Course Outline

COURSE: JFT 13    DIVISION: 50    ALSO LISTED AS:

TERM EFFECTIVE: Fall 2017    CURRICULUM APPROVAL DATE: 02/27/2017

SHORT TITLE: LARRO

LONG TITLE: Low Angle Rope Rescue Operational Course

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<th>Units</th>
<th>Number of Weeks</th>
<th>Type</th>
<th>Contact Hours/Week</th>
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COURSE DESCRIPTION:

The Low Angle Rope Rescue Operational course is designed to provide training for responders in low angle rope rescue operations. This course will also provide training in a subject element required for the California Urban Search and Rescue (US and R) Basic and Light Operational Level.

PREREQUISITE: JFT 8 - Fire Fighter I Academy

1. State Fire Marshall certified basic firefighting academy diploma 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.

2. 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 officer training that builds upon them. These minimum knowledge and skill levels are regarding: - Firefighter safety - Knowledge of all firefighting tools and equipment, ladders, and hoses including appropriate selection, carry, and use for each type across all types of emergencies - Rescue knots such as bowline, clove hitch, figure eight on a bight, half hitch, Becket, and safety knots

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

3/3/2017
SCHEDULE TYPES:
- 02 - Lecture and/or discussion
- 03 - Lecture/Laboratory
- 04 - Laboratory/Studio/Activity

STUDENT LEARNING OUTCOMES:
1. Describe the components, use/misuse, types, construction, size/dimension, and inspection/maintenance for a kernmantle rescue rope, prusik loop, webbing, load-releasing device, commercial harness, carabiner, brake bar rack, figure eight plate with ears, rescue pulley, mechanical grab device, anchor plate, and edge protection.
Measure of assessment: Skills demonstration Skills Exam
Year assessed, or planned year of assessment: 2016
Semester: Fall
2. Demonstrate how to tie the six required knots.
Measure of assessment: Skills Demonstration Skills Exam
Year assessed, or planned year of assessment: 2016
Semester: Fall
3. Identify several methods of system attachments for rescuers and victims.
Measure of assessment: Skills Exam
Year assessed, or planned year of assessment: 2016

CONTENT, STUDENT PERFORMANCE OBJECTIVES, OUT-OF-CLASS ASSIGNMENTS
Curriculum Approval Date: 02/27/2017
1 Hours
Content: Chapter 1: Course Introduction (1 Hour)
I. Course Overview
A. Welcome/Purpose of the course
1. Instructor Experience, background, injuries, limitations, Low angle, High angle
Student Performance Objectives (SPO): Describe low angle and high angle rescue
Out-of-Class Assignments: Review lecture material
1 Hours
Content: Chapter 2: Rope Rescue Equipment (1 Hour)
I. Types of Equipment
A. Kernmantle Rescue Rope prusik loop
B. Webbing and load releasing devices
C. Components, use, types, construction, size
D. Inspection
Student Performance Objectives (SPO): Identify rope rescue components and equipment
Out-of-Class Assignments: review lecture material
2 Hours
Content: Chapter 3: Rescue Knots and Hitches
I. Qualities of a Rescue Knot
A. Five characteristics to any preferred rescue knot
II. Rope Terminology
A. Running end, working end, standing part
III. Components of Knots and Hitches
IV. Hitches
A. Temporarily secure objects
B. Securing a victim to a rescue litter
V. Knots
A. Bights, loops, and round turns
B. Bending knot (overhand bend, figure eight bend, double overhand bend) is used to tie rope or webbing
C. Terminology
D. Tail Length
E. Required Knots
Student Performance Objectives (SPO): Demonstrate how to tie rescue knots and hitches
Out-of-Class Assignments: practice tying knots and hitches
2 Hours
Content: Chapter 4: Anchor Systems
I. California Code of Regulations, Title 8, Section 1670
A. Personal Fall Arrest Systems
II. Considerations When Selecting Anchors
A. Force Hold Required
B. Direction of Pull
C. Working Distances
D. Sharp Edges
III. Types of Anchors
A. Natural Anchors
B. Manufactured anchors
IV. Sling Anchor Attachments: Pre-tied
A. Advantages
B. Disadvantages
V. Single Sling Anchor Attachments: Open
A. Advantages
B. Disadvantages
VI. Multi-Point Self-adjusting Anchor Systems
A. Two-point/three point Self-adjusting Anchor System, critical angles
VII. Windlassed Picket Systems
Student Performance Objectives (SPO): Demonstrate construction of appropriate anchor systems
Out-of-Class Assignments: practice construction of anchor systems
2 Hours
Content:
Chapter 5: Rescuer and Ambulatory Victim Packaging
I. Rescuer Packaging
II. Sample NFPA class II harness instruction card
III. Ambulatory victim packaging
Student Performance Objectives (SPO): Demonstrate application of rescuer and victim packaging
Out-of-Class Assignments: Review NFPA class II harnesses
2 Hours
Content: Chapter 6: Types of Litters and Victim Packaging
I. Rescue Litters
A. Metal Litters
B. Metal/plastic
II. How to Secure a Victim to a Rescue Litter
A. Interior Lashing, exterior lashing
III. Alternative Victim Packaging (Optional)
   A. Equipment Needed, advantages, disadvantages, uses.

