

COURSE OUTLINE

**Fire Technology 109
Rescue Practices**

I. Catalog Statement

Fire Technology 109 offers instruction in rescue practices, the human body, emergency care of victims, childbirth, artificial respiration, toxic gases, chemicals and diseases, radioactive hazards, rescue problems and techniques.

Total Lecture Units: 3.0

Total Course Units: 3.0

Total Lecture Hours: 48.0

Total Faculty Contact Hours: 48.0

Prerequisite: Fire Technology 101 or equivalent.

II. Course Entry Expectations

Skills Levels Ranges: Reading 5; Writing 5; Listening/Speaking 5; Math 3.

Prior to enrolling in the course, the student should be able to:

1. describe and discuss the components of the history and philosophy of the modern day fire service;
2. analyze the basic components of fire as a chemical reaction, the major phases of fire, and examine the main factors that influence fire spread and behavior;
3. differentiate between fire service training and education; fire protection certificate program and a fire service degree program; and explain the value of education in the fire service;
4. list and describe the major organizations that provide emergency response service and illustrate how they interrelate;
5. identify fire protection and emergency-service careers in both the public and in the private sector;
6. synthesize the role of national, state and local support organizations in fire protection and emergency services;
7. discuss and describe the scope, purpose, and organizational structure of fire and emergency services;
8. describe the common types of fire and emergency services facilities, equipment, and apparatus;
9. compare and contrast effective management concepts for various emergency situations;

10. identify and explain the components of fire prevention including code enforcement, public information, and public and private fire protection systems.

III. Course Exit Standards

Upon successful completion of the required coursework, the student should be able to:

1. recognize appropriate conduct and assessment of need in rescue situations;
2. develop awareness of the human body;
3. demonstrate knowledge of the circulatory, skeletal, nervous and digestive systems;
4. demonstrate skills in emergency care in rescue situations.

IV. Course Content

Total Faculty Contact Hours = 48

A. Rescue Practices	3 hours
1. Conduct	
2. Responsibilities	
B. Human Body	4 hours
1. Skeletal system	
2. Circulatory system	
3. Lymph system	
4. Nervous system	
5. Muscles and tendons	
6. Digestive system	
C. Emergency Care	3 hours
1. Internal	
2. External	
D. Childbirth	4 hours
1. Information	
2. Procedure	
E. Artificial Respiration	3 hours
1. Diagnosis	
2. Patient care	
3. Manual artificial respiration	
4. Mechanical artificial respiration	
F. Gases, Chemicals, and Diseases	3 hours
1. Physiological effects	
2. Treatment	
3. Precautions	
G. Radioactive Hazards	4 hours
1. Physical properties and effects	

2. Protection	
3. Precautions	
H. Rescue Equipment	6 hours
1. Cutting	
2. Lifting	
3. Pulling	
4. Ropes	
5. Ladders	
6. Nets	
I. Rescue Breathing Equipment	3 hours
1. Hose masks	
2. Filter	
3. Self-Contained	
J. Rescue Problems	2 hours
1. Electrical	
2. Trapped	
3. Asphyxiated	
K. Rescue Tactics	4 hours
1. Size up	
2. Immediate rescue	
3. Exploration	
4. Selected debris removal	
5. General rubble clearance	
L. Rescue Methods	4 hours
1. Lashing	
2. Holdfast	
3. Rigging	
4. Slings	
5. Tunneling	
6. Trenching	
7. Breaching	
8. Ventilation	
9. Shoring	
10. Debris handling	
M. Casualty Handling	3 hours
1. First aid	
2. Removal	
3. Hoisting and lowering	
4. Deposition	

N. Area Security

2 hours

1. Crowd control
2. Building safety

V. **Methods of Instruction**

The following methods of instruction may be used in the course:

1. lecture;
2. demonstration;
3. films;
4. simulations.

VI. **Out of Class Assignments**

The following out of class assignments may be used in the course:

1. individual projects (i.e. written assignment, reading reports);
2. group projects (i.e. Homework problems, problem solving demonstrations, discussion on textbook topics).

VII. **Methods of Evaluation**

The following methods of evaluation may be used in the course:

1. quizzes;
2. midterm examination;
3. final examination.

VIII. **Textbooks**

International Fire Service Training Association (IFSTA), *Principles of Vehicle Extrication [3rd Edition]*. IFSTA, 2010.

10th Grade Textbook Reading Level. ISBN: 8793938098

Erven, Lawrence W. *Emergency Rescue Techniques*. [3rd Edition]. Davis, 1968.
10th Grade Textbook Reading Level.

IX. **Student Learning Outcomes**

1. Student will be able to recognize appropriate conduct and assessment of need in rescue situations.
2. Student will be able to develop awareness of the human body.
3. Student will be able to demonstrate knowledge of the circulatory, skeletal, nervous and digestive systems.
4. Student will be able to demonstrate skills in emergency care in rescue situations.