

CERTIFIED FIRE PROTECTION SPECIALIST (CFPS) PROGRAM

CFPS Examination Content Area Weighting

- | | | |
|------------|--|--------------|
| I | Safety in the Built Environment | (2%) |
| | A Identify challenges to safety in the built environment | |
| | B Apply fundamentals of safe building design | |
| | C Be familiar with the local and regional codes and standards for the built environment | |
| II | Basics of Fire and Fire Science | (10%) |
| | A Identify the chemistry and physics of fire | |
| | B Identify dynamics of fire growth | |
| III | Information and Analysis for Fire Protection | (3%) |
| | A Conduct fire loss investigation | |
| | B Collect and use fire incident data and statistics | |
| | C Conduct fire analysis | |
| | D Apply data and analysis | |
| IV | Human Behavior in Fire Emergencies | (5%) |
| | A Identify principles of human behavior and fire | |
| | B Identify concepts of egress design | |
| | C Use calculation methods for egress prediction | |
| V | Fire Prevention | (10%) |
| | A Develop policies, procedures, and training programs to inform and educate population in fire prevention principles and fire and life safety practices | |
| | B Understand proper design, installation, and maintenance of electrical systems and appliances | |
| | C Identify the components that, alone or in combination, form emergency and standby power systems | |
| | D Understand the dynamics of heating systems | |
| | E Identify basic components of and the hazards associated with 'hot work' and the following manufacturing processes: | |
| | F Practice proper storage and handling procedures | |
| | G Identify the fire hazards of grinding processes | |
| | H Identify common types of refrigeration and associated hazards | |
| | I Identify the unique hazards of semiconductor manufacturing | |
| | J Identify fire prevention housekeeping basics | |
| | K Initiate and track corrective action for life safety and fire protection deficiencies and coordinate hazard abatement solutions with building managers, physical plant personnel, and engineering department | |
| | L Safety Control Systems (PLC Safety Controllers, Hardwired Interlock Systems) as it applies to: NFPA 70E, 79, 85 and 86 ANSI/ISA 84.00.01-2003 (IEC 61511) Safety Integrity Levels 1, 2 or 3 | |

- VI Facility Fire Hazard Management (10%)**
- A Possess knowledge of property fire insurance, building construction and/or field experience in performing fire/property surveys involving detailed analyses
 - B Be able to observe, examine, inspect, gather data and describe all aspects of a property/building and business
 - C Conduct complex inspection surveys of commercial and residential properties to evaluate physical characteristics of a property and business
 - D Understand and apply related NFPA standards and company requirements and standards
 - E Possess knowledge of fire services, environmental hazards, and building construction
 - F Oversee acquisition, installation, operation, maintenance and disposition of building systems
 - G Manage the maintenance of building structures
 - H Evaluate code, law, and regulation compliance of a facility's operations
 - I Develop and manage emergency preparedness procedures and assure all emergency systems and procedures are tested as planned
 - J Understand public protection class and municipal and private water systems
- VII System Approaches to Property Classes (8%)**
- A Assess life safety as it relates to:
 - B Understand fire protection in special occupancies
 - C Understand fire protection in warehouse and storage operations
 - D Understand fire protection of electronic equipment
- VIII Organizing for Fire and Rescue Services (5%)**
- A Perform pre-incident planning for industrial and commercial facilities
 - B Understand operations of fire loss prevention and emergency organizations
 - C Understand operations of emergency medical services
 - D Understand municipal fire prevention and code enforcement operations
 - E Train fire and emergency services
 - F Understand operations of fire department facilities and fire training facilities
 - G Understand operations of public emergency services communication systems
 - H Understand fire department apparatus and equipment
 - I Understand the use and function of fire and emergency services protective clothing and protective equipment
 - J Evaluate fire department resources and the placement thereof
- IX Materials, Products and Environments (10%)**
- A Understand the hazards of:
 - B Understand explosion prevention and protection
 - C Understand the precautionary need for various types of air-moving equipment
 - D Selection, operation, and maintenance of materials-handling equipment

- X** **Detection and Alarm** **(10%)**
- A Understand operational characteristics of the modern fire alarm systems
 - B Understand operational characteristics and proper application of automatic fire detectors
 - C Understand the benefits and requirements of fire alarm systems interfaced to other systems
 - D Understand inspection, testing, and maintenance of fire alarm systems
 - E Plan and administer surveillance and fire guard services for fire protection
 - F Provide plans review for detection and alarm systems
- XI** **Water-Based Suppression** **(17%)**
- A Evaluate need for water distribution systems
 - B Provide plans review for water-based systems
 - C Identify and understand water supply system requirements
 - D Identify and understand design criteria for hydraulics for fire protection
 - E Determine water supply adequacy
 - F Identify and understand the operating principles of stationary fire pumps
 - G Understand fine water mist systems and their applications
 - H Identify and understand the operating principles of automatic sprinkler systems
- XII** **Fire Suppression without Water** **(5%)**
- A Identify and understand halogen and direct halogen replacement agents and systems
 - B Provide plans review for non water-based systems
 - C Identify and understand the properties, proper use/application, and the limitations of carbon dioxide extinguishing agents and application systems
 - D Identify and understand the properties, proper use/application, and the limitations of both dry and wet chemical extinguishing agents and application systems
 - E Identify and understand the basic characteristics and applications of various foam extinguishing agents and the methods for producing fire-fighting foam systems
 - F Identify and understand proper use and maintenance of portable fire extinguishers
 - G Identify and understand the proper extinguishing agents and application techniques for combustible metal fires
 - H Care and maintenance of non water-based extinguishing systems
- XIII** **Confining Fires** **(5%)**
- A Understand building construction elements for fire protection
 - B Understand the following elements of confinement of fire in buildings
 - C Identify and describe the structural damage factors to be evaluated after a fire
 - D Identify fire hazards of construction, alteration and demolition of buildings