

### Course Outline

**COURSE:** JFT 35                      **DIVISION:** 50                      **ALSO LISTED AS:**

**TERM EFFECTIVE:** Spring 2022                      **CURRICULUM APPROVAL DATE:** 04/12/2022

**SHORT TITLE:** FIRE FIGHTER SURVIVAL

**LONG TITLE:** Fire Fighter Survival

<u>Units</u>	<u>Number of Weeks</u>	<u>Type</u>	<u>Contact Hours/Week</u>	<u>Total Contact Hours</u>
.5	18	Lecture:	.11	1.98
		Lab:	.78	14.04
		Other:	0	0
		Total:	.89	16.02

#### **COURSE DESCRIPTION:**

This 16 hour Fire Fighter Survival course was developed in the continuing effort to reduce the number of fire fighter injuries and fatalities that occur on an annual basis. The course will supply the student with a greater understanding of the need for situational awareness, fire fighter survival skills and technical survival skills to help avoid committing fatal errors on the fireground. **PREREQUISITE:** JFT 8 or equivalent.

#### **PREREQUISITES:**

Completion of JFT 8, as UG, with a grade of C or better.

#### **COREQUISITES:**

**CREDIT STATUS:** D - Credit - Degree Applicable

#### **GRADING MODES**

P - Pass/No Pass

**REPEATABILITY:** N - Course may not be repeated

#### **SCHEDULE TYPES:**

02 - Lecture and/or discussion

03 - Lecture/Laboratory

04 - Laboratory/Studio/Activity

**STUDENT LEARNING OUTCOMES:**

By the end of this course, a student should:

1. Demonstrate, by using hoseline to exit the structure as a last resort to escape the heat, smoke and fire gasses.
2. Student will demonstrate proper use of a self-contained breathing apparatus and size-up, enter, search, and locate, while maintaining room/building orientation.

**COURSE OBJECTIVES:**

By the end of this course, a student should:

1. Student will gain the skills and identify with fire fighter survival and situational awareness in emergency situations.

**CONTENT, STUDENT PERFORMANCE OBJECTIVES, OUT-OF-CLASS ASSIGNMENTS**

Curriculum Approval Date: 04/12/2022

**LECTURE CONTENT:**

- I. Developing a Survival Attitude (2 Hours)
  - A. Safety and Survival, Creating the Culture
  - B. Attitude
    1. Developing the Right Attitude
    2. Learning and Attitude
  - C. U.S. Government Involvement to Reduce Fire Fighter Injuries and Fatalities
  - D. 2008 Firefighter Fatalities in the United States (USFA/FEMA)
    1. Lost or disoriented
    2. Caught or trapped
  - E. Dedication toward Health and Wellness
  - F. Focused on Training and Gaining Knowledge

## **LAB CONTENT:**

### **II. Preventing the Fire Fighter Emergency (2 Hours)**

- A. Case Study: Arizona (F2001-13)
- B. Size-Up
  - 1. Your situation
  - 2. Air consumption
  - 3. Communication
  - 4. Exterior Size-up
  - 5. Interior Size-up
    - a. Potential hazards
    - b. Orientation
    - c. Egress
    - d. Structural integrity
    - e. Fire location and activity
- C. Smoke
  - 1. Reading Smoke
  - 2. Volume
  - 3. Velocity
  - 4. Density
  - 5. Color
- D. Building Construction
  - 1. Pre-incident Planning
  - 2. Conventional Construction vs. Lightweight Construction
  - 3. Lightweight Wood Truss Construction
  - 4. Lightweight Steel Construction
  - 5. Engineered I-joists
  - 6. Large Area Floor Design
- E. Fire Loads
  - 1. High-target Structures
- F. Training
  - 1. Physical Fitness

### **III. The Fire Fighter Emergency (2 Hours)**

- A. Review Sacramento Fire Department Green Sheet: Burn Injuries (SFD #55285)
  - 1. Conditions
    - a. Weather
    - b. Structure
    - c. Sequence of events
  - 1) Injuries/Damages
  - 2) Safety Issues for review
- B. The Fire Fighter Emergency
  - 1. Ensure Mayday transmissions are received by Incident Commander
  - 2. Actions to take if trapped or disoriented inside a burning structure
  - 3. Ensure fire fighters are trained in air management techniques
- C. Recognizing the Fire Fighter Emergency
  - 1. Floor collapse
  - 2. Overhead loads to collapse or block a means of egress
  - 3. Become entangled in cables or wires
  - 4. Become separated from hoseline, interior wall, search rope, or crew causing disorientation

