GAVILAN COLLEGE
5055 Santa Teresa Blvd
Gilroy, CA 95023

Course Outline

COURSE: JFT 13 DIVISION: 50 ALSO LISTED AS:

TERM EFFECTIVE: Fall 2022 CURRICULUM APPROVAL DATE: 11/7/2022

SHORT TITLE: LARRO

LONG TITLE: Low Angle Rope Rescue Operational Course

Units	Number of Weeks	Type	Contact Hours/Week	Total Contact Hours
.5	18	Lecture:	.22	3.96
		Lab:	1.13	20.34
		Other:	0	0
		Total:	1.35	24.3
		Total Learning Hrs:	32.22	

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.

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 how to tie the six required knots.
2. Identify several methods of system attachments for rescuers and victims.

COURSE OBJECTIVES:

By the end of this course, a student should:

1. be familiar with 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 used for Low Angle Rope Rescue Operations.

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

Curriculum Approval Date: 11/7/2022

LECTURE CONTENT:

Chapter 1: Course Introduction (4 hours)

Low and High Angle Rope Rescue Definitions

Rescuer and Victim Safety Considerations

LAB CONTENT:

Chapter 2: Rope Rescue Equipment (1 hour)

1. Kernmantle Rescue Rope
2. Prusik Loop
3. Webbing
4. Load-releasing Device
5. Commercial Harness
6. Carabiner
7. Brake Bar Rack
8. Figure Eight Plate with Ears
9. Rescue Pulley
10. Mechanical Grab Device
11. Anchor Plate
12. Edge Protection

Chapter 3: Rescue Knots and Hitches (1 hour)

1. Qualities of a Rescue Knot
2. Rope Terminology
3. Components of Knots and Hitches
4. Hitches
5. Knots

Chapter 4: Anchor Systems (1 hour)

1. California Code of Regulations, Title 8, Section 1670
2. Considerations When Selecting Anchors
3. Types of Anchors
4. Sling Anchor Attachments: Pretied
5. Single Sling Anchor Attachments: Open
6. Multi-Point Self-adjusting Anchor Systems
7. Windlassed Picket Systems

Chapter 5: Rescuer and Ambulatory Victim Packaging (1 hour)
1. Rescuer Packaging
2. Sample NFPA Class II Harness Instruction Card
3. Ambulatory Victim Packaging Overview
4. Sample Victim Harness Instructions
Chapter 6: Types of Litters and Victim Packaging (1 hour)
1. Rescue Litters
2. How to Secure a Victim to a Rescue Litter
3. Alternative Victim Packaging (Optional)
4. Considerations for Packaging Nonambulatory Victims in Unstable Terrain
Chapter 7: System Attachments and Fall Restraint (2 hours)
1. Rescuer Attachment to a Rope Rescue System
2. Ambulatory Victim Attachment to a Rope Rescue System
3. Rescue Litter Attachments to a Rope Rescue System
4. Rescuer Attachment to the Litter System
5. Litter Harness Pre-rig
6. Three Rescuer Litter Attachment
7. Four Rescuer Litter Attachment
8. Fall Restraint
9. Components of a Fall Restraint System
Chapter 8: Three Main Components of a Rope Rescue System (1 hour)
1. Key Points about the Component Approach
2. Single RPM Configuration
3. Prerigged Dual RPM Systems
Chapter 9: Belay/Safety Line Systems (2 hours)
1. Key Points Regarding the Operation of Belay/Safety Line Systems
2. Belay/Safety Line Configurations
3. Lowering Operations ? Basic Configuration
4. Retrieval Operations ? Basic Configuration
5. Lowering Operations ? PMP Configuration (Optional)
6. Retrieval Operations ? PMP Configuration (Optional)
7. System Variations
Chapter 10: Descending/Ascending (2 hours)
1. Descending
2. Rigging a Fixed Line
3. Rappel Position
4. Ascending

Chapter 11: Lower/Raise (Mechanical Advantage) Systems (2 hours)
1. Key Points Regarding Lower/Raise Operations
2. Lowering Line Systems
3. Raising (MA) Systems
4. Lower to Raise Conversion: 3:1 Inline ? RPM
5. Lower to Raise Conversion: 5:1 Inline ? RPM
6. Lower to Raise Conversions 3:1 or 5:1 Inline with Directional Pulley
7. Piggyback Systems
8. Pig Rig Construction: 3:1
9. Pig Rig Construction: 5:1
10. Lower to Raise Conversion: 3:1 Pig Rig
11. Lower to Raise Conversion: 5:1 Pig Rig
Chapter 12: Load-releasing Methods (2 hours)
1. Rappelling or Lowering Operations
2. Raising Operations
Chapter 13: Rescue Scene Organization and Management (1 hour)
1. Command and Control in Low Angle Rope Rescue Operations
2. Considerations for the IC
3. Introduction to Rope Rescue Lowering and Raising Systems
4. Organization of a Low Angle Rescue Using 3-Person Engines
5. Organization Chart
Chapter 14: Litter Walkouts (2 hours)
1. The Simple Walkout
2. The Caterpillar Walkout
3. The Single Pitch Walkout with a Belay/Safety Line
4. The Multiple Pitch Walkout with a Belay/Safety Line
5. Staffing
6. Ladders used in Litter Walkouts
Chapter 15: Ladder Rescue Systems (1 hour)
1. Moving Ladder
2. Ladder Slide
Chapter 16: Evolutions (1 hour)
1. Evolution Components

METHODS OF INSTRUCTION:
Lab / Lecture / Demonstration

OUT OF CLASS ASSIGNMENTS:
Assignment Description: Skills practice

METHODS OF EVALUATION:
Writing assignments
Evaluation Percent 10
Evaluation Description
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
Evaluation Percent 20
Evaluation Description
Percent range of total grade: 20 % to 30 %

Homework Problems;
Skills Demonstrations
Skills Exams
Skill demonstrations
Evaluation Percent 50
Evaluation Description
Percent range of total grade: 50 % to 60 %
Performance Exams

Objective examinations
Evaluation Percent 20
Evaluation Description
Percent range of total grade: 10 % to 20 %
Multiple Choice

REPRESENTATIVE TEXTBOOKS:
Required: CDF/State Fire Marshal, Low Angle Rope Rescue Operational, State Fire Training. 2016.

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:
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: CCC000533719
Sports/Physical Education Course: N
Taxonomy of Program: 213300