



FIRE SERVICE 43.0202.00

TECHNICAL STANDARDS

An Industry Standards Validation Committee developed and approved these standards on February 23, 2023. They align with the NFPA Standard for Fire Fighter Professional Qualifications in preparation for the Firefighter I Certification. Students may also be eligible for the Emergency Medical Technician certification, CPR certification, First Aid Certification, and completion of the Hazardous Materials First Responder NFPA 472 and the Wildland S130/190. The Arizona Career and Technical Education Quality Commission, the validating authority for the Arizona Skills Standards Assessment System and the end-of-program assessments, certificates, and transcripts, endorsed these standards on July 16, 2023.

Note: Arizona's Professional Skills are taught as an integral part of the Fire Service program.

The Technical Skills Assessment for Fire Service is available SY2023-2024.

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STANDARD 1.0 EXAMINE THE ORGANIZATION AND STRUCTURE OF FIRE SERVICE

- 1.1 Explain fire service (e.g., history, mission, culture, and organizational structure)
- 1.2 Diagram an organizational chart for a fire department (i.e., chain of command, etc.)
- 1.3 Explain the importance of standard operating procedures and policies for the fire department
- 1.4 Describe the fire agency's interactions with other community agencies
- 1.5 Describe the responsibility of the risk manager/manager of public safety in a fire department
- 1.6 Research occupational trends, career tracks, and employment opportunities in fire service
- 1.7 Research training and education opportunities for firefighters (e.g., fire service resources, fire department or unit demands, State Fire Academy, and Arizona Center for Fire Service Excellence)
- 1.8 Describe various roles and responsibilities of emergency apparatus types on emergency incidents

STANDARD 2.0 EXAMINE FIREFIGHTER HEALTH, WELLNESS, AND SAFETY

- 2.1 Research common firefighter injuries and fatalities
- 2.2 Describe safety standards related to fire service [e.g., NFPA (National Fire Protection Association) 1500 and OSHA]
- 2.3 Analyze sources of personal stress and fire service related crises (i.e., sleep deprivation, cancer awareness, etc.), and identify management strategies
- 2.4 Practice personal safety in learning and training
- 2.5 Evaluate health-compromising risk behaviors on the job and in personal life, and identify successful prevention and intervention techniques
- 2.6 Describe various fire service health and wellness programs and EAPs (Employee Assistance Programs) available to firefighters
- 2.7 Identify functional exercises specific for firefighters (e.g., warm-up, flexibility, and core strength exercises; cardiovascular exercises; and functional training exercises)
- 2.8 Exhibit physical well-being through good nutrition and a personal fitness plan including exercises appropriate to firefighters
- 2.9 Identify components of a common physical fitness program (e.g., muscular strength, muscular endurance, cardiovascular endurance, flexibility, and body fat composition)
- 2.10 Complete a physical ability assessment (i.e., CPAT, etc.)
- 2.11 Practice appropriate safety precautions in fire stations and facilities

STANDARD 3.0 DEMONSTRATE THE PROPER USE AND MAINTENANCE OF FIREFIGHTING PERSONAL PROTECTIVE EQUIPMENT (PPE)

- 3.1 Identify protective equipment that comprises the firefighter's ensemble
- 3.2 Demonstrate the inspection and maintenance of personal protective equipment
- 3.3 Demonstrate donning and doffing of PPE within 1 minute
- 3.4 Identify the components of a SCBA (Self-Contained Breathing Apparatus)
- 3.5 Describe respiratory hazards and when SCBA "shall be used" (i.e., carcinogens, cyanide, etc.)

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- 3.6 Demonstrate donning and doffing SCBA
- 3.7 Explain the principles of air management consistent with NFPA 1404
- 3.8 Demonstrate replacing SCBA air cylinders

STANDARD 4.0 EXPLAIN FIRE BEHAVIOR

- 4.1 Describe the interaction of the fire triangle and fire tetrahedron (e.g., chemistry of fire)
- 4.2 Describe transmission of heat
- 4.3 Explain various states of fuel
- 4.4 Describe the classifications of fire (e.g., A, B, C, D, and K)
- 4.5 Explain the stages of fire growth (e.g., incipient, growth, fully developed, and decay)

STANDARD 5.0 EVALUATE BUILDING CONSTRUCTION RELATIVE TO FIRE BEHAVIOR AND STRUCTURAL PERFORMANCE

- 5.1 Define and use construction terminology
- 5.2 Identify common building materials and construction features
- 5.3 Identify the types of building construction (e.g., I, II, III, IV, and V)
- 5.4 Contrast strengths and weaknesses of different types of construction
- 5.5 Identify fire conditions within building constructions that contribute to firefighter injuries/fatalities (i.e., wood vs. steel, lightweight construction, traditional onsite framing, etc.)
- 5.6 Research a firefighter fatality NIOSH (National Institute for Occupational Safety and Health) report where building construction was a factor

