

COURSE OUTLINE **Firefighter I**

Course Description

FS 100. Firefighter I. 4.5 hours credit. This course will enable the student perform basic fire service operations and gain basic knowledge of personal safety, personal protective clothing and equipment, fire service tools and equipment, fire behavior, building construction, and tactics and strategies. The student will learn requirements for initial response to hazardous materials incidents and develop team communication skills necessary for emergency operations. This course will prepare the student to meet National Fire Protection Association's Standard 1001, Firefighter Professional Qualifications, pertaining to the Firefighter I level. The student will be introduced to NFPA Standard 472, Professional Competencies of Responders to Hazardous Materials Incidents, at the Awareness level.

Course Relevance

Techniques learned in the class will assist the student in completing the Professional Firefighter I and Hazardous Material Awareness nationally recognized certification examination. This certificate is required for those who are pursuing a career in the fire service. Concepts taught in this course will enable the student to recognize the importance of teamwork, effective communication skills, self awareness and critical thinking skills necessary to execute tasks that require immediate decision making. This course will enable the student to learn the concepts included in the National Fire Protection Association's Standard 1001, Firefighter Professional Qualifications and Standard 472 Professional Competencies of Responders to Hazardous Material Incidents.

Required Materials

International Fire Service Training Association. (2004). *Hazardous materials for first responders* (3rd ed.). Stillwater, OK: Fire Protection Publications.

National Fire Protection Association. (2008) *Fundamentals of firefighter skills* (2nd ed.). Sudbury, MA: Jones & Bartlett

Supplemental materials

Essentials of Firefighting (4th ed.). Study guide.

Hazardous Materials for First Responders (3rd ed.). Study guide.

Learning Outcomes

The intention is for the student to be able to:

1. Develop effective communication skills for emergency operations

2. Demonstrate competent use of various articles of personal protective clothing and equipment
3. Recognize the different stages of fire development and the effects on various types of construction
4. Demonstrate competent use of various tools and equipment used by today's fire service
5. Identify the presence of hazardous materials

Primary Learning PACT Skills that will be DEVELOPED and/or documented in this course

Through the student's involvement in this course, he/she will develop his/her ability in the following primary PACT skill areas:

1. Teamwork
 - Through the analysis of examples and exercises, the student will learn the importance of working as part of a group to accomplish a specific task.
2. Critical Thinking
 - Through analysis, the student will identify and define a specific task relative to emergency operations.
3. Field-Related Technology
 - Through the production of simulated emergency scenarios, the student will perform a series of skills requiring the proper application of tools and equipment of today's fire service.

Secondary skills (developed but not documented):

- Communication
- Problem Solving

Major Summative Assessment Task(s)

1. These learning outcomes and the primary Learning PACT skills will be demonstrated by performing a series of cognitive and psychomotor assessments to demonstrate proficiency and prepare for national certification as Professional Firefighter I and Hazardous Materials Awareness level

Course Content

- I. Themes – Key recurring concepts that run throughout this course:
 - A. Safety
 - B. Incident stabilization
- II. Issues – Key areas of conflict that must be understood in order to achieve the intended outcome:
 - A. Personal safety
 - B. Loss prevention
 - C. Environmental conservation
- III. Concepts – Key concepts that must be understood to address the issues:
 - A. Understanding the importance of safety standards
 - B. Knowledge of equipment
- IV. Skills/Competencies – Actions that are essential to achieve the course outcomes:

- A. Ability to utilize personal protective equipment
- B. Ability to utilize suppression equipment to minimize property damage
- C. Identify the various stages of combustion and their effect on structures