5. Not properly monitoring SCBA air supply
6. Injured while performing interior operations
- D. Why Fire Fighters Delay the Fire fighter Emergency Call
  1. Loss of situational awareness
  2. Fear of retribution, pride, ego, and denial
- E. National Fire Academy Acronym
  1. LUNAR
    - a. Location (where are you?)
    - b. Unit (apparatus)
    - c. Name (who are you?)
    - d. Assignment (what were you doing?)
    - e. Resources (what do you need?)
  2. NUCAN
    - a. Name
    - b. Unit / Assignment / Location
    - c. Conditions
    - d. Actions
    - e. Needs
- F. Fire Fighter Emergency Procedures
  1. Activate the PASS device (Personal Alarm Safety System)
  2. Communicate your surroundings
  3. Monitor and control your air
  4. Turn on your flashlight (facing up if possible)
  5. Make tapping noises against floor or wall
  6. Look for exits (windows, doors, light from the outside)
  7. Stay calm
  8. Stay low
- G. Preventing the Fire Fighter Emergency
  1. Conduct risk vs. benefit analysis
  2. Communication and coordination between interior and exterior crews
  3. Scene Command
- H. Summary
- V. Fire Fighter Survival Skills SCBA Emergencies (Self-Contained Breathing Apparatus) (2 Hours)
  - A. SCBA Training
  - B. Air Consumption for survival
  - C. Consumption Rate Testing
    1. Types of tests
      - a. SCBA consumption course
      - b. Treadmill
      - c. Stair climber
    2. Air Supply Interruption
    3. Out of Air
    4. Face Piece Removal
    5. Alternative Means of Obtaining Additional Air
      - a. RIC Familiarization (Rapid Intervention Crew)
        - 1) Universal Air Connection
        - 2) Low-pressure Hose to EBS
        - 3) Low-pressure hose to fire fighter's mask mounted regulator

- 4) Regulator Exchange
- 5) Full mask Exchange
6. Restrictive Area Techniques
7. Nonremoval Method
8. Low or Reduced Profile
9. Zero or No Profile (Full Removal)
10. Alternate Restrictive Area Techniques
11. Left Side Shift Technique
12. Backwards "Swim" Maneuver
13. Forward Dive Technique (Superman)
14. SCBA Confidence Course
15. Summary

VI Skills and Evaluations (8 Hours)

A SKILL #1: SCBA Emergency Procedure Check

1. At the time of the emergency, you must be completely familiar with the components and operations of your breathing apparatus in order to easily diagnosis and correct problems.

B. SKILL #2: Calling "Mayday"

1. When a fire fighter is confronted with an emergency situation, such as becoming lost/trapped or encounters a SCBA emergency, he or she must be able to call for help and initiate proper fire fighter emergency procedures. This scenario is something that needs to be practiced and maintained because it is not a common occurrence.

C. SKILL #3: Reading Couplings

1. If fire fighters get disoriented, the hoseline can be a valuable solution in giving direction to exit the structure. In this skill, the students will demonstrate a last resort method of escaping the heat, smoke, and fire gasses from an advancing fire

D. SKILL #4: Window Hang

1. The window hang represents the last option of seeking refuge. The window hang may provide a safe location until help arrives. In this skill, the student will demonstrate a last resort method of escaping heat, smoke, and fire gasses from an advancing fire.

E. SKILL #5: Hose Slide

1. If operating above the first floor and performing fire attack, you may find your means of egress cut off due to rapidly advancing fire. This is a last resort method of escaping the heat, smoke, and fire gasses from an advancing fire.

F. SKILL #6: Ladder Escape-Hook-two/Slide-to-four-Method

1. The ability to exit out a window onto a ladder is an emergency skill that must be practiced and has already potentially saved fire fighters' lives. This is a last resort of escaping the heat, smoke, and fire gasses from an advancing fire.

#### G. SKILL #7: Entanglement Emergencies - Swim or Sweep Method

1. Due to the flex duct work in residential occupancies and the number of wires and cables in drop ceilings in commercial

buildings, fire fighters are becoming exposed to more possible wire entanglements these days. The skills needed to

maneuver through these wires or the necessary tools to carry to cut these wires will be discussed in this skill set.

#### H. SKILL #8: Entanglement Emergencies - SCBA Removal Method

1. Due to the flex duct work in residential occupancies and the number of wires and cables in drop ceilings in commercial

buildings, fire fighters are becoming exposed to more possible wire entanglements these days. The skills needed

to maneuver through these wires or the necessary tools to carry to cut these wires will be discussed in this skill set.

#### I. SKILL #9: Wall Breach

1. The ability to escape or maneuver through a wall requires a knowledge of building construction materials and your

equipment. This practice situation allows you to identify the obstacles that may be encountered as well as offer

the techniques that may be used to remedy the situation.

#### J. SKILL #10: Changing your SCBA Profile (Nonremoval Method)

1. Building collapse due to lightweight construction, earthquakes, gas explosions, terrorist attacks, lack of training, or just

lack of experience due to the amount of fires and the amount of new fire fighters are just a few possible reasons why you

may find your means of egress cut off. Finding your way through a small opening may be your only way to a safe refuge

or the outside. Maneuvering your SCBA into a low-or-zero-profile is a skill you may need to use. In this skill,

the students will demonstrate a last resort method of escaping the heat, smoke, and fire gasses from an advancing fire.

#### K. SKILL #11: Changing to a Low or Reduced SCBA Profile (Partial Removal Method)

1. Building collapse due to lightweight construction, earthquakes, gas explosions, terrorist attacks, lack of training, or just

lack of experience due to the amount of fires and the amount of new fire fighters are just a few possible reasons why you

may find your means of egress cut off. Finding your way through a small opening may be your only way to a safe refuge

or the outside. Maneuvering your SCBA into a low-or-zero-profile is a skill you may need to use. In this skill, the

students will demonstrate a last resort method of escaping the heat, smoke, and fire gasses from an advancing fire.

#### L. SKILL #12: Changing to a Zero or No SCBA Profile (Full Removal Method)

1. Building collapse due to lightweight construction, earthquakes, gas explosions, terrorist attacks, lack of training, or just

lack of experience due to the amount of fires and the amount of new fire fighters are just a few possible reasons why you may find your means of egress cut off. Finding your way through a small opening may be your only

way to a safe refuge or the outside. Maneuvering your SCBA into a low-or-zero-profile is a skill you

may need to use. In this skill, the students will demonstrate a last resort method of escaping the heat, smoke, and fire

gasses from an advancing fire.

M. Evolution #1: SCBA Confidence Course

1. The student must successfully navigate the entire SCBA confidence course using survival skills when needed.

N. Evolution #2: SCBA Awareness

1. The student will size-up, enter, search, locate, and don a SCBA while maintaining room/building orientation. The student

then activates the fire fighter emergency, perform personal procedures, and exit the building while maintaining

room/building orientation using a hoseline and/or a left/right search pattern.

**METHODS OF INSTRUCTION:**

Lecture, discussion, demonstration, and hands-on practical applications/exercises.

**OUT OF CLASS ASSIGNMENTS:**

Required Outside Hours 4

Assignment Description

Reading assignments from Student Manual

**METHODS OF EVALUATION:**

Skill demonstrations

Evaluation Percent 80

Evaluation Description

In mock scenarios, students will don self-contained breathing apparatus, demonstrate the ability to maneuver obstacles, as well as techniques used in emergency situations. Skills evaluated by State Fire Training Instructor for accuracy.

Objective examinations

Evaluation Percent 20

Evaluation Description

Skills exam to be graded State Fire Training Instructor for accuracy.

**REPRESENTATIVE TEXTBOOKS:**

Fire Fighter Survival Student Manual, California State Fire Marshal, 2020.

12 Grade Verified by: Doug Achterman

**RECOMMENDED MATERIALS:**

Instructor Handouts

**ARTICULATION and CERTIFICATE INFORMATION**

Associate Degree:

CSU GE:

IGETC:

CSU TRANSFER:

Transferable CSU, effective 201130

UC TRANSFER:

Not Transferable

**SUPPLEMENTAL DATA:**

Basic Skills: N

Classification: Y

Noncredit Category: Y

Cooperative Education:

Program Status: 2 Stand-alone

Special Class Status: N

CAN:

CAN Sequence:

CSU Crosswalk Course Department:

CSU Crosswalk Course Number:

Prior to College Level: Y

Non Credit Enhanced Funding: N

Funding Agency Code: Y

In-Service: N

Occupational Course: C

Maximum Hours:

Minimum Hours:

Course Control Number: CCC000525305

Sports/Physical Education Course: N

Taxonomy of Program: 213300