

Course Outline

COURSE: JFT 108 **DIVISION:** 50 **ALSO LISTED AS:**

TERM EFFECTIVE: Fall 2015 **CURRICULUM APPROVAL DATE:** 03/23/2015

SHORT TITLE: ENGINE BOSS

LONG TITLE: Engine Boss S-231

<u>Units</u>	<u>Number of Weeks</u>	<u>Type</u>	<u>Contact Hours/Week</u>	<u>Total Contact Hours</u>
.5	18	Lecture:	.5	9
		Lab:	.44	7.92
		Other:	0	0
		Total:	.94	16.92

COURSE DESCRIPTION:

This course is designed to meet the training needs of an incident Engine Boss outlined in the Wildland and Prescribed Fire Qualification System Guide, PMS 310-1, and the Position Task Book (PTB) developed for the position of Single Resource Boss, Engine (ENGB). The course will cover the task of an Engine Boss in making the tactical decisions required to safely manage an engine and personnel on an incident. This is a pass/no pass course. **PREREQUISITE:** Basic Fire Fighter I Academy certificate 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:

1. Identify Engine capabilities and limitations that the Engine boss must consider when deciding to attempt an assignment.

Measure: Written Assignment, Scenario

PLO:

ILO: 2,3,6

GE-LO:

Year Assessed: 2014

2. Describe the sizeup elements in a fire situation and determine the tactics to be used after sizeup occurs.

Measure: Written Assignment, Class Performance

PLO:

ILO: 3,6,7

GE-LO:

Year Assessed: 2014

3. Develop alternative plans based upon equipment failures and/or personnel problems.

Measure: Problem Solving, Skills Demonstration, Scenario

PLO:

ILO: 2,6,7

GE-LO:

Year Assessed: 2014

4. Describe safety hazards commonly encountered in wildland/urban interface fires.

Measure: Written Assignment

PLO:

ILO: 3,7

GE-LO:

Year Assessed: 2014

5. Obtain essential information from the Incident Commander and brief crewmembers and adjoining forces.

Measure: Role Play, Skills Demonstration

PLO:

ILO: 1,3,4

GE-LO:

Year Assessed: 2014

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

Curriculum Approval Date: 03/23/2015

2.0 Hours

Content:

I. Engine and Crew Capabilities and Limitations

A. Engine capabilities and limitations

1. Terrain considerations

2. Water capabilities

3. Maneuverability

4. Ability to get in and out (ingress/egress) of a given situation

5. Engine suited to stationary vs mobile attack

6. Reliability

B. Engine typing

C. Crew Capabilities

1. Experience and training level

2. Condition of Crew

3. Unfamiliar Crew Members

D. Tactical Assignments

1. Pre-Incident Inventory
2. Maintaining Inventory During Incident Operations
3. Utilization of Hose and Appliances
4. Demobilization/ Post-Incident Inventory Re-supply

Student Performance Objectives (SPO): Identify engine capabilities and limitations that the Engine Boss must consider when deciding to attempt an assignment. Describe assignments that require specialized training of engine crew members as well as observations the Engine Boss must make of crewmembers to ensure safety is not compromised.

Out-of-Class Assignments: Reading assignments

3.5 Hours

Content:

II. Information Sources

A. Supervisor briefing

1. Essential information
 - a. Situation
 - b. Mission/Execution
 - c. Communications
 - d. Service/ Support
 - e. Risk Management
 - f. Special or additional equipment
 - g. Fueling requirements

B. Incident Personnel

1. Communication
 2. Experience level
- ##### C. Subordinate Briefing
1. Chain of Command
 2. Safety Issues
 3. Work Assignment
 4. Necessary Support
 5. Communications

D. Coordination

1. Establishing and Maintaining Communications
2. Coordination with Adjoining Forces

E. Class Exercise

Student Performance Objectives (SPO): Identify information sources needed to successfully complete a tactical assignment and describe the coordination required to accomplish the tactical assessment.

Out-of-Class Assignments: Reading Assignments

3.5 Hours

Content: III. Fire Sizeup Considerations

A. Sizeup elements

1. Method of attack
2. Factors
 - a. Fuels and terrain
 - b. Fire behavior potential
 - c. Current and predicted weather
 - d. Smoke Column
 - e. Access road

- f. Possible water sources
- g. Jurisdiction
- h. Fire history of the area
- i. Parking
- B. Fuel groups and Expected fire behavior
 - 1. Grass group
 - 2. Shrub group
 - 3. Timber litter group
 - 4. Logging slash group
- C. Arrival on the fire scene
 - 1. Safety
 - 2. Decisions to be made

Student Performance Objectives (SPO): Demonstrate a clear understanding of the sizeup elements in a fire situation, identify the four fuel groups and the behavior of the fire associated with each, and determine the tactics to be used after sizeup occurs .

