features, and utilities, identify special features and hazards associated with the structure.(Fire and Life Safety Initiatives, Preparedness, and Maintenance) NFPA 1001 Ch. 6.5.3</p>	<p>5.33.1 Describe the source of water supply for fire protection.</p> <p>5.33.2 Discuss the fundamentals of fire suppression and detection systems.</p> <p>5.33.3 Discuss the common symbols used in diagramming construction features, utilities, hazards, and fire protection systems.</p> <p>5.33.4 Explain the departmental requirements for a pre-incident survey and form completion and the importance of accurate diagrams.</p> <p>5.33.5 Demonstrate the components of fire suppression and detection systems and sketch the site, buildings, and special features.</p> <p>5.33.6 Perform the ability to detect hazards and special considerations to include in the pre-incident sketch.</p> <p>5.33.7 Demonstrate the ability to complete all related departmental forms.</p>

<p>12 Explain and demonstrate the cleaning and maintenance of power plants, power tools, lighting equipment, and hand tools. Complete appropriate maintenance records. (Fire and Life Safety Initiatives, Preparedness, and Maintenance) NFPA 1001 Ch. 6.5.4</p>	<p>5.34.1 Discuss the types of cleaning methods. 5.34.2 Explain the correct cleaning solvents. 5.34.1 Describe manufacturers and departmental guidelines for maintaining equipment and documentation. 5.34.2 Explain the problem-reporting practices. 5.34.3 Demonstrate the ability to select correct tools, follow guidelines, and complete recording and reporting procedures. 5.34.4 Demonstrate the ability to operate power plants, power tools, and lighting equipment.</p>
<p>13. Explain the processes and demonstrate the procedures for inspecting, testing, placing hose out-of-service and completing documentation of test results. (Fire and Life Safety Initiatives, Preparedness, and Maintenance) NFPA 1001 Ch. 6.5.5</p>	<p>5.35.1 Discuss the procedures for safely conducting hose service testing. 5.35.2 Describe the indicators that dictate any hose be removed from service and recording procedures for hose test results. 5.35.3 Demonstrate the ability to operate a hose testing and nozzles and to record the results.</p>