Miami Dade College

Course Description

FFP1810 | Firefighting Tactics & Strategy 1 | 3.00 credits

This course will provide students with a basic understanding of factors involved in coping with a fire emergency and deter mining the best use of available resources in protecting lives and property. The course emphasizes the changing nature of an emergency situation and the ways in which the fire officer can evaluate the effectiveness of their proposed incident action plan. Prerequisite: FFP1000

Course Competencies:

Competency 1: The student will explore the theories and fundamentals of how and why fires start, spread, and how they are controlled by:

1. Identifying physical properties of the three estates of matter
2. Describing the components of fire
3. Recalling the physical and chemical properties of fire
4. Describing the basic terms and concepts associated with the chemistry and dynamics of fire and combustion
5. Discussing various materials and their relationship to fires as fuel
6. Summarizing the characteristics of water as a fire suppression agent
7. Discussing other-than-water suppression agents and strategies
8. Comparing methods and techniques of fire extinguishments

Competency 2: The student will comprehend the concepts of building construction components and techniques related to fire and life safety by:

1. Describing building construction components and techniques as they relate to building codes, fire and life-safety codes, fire prevention and inspection, firefighter safety, and firefighting strategy and tactics
2. Distinguishing the Classifications of major types of building construction as applicable with “model” building codes
3. Interpreting the hazards and tactical considerations associated with the various types of building construction
4. Analyzing the different loads and stresses that are placed on a building and their interrelationships
5. Describing principle structural components in a typical building design
6. Explaining the function of each building design
7. Classifying occupancy designations of the building and fire code
8. Identifying the indicators of potential structural failure as they relate to firefighter safety
9. Analyzing the causes involved in the line of duty firefighter deaths related to structural firefighting and building collapse

Competency 3: The student will describe the features of design and operation of fire alarm systems, water-based fire suppression systems, special hazard fire suppression systems, and water supply for fire protection and portable fire extinguishers by:

1. Defining the benefits of residential sprinkler legislation in NFPA 13
2. Identifying sprinkler design requirements for residential occupancies NFPA 13R
3. Analyzing the different types of non-water- based fire suppression systems and how these extinguish fire

Competency 4: The student will discuss fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection/service; fire loss analysis; organization, management, and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; and introduction to fire strategy and tactics by:

1. Discussing the components of the history and philosophy of the modern-day fire service
2. Describing the fire service training requirements; standards and laws associated with training; and the value of higher education in the fire service
3. Describing the scope, purpose, and organizational structure of fire and emergency services organizations
4. Describing the common types of fire and emergency services facilities, equipment, and apparatus
5. Comparing and contrasting effective management concepts for various emergency situations

Competency 5: The student will examine the organization and management of a fire department and the relationship of government agencies to the fire service by:

1. Describing the concepts of span and control, effective delegation and division of labor management principles and concepts
2. Summarizing the history and development of management and supervision
3. Describing methods of managing available resources
4. Identifying roles and responsibilities of fire department personnel and management/ leadership positions
5. Comparing and contrasting the traits of effective versus ineffective supervision and management styles
6. Analyzing safety needs for both emergency and non-emergency situations
7. Defending the importance of ethics in the public safety work environment as they apply to supervisors
8. Identifying the roles of company officers in current Incident Command/Management systems to include: ICS, NIMS, and Unified Command

Competency 6: The student will define risk evaluation and control procedures for fire stations, training sites, emergency vehicles, and emergency situations involving fire, EMS, hazardous materials, terrorism, and technical rescue by:

1. Identifying the concepts of risk identification and risk evaluation
2. Describing the components of an effective response safety plan to include fire stations and emergency response vehicles
3. Describing the components of the pre-incident planning process
4. Describing the considerations for safety while training
5. Discussing the value of personal protective equipment
6. Describing the components of accountability system in emergency operations
7. Defining incident priorities and how they relate to health and safety
8. Describing the relationship of incident management as it relates to health and safety
9. Describing the methods of controlling hazards associated with responding to EMS, hazmat, terrorism-related events, and technical rescue incidents
10. Explaining the purpose and process for post- incident analysis
11. Describing the components and value of critical incident stress management programs
12. Describing the responsibilities of individual responders, supervisors, safety officers, and incident commanders, safety program managers, safety committees and fire department managers as they relate to health and safety programs
13. Describing the responsibility of a safety officer as established within the Incident Command System (ICS)

Competency 7: The student will discuss the federal, state, and local laws that regulate emergency services, national standards influencing emergency services, standard of care, tort, liability, and a review of court cases by:

1. Describing federal, state, and local laws, which regulate or influence emergency services

Competency 8: The student will Analyze the principles of fire control through utilization of personnel, equipment, and extinguishing agents on the fire ground by:

1. Explaining the main components of pre- fire planning and can identify steps to complete a pre-fire plan review
2. Explaining building construction and components and how they interrelate to pre-fire planning
3. Identifying steps taken during size-up and recognize the order in which they will take place at an incident
4. Describing concepts for effectiveness of fire ground communications
5. Defining the main functions within an IMS system and how they interrelate during an incident
6. Identifying concepts for managing resources for expanding incidents

Competency 9: The student will Identify the fundamentals and technical knowledge needed for proper fire scene interpretations, including recognizing and conducting origin and cause, preservation of evidence and documentation, scene security, motives of the fire setter, and types of fire causes by:

1. Identifying the responsibilities of a firefighter when responding to the scene of a fire
2. Describing how fire progression is affected by fire protection systems and building construction and design

Learning Outcomes:

- Communicate effectively using listening, speaking, reading, and writing skills
- Solve problems using critical and creative thinking and scientific reasoning
- Formulate strategies to locate, evaluate, and apply information
- Create strategies that can be used to fulfill personal, civic, and social responsibilities