IV. Considerations for Packaging Non-ambulatory Victims in Unstable Terrain

Student Performance Objectives (SPO): Identify and describe litters and victim packaging systems.
Out-of-Class Assignments: practice securing simulated victims in litters
2 Hours

Content: Chapter 7: System Attachments and Fall Restraint
I. Rescuer attachment to a rope rescue system.
   A. Ambulatory victim attachment to a rope rescue system
   B. Rescuer Litter Attachment to a Rope Rescue System
   C. Three Rescuer Litter Attachment
   D. Four Rescuer Litter Attachment
   E. Components of a Fall Restraint System

Student Performance Objectives (SPO): Demonstrate application of rope rescue systems to litter attachments
Out-of-Class Assignments: Practice rescue litter attachments to a rope rescue system
3 Hours

Content: Chapter 8: Three Main Components of a Rope Rescue System
I. Three main components of low angle rope rescue operations.
   A. Belay/Safety Line Component
   B. Main line component
   C. Mechanical advantage
   D. Single RPM Configuration
   E. Pre-rigged Dual RPM System

Student Performance Objectives (SPO): Identify components of a belay system
Out-of-Class Assignments: Review lecture material
2 Hours

Content: Chapter 9 Belay/Safety Line Systems
I. Operation of Belay/Safety Line Systems
   A. Belay safety line configurations

Student Performance Objectives (SPO): Identify safety considerations of a belay system
Out-of-Class Assignments: Review lecture material
2 Hours

Content: Chapter 10: Descending/Ascending
I. Descending
   A. Types of Descent Control Devices (DCD)
II. Ascending
   A. Equipment
   B. Topside Recovery Option
   C. Self-Rescue Option

Student Performance Objectives (SPO): Identify descending and ascending control devices
Out-of-Class Assignments: Review lecture material
2 Hours

Content: Chapter 11: Lower/Raise (Mechanical Advantage) Systems
I. Key Points Regarding Lower/Raise Operations
   A. Lowering Line Systems
   B. Raising (MA) Systems
   C. Piggyback Systems
Student Performance Objectives (SPO): Identify key points of lowering/raising operations
Out-of-Class Assignments: Construct lower/raise systems
1 Hours
Content: Chapter 12: Load-releasing Methods
I. Rappelling operations
A. Load Releasing and Raising
Student Performance Objectives (SPO): Identify load releasing methods
Out-of-Class Assignments: Review lecture material
5 Hours
Content: Chapter 13.: Rescue Scene Organization and Management
I. Command and Control in Low Angle Rope Rescue Operations
A. Incident command system
C. Rescue operation
D. Small incidents
E. Unified Command
G. Positions that may need to be filled on a "typical" low angle rescue incident include:
1. Incident Commander (IC).
2. Safety Officer (this role may be retained by the IC).
4. Assistant Safety Officer- Low Angle Rescue.
5. Rigging Team.
6. Haul Team.
7. Litter Team.
8. Edge Person.
9. Main Line Tender.
11. Rescuer(s).
II. Example Organization of a Low Angle Rescue Using 3-Person Engines
A. First Arrival Considerations
1. Size-up, anchor systems.
B. Step #1: Scene Assessment and Rigging
1. First Engine
C. Step #2: Initial Victim Contact
1. First Engine
D. Step #3: Ambulatory Victim Walkout
1. Second Engine, third engine
E. Step #4: Non-ambulatory Victim Packaging
1. Second Engine
F. Step #5: Non-ambulatory Victim Rescue
1. Third Engine
G. Sample Organization Chart
1. Scene Assessment and Rigging, initial victim contact, ambulatory victim walkout, non-ambulatory victim packaging/rescue, blank chart
Student Performance Objectives (SPO): Identify the ICS positions and scene management organization
Out-of-Class Assignments: Review ICS rescue scene organizations
2 Hours
Content: Chapter 14: Litter Walkouts

3/3/2017
I. Walkouts
   A. Simple walkout
   B. Caterpillar walkout
   C. Single pitch walkout with belay/safety line
   D. Multiple pitch with a belay/safety line
   E. Staffing, ladders used in litter walkouts

Student Performance Objectives (SPO): Identify the components of a litter walkout system
Out-of-Class Assignments: Practice constructing litter walkout systems
2 Hours

Content: Chapter 15: Ladder Rescue Systems
I. Ladder rescue systems
   A. Moving Ladder Slide
   B. Construction
   C. Operations safety considerations

Student Performance Objectives (SPO): Demonstrate construction of a moving ladder slide
Out-of-Class Assignments: Review lecture material
4 Hours

Content: Chapter 16: Evolutions
I. Evolution Components
   A. Mechanical Advantage Systems
   B. Victim packaging
   C. Rescuer packaging
   D. Anchor systems

Student Performance Objectives (SPO): Construct a rescue system as directed by instructor
Out-of-Class Assignments: review lecture material
1 Hours

Final

METHODS OF INSTRUCTION:
Lab / Lecture / Demonstration

METHODS OF EVALUATION:
Writing assignments
Percent of total grade: 10.00 %
Percent range of total grade: 10 % to 20 % 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
Problem-solving assignments
Percent of total grade: 20.00 %
Percent range of total grade: 20 % to 30 % Homework Problems; Skills Demonstrations Skills Exams
Skill demonstrations
Percent of total grade: 50.00 %
Percent range of total grade: 50 % to 60 % Performance Exams
Objective examinations
Percent of total grade: 10.00 %
Percent range of total grade: 10 % to 20 % Multiple Choice

OUT OF CLASS ASSIGNMENTS:
Required Outside Hours:
Assignment Description: Skills practice

REPRESENTATIVE TEXTBOOKS:
Required Representative Textbooks

ARTICULATION and CERTIFICATE INFORMATION
Associate Degree:
CSU GE:
IGETC:
CSU TRANSFER:
Transferable CSU, effective 201270
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: 13
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: CCC000533719
Sports/Physical Education Course: N
Taxonomy of Program: 213300