Out-of-Class Assignments: Reading assignment

2.5 Hours

Content: IV. Tactics

- A. Advantages and disadvantages of different methods of attack
 - 1. Direct
 - 2. Parallel
 - 3. Indirect
- B. Delivery of attack methods
 - 1. Stationary
 - 2. Mobile attack
- C. Ensure personal safety
 - 1. Fight fire in fuels consistent with engine capabilities
 - 2. Use direct attack when possible
 - 3. Attack flank with greatest potential for escape
 - 4. Burn out unburned fuels
 - 5. Use extreme caution during frontal assaults
 - 6. Avoid fire path of least resistance (chimneys, chutes and saddles)
 - 7. Recognize topography hazards
 - 8. When preserving area of origin, continue to consider firefighter safety
 - 9. Be aware of environmental factors
 - 10. Recognize education and experience
- D. Primary plan alternatives
 - 1. Planning
 - a. Plan ahead
 - b. Work with backup engine
 - 2. Alternate methods to accomplish assigned tasks
 - a. Use of tools
 - 3. Engine Boss responsibilities in the event of equipment breakdown
 - a. Communication
- E. Course Exercises
 - 1. Hardwood Timber Litter
 - 2. Grass and Shrubs

Student Performance Objectives (SPO): Describe appropriate tactics to be used when changes in weather or terrain occur during a fire and develop alternative plans based upon equipment failures and/or personnel problems.

Out-of-Class Assignments: Reading Assignments

2.5 Hours

Content: V. Wildland/ Urban Interface

A. Wildland/ urban interface characteristics

1. Triage
 2. Five factors that affect all triage decisions
 3. Triage categories
 4. When it is time to withdraw
- B. Safety hazards commonly encountered in wildland/urban interface fires
1. Poor access and narrow one way roads
 2. Bridge load limits
 3. Wooden construction and wood shake roofs
 4. Inadequate water supply
 5. Natural fuels
 6. Structures in chimneys, box canyons, narrow canyons, or on steep slopes
 7. Extreme fire behavior
 8. Strong winds
 9. Evacuation of public
- C. Additional Wildland/Urban Watchouts
1. Power lines
 2. Petroleum or propane tanks are present
 3. Out Buildings

Student Performance Objectives (SPO): Identify characteristics that must be monitored within a wildland and/or urban interface and describe safety hazards.

Out-of-Class Assignments: Reading Assignment

Hours

Content: VI. Field Exercise

- A. Field Exercise
- B. Tactical Decisions Game
- C. Scenario

Student Performance Objectives (SPO): Obtain essential information from the Incident Commander and brief crewmembers and adjoining forces while maintaining LCES and standard safety procedures.

Out-of-Class Assignments: Reading Assignment

METHODS OF INSTRUCTION:

Skills Demonstration, Lecture, Scenario Training

METHODS OF EVALUATION:

CATEGORY 1 - The types of writing assignments required:

Percent range of total grade: 5 % 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: 20 % to 30 %

Field Work

Other: Skills Exam

CATEGORY 3 - The types of skill demonstrations required:

Percent range of total grade: 50 % to 90 %

Class Performance/s

Field Work

Performance Exams

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

Percent range of total grade: 30 % to 50 %

Multiple Choice

Other: Skills Demonstration

REPRESENTATIVE TEXTBOOKS:

Required:

NFES, Engine Boss Student Workbook, National Wildfire Coordinating Group, 2004 or most current edition or other appropriate college level text.

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

Other textbooks or materials to be purchased by the student: Wildland Fire Incident Management Field Guide, PMS 210

Position Task Book for Single Resource Boss, NFES 2318, National Wildfire Coordinating Group, 2012 or most current edition

Wildland Fire Suppression Tactics Reference Guide, NFES 1256, National Wildlife Coordinating Group, 1996 or most current edition

Incident Response Pocket Guide, NFES 1077, National Wildfire Coordinating Group, 2014 or most current edition

ARTICULATION and CERTIFICATE INFORMATION

Associate Degree:

CSU GE:

IGETC:

CSU TRANSFER:

Transferable CSU, effective 201570