Learning Units

- I. Firefighter orientation and safety
 - A. Fire department organization
 - B. Fire department regulations
 - C. Incident Management System
 - D. Interacting with other organizations
 - E. Firefighter safety
- II. Fire behavior
 - A. Physical science
 - B. Combustion
 - C. Special considerations
 - D. Fire extinguishment theory
 - E. Classification of fires
- III. Building construction
 - A. Types of building construction
 - B. Effects of fire on common building construction
 - C. Firefighter hazards related to building construction
- IV. Firefighter personal protective clothing
 - A. Personal protective clothing components
 - B. Inspection and maintenance of personal protective clothing
- V. Self-contained breathing apparatus
 - A. Donning and doffing protective breathing apparatus
 - B. Inspection and maintenance of self contained breathing apparatus
 - C. Using self contained breathing apparatus
- VI. Portable fire extinguishers
 - A. Types of portable fire extinguishers
 - B. Extinguisher rating system
 - C. Using portable fire extinguishers
 - D. Inspection of portable fire extinguishers
- VII. Ropes and knots
 - A. Types of rope and their usage
 - B. Rope materials
 - C. Rope construction
 - D. Rope maintenance
 - E. Storage of life safety rope
 - F. Knots

- G. Hoisting tools and equipment
- H. Rescue rope

- VIII. Building search and victim removal
 - A. Fireground search and rescue
 - B. Safety
 - C. Victim removal

- IX. Forcible entry tools
 - A. Types of tools

- X. Forcible entry construction and techniques
 - A. Door size up and construction features
 - B. Locks and locking devices
 - C. Non-destructive rapid entry methods
 - D. Conventional forcible entry through doors
 - E. Forcing windows
 - F. Breaching walls
 - G. Breaching floors

- XI. Ground ladders
 - A. Basic parts of a ladder
 - B. Ladder types
 - C. Ladder inspection and maintenance
 - D. Handling ladders
 - E. Ladder carries
 - F. Placement of ground ladders
 - G. Procedures for raising and lower ground ladders
 - H. Climbing ladders
 - I. Working on a ladder
 - J. Assisting victims down a ladder

- XII. Ventilation
 - A. Advantages to ventilation
 - B. Considerations affecting the decision to ventilate
 - C. Vertical ventilation
 - D. Horizontal ventilation
 - E. Forced ventilation

- XIII. Water supply
 - A. Principles of municipal water supply system
 - B. Processing of treatment facilities
 - C. Kinds of pressure
 - D. Fire hydrants
 - E. Alternative water supplies
 - F. Rural water operations

- XIV. Coupling, loading and rolling hose
 - A. Fire hose sizes
 - B. Causes and prevention of hose damage
 - C. Maintenance of fire hose
 - D. Fire hose couplings
 - E. Hose appliance and hose tools
 - F. Hose rolls
 - G. Couplings and uncoupling fire hose

- XV. Laying, carrying, and advancing hose
 - A. Basic and loading and finishing
 - B. Pre-connected hose loads for attack lines
 - C. Supply hose lays
 - D. Handling hose lays
 - E. Advancing hose lays
 - F. Operating hose lines
 - G. Service testing fire hose

- XVI. Water fire streams
 - A. Extinguishing properties of water
 - B. Pressure loss and gain
 - C. Water hammer
 - D. Water fire streams patterns and nozzles
 - E. Extinguishing fire with fire fighting foam

- XVII. Fire classification
 - A. Class A fires
 - B. Class B fires
 - C. Class C fires
 - D. Class D fires

- XVIII. Sprinkler fundamentals
 - A. Types of alarm systems
 - B. Automatic sprinkler systems
 - C. Water supply
 - D. Applications of sprinkler systems

- XIX. Salvage, overhaul, and protection of evidence
 - A. Philosophy of loss control
 - B. Salvage
 - C. Overhaul
 - D. Role of an investigator
 - E. Observations of the emergency responders
 - F. Securing the fire scene
 - G. Legal consideration
 - H. Protecting and preserving evidence

- XX. Communications
 - A. Telecommunications center personnel
 - B. Telecommunications centers
 - C. Receiving non-emergency calls
 - D. Receiving emergency calls
 - E. Radio communications
 - F. Incident reports

- XXI. Prevention
 - A. Fire prevention
 - B. Fire hazards
 - C. Fire safety surveys
 - D. Pre-incident surveys
 - E. Residential fire safety surveys
 - F. Public fire and life safety education

- XXII. Hazardous materials awareness
 - A. Identification and recognition
 - B. Scene management
 - C. Personal protection
 - D. Terrorist activities

Learning Activities

The student will be engaged in classroom interaction and field applications.

Grade Determination

The student will be evaluated through written exams, skill proficiency assessments, and other methods of evaluation at the discretion of the instructor.