STANDARD 6.0 EXAMINE FIRE SERVICE WATER SUPPLY AND DEMONSTRATE FIRE STREAMS

- 6.1 Describe water supply sources, including alternate and rural delivery
- 6.2 Identify types of fire hydrants, markings, locations, use, inspection, and maintenance
- 6.3 Identify fire hose sizes, applications, couplings, and general care and maintenance
- 6.4 Recognize and demonstrate various hose loads, pre-connect hose lines, and hose rolls
- 6.5 Demonstrate the operation of hose lines and associated appliances and hose tools
- 6.6 Explain the principles of fire streams (e.g., types, design, operation, and nozzle pressure effects, and flow capabilities) and precautions when advancing hose lines
- 6.7 Demonstrate fire stream tactics (e.g., extinguishing properties of water, steam conversion, and friction loss; opening, closing, and adjusting nozzle flow and patterns; and indirect, combination, and direct fire attack with fire streams)

STANDARD 7.0 EXAMINE FIRE GROUND FUNCTIONS

- 7.1 Describe observational practices, strategies, and tactics, enroute and at the scene [i.e., SDM (Strategic Decision Making Model), fire ground safety, etc.]
- 7.2 Describe various firefighter tools and equipment and their uses
- 7.3 Identify types of ladders and their uses and safe practices on the fire ground
- 7.4 Describe conventional forcible entry
- 7.5 Describe salvage basics (e.g., covers and equipment, care, and maintenance)
- 7.6 Describe the purpose and techniques of overhaul
- 7.7 Explain fire ground search and rescue techniques and safety considerations
- 7.8 Explain the purpose and functions of a RIC (Rapid Intervention Crew/Companies)
- 7.9 Describe reasons and considerations for fire ground ventilation
- 7.10 Demonstrate vertical, horizontal, and forced ventilation

STANDARD 8.0 EXAMINE INCIDENT COMMAND

- 8.1 Describe the NIMS (National Incident Management System) (i.e., ICS 100, etc.)
- 8.2 Describe a fire department's risk management profile
- 8.3 Explain the three fire ground strategies
- 8.4 Describe tactical priorities
- 8.5 Discuss critical fire ground factors (i.e., rescue profiles, etc.)
- 8.6 Demonstrate proper radio procedures

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8.7 Describe the importance of documentation and incident reporting

STANDARD 9.0 EXAMINE VEHICLE EXTRICATION

- 9.1 Explain and demonstrate the operation of hydraulic, pneumatic, battery-powered, and hand extrication tools and techniques
- 9.2 Demonstrate vehicle stabilization techniques (e.g., stabilizing the scene, stabilizing the vehicle, and stabilizing the patient)
- 9.3 Explain and demonstrate disentanglement and patient management procedures

STANDARD 10.0 EXAMINE SPECIAL OPERATIONS

- 10.1 Complete IS-5.A: An Introduction to Hazardous Materials - FEMA Training
- 10.2 Complete the Introduction to Wildland and Ground Cover Fire
- 10.3 Describe types of ropes and knots (i.e., figure 8, bowline, etc.), their uses, construction, care, and maintenance
- 10.4 Define types of special rescues encountered by firefighters (i.e., water, trench, mountain, confined space, rope, use of drones, etc.)

STANDARD 11.0 EXAMINE EMS MANAGEMENT

- 11.1 Demonstrate the proper use of infection control precautions (e.g., BSI/PPE standards and regulations)
- 11.2 Describe common infectious diseases
- 11.3 Describe the body systems (e.g., muscular, nervous, cardiovascular, respiratory, and digestive)
- 11.4 Complete (obtain) a basic CPR certification
- 11.5 Complete (obtain) a basic First Aid certification
- 11.6 Complete (obtain) Stop the Bleed certification

STANDARD 12.0 ANALYZE COMMUNITY RISK REDUCTION

- 12.1 Identify the roles and responsibilities of fire inspectors, fire investigators, public fire educators, and community education specialists [e.g., NFPA 1033 and 5 Es (Education, Engineering, Enforcement, Economic Incentives, and Emergency Response of CRR (Community Risk Reduction)]
- 12.2 Describe fire detection, suppression, and smoke control systems
- 12.3 Demonstrate proper use of portable fire extinguishers
- 12.4 Explain steps taken to protect evidence, determine the cause and origin, stop property loss, and secure incident scene

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