

Course Outline

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

TERM EFFECTIVE: Fall 2016 **CURRICULUM APPROVAL DATE:** 02/22/2016

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:	.45	8.1
		Lab:	.45	8.1
		Other:	0	0
		Total:	.9	16.2

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 the technical survival skills to help avoid committing fatal errors on the fireground. This course is a pass/no pass course. **PREREQUISITE:** California State Marshal certified fire fighter 1 academy or equivalent as determined by the Dean of Academy Instruction. Note: Approval of equivalent training is not a guarantee state regulatory or licensing agencies will also grant equivalency. Prior to beginning this course students must already be familiar with, and be able to demonstrate all of the skills listed below. These will not be taught in the course, rather they will be the starting point for advanced fire fighter training that builds upon them. These minimum knowledge and skill levels are regarding: 1. Firefighter safety 2. Don and use SCBA, emergency procedure for SCBA failure 3. Determination of air supply in the hazardous atmosphere 4. Safe mounting and dismounting of apparatus 5. Knowledge of all firefighting personal protective equipment, including hand and eye protection 6. Knowledge of all firefighting tools and equipment, ladders, and hoses including appropriate selection, carry, and use for each type across all types of emergencies. 7. Horizontal and vertical ventilation on a structure 8. Hazardous materials and safety precautions 9. Attack technique for an interior structure fire 10. Structure search and rescue including conscious and unconscious victim removal 11. Rescue knots such as bowline, clove hitch, figure eight on a bight, half hitch, and Becket. 12. Familiarity with radio procedures 13. Effective verbal communication used in firefighting 14. First responder CPR and first aid

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:

1. Demonstrate the ability to react efficiently and effectively during various fire emergencies and demonstrate emergency communications when fire fighters become lost, trapped, or disoriented inside a burning structure during classroom scenarios.

Measure: Skill demonstration, participation in classroom scenarios performance review, practical application of techniques

PLO:

ILO: 1, 2, 5, 7

GE-LO:

Year assessed or anticipated year of assessment: 2015

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

Curriculum Approval Date: 02/22/2016

I. Orientation and Administration

A. Course Objectives

B. Students Evaluations

C. Safety/Injury Reporting

D. Sample Calendar of Events

SPO: The student will be aware of the course goals, and the requirements for successfully completing the course.

Assignment: Review course objectives described in class.

II. Developing a Survival Attitude

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

G. Dedication toward Health and Wellness

H. Focused on Training and Gaining Knowledge

SPO: Student will describe recommendations to empower and enhance fire fighter training to handle their own emergencies.

Assignment: Review causes of fire fighter fatalities in cases discussed in class.

III. Preventing the Fire Fighter Emergency

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
- K. Fire Loads
 1. High-target Structures
- M. Training
 2. Physical Fitness

SPO: The student will be able to recognize and evaluate a potentially hazardous situation. They will be able to describe the key elements of conducting a thorough and concise size-up.

Assignment: Create and execute a physical fitness plan.

IV. The Fire Fighter Emergency

- 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

H. 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

I. Preventing the Fire Fighter Emergency

1. Conduct risk vs. benefit analysis
2. Communication and coordination between interior and exterior crews
3. Scene Command

J. Summary

SPO: The student will be aware of preventing the fire fighter emergency, recognizing a fire fighter emergency, and proper procedures for calling and dealing with the fire fighter emergency.

Assignment: Review the procedure for conducting a risk vs. benefit analysis during a fire fighter emergency.

V. Fire Fighter Survival Skills

SCBA Emergencies (Self-Contained Breathing Apparatus)

1. SCBA Training
2. Air Consumption for survival
3. Consumption Rate Testing
 - a. Types of tests
 - 1) SCBA consumption course
 - 2) Treadmill
 - 3) Stair climber
4. Air Supply Interruption
5. Out of Air
6. Face Piece Removal
7. 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
8. Restrictive Area Techniques
9. Nonremoval Method
10. Low or Reduced Profile
11. Zero or No Profile (Full Removal)
12. Alternate Restrictive Area Techniques
13. Left Side Shift Technique
14. Backwards "Swim" Maneuver
15. Forward Dive Technique (Superman)
16. SCBA Confidence Course
17. Summary

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.

SPO: The student will be able to identify a variety of obstacles and SCBA emergencies during a fire fighter survival emergency.

Assignment: Familiarize oneself with the SCBA and its function for skills exam.

VI. Fire Fighter Survival Evolutions

A. Evolution #1: SCBA Confidence Course

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

B. Evolution #2: SCBA Awareness

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.

SPO: Demonstrate skills and techniques learned throughout course.

Assignment: Review the procedure followed during a fire fighter emergency in various situations for skills exam.

METHODS OF INSTRUCTION:

Lecture, discussion, demonstration, and hands-on practical applications/exercises. PowerPoint presentations, video instruction.

METHODS OF EVALUATION:

CATEGORY 1 - The types of writing assignments required:

Percent range of total grade: 10 % to 15 %

Reading Reports

If this is a degree applicable course, but substantial writing assignments are NOT appropriate, indicate reason

Course primarily involves skill demonstration or problem solving

CATEGORY 2 - The problem-solving assignments required:

Percent range of total grade: 15 % to 20 %

Field Work

CATEGORY 3 - The types of skill demonstrations required:

Percent range of total grade: 50 % to 70 %

Class Performance/s

Performance Exams

CATEGORY 4 - The types of objective examinations used in the course:

Percent range of total grade: 35 % to 40 %

Completion

Other: Skills Demonstration

REPRESENTATIVE TEXTBOOKS:

Required:

California State Fire Marshal. Fire Fighter Survival Student Manual. California: State Fire Training, 2010. Or other appropriate college level text.

Reading level of text, Grade: 12 Verified by: Doug Achterman

Other textbooks or materials to be purchased by the student:

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: JFT
CSU Crosswalk Course Number: 35
Prior to College Level: Y
Non Credit Enhanced Funding: N
Funding Agency Code: Y
In-Service: N
Occupational Course: C
Maximum Hours: .5
Minimum Hours: .5
Course Control Number: CCC000525305
Sports/Physical Education Course: N
Taxonomy of Program: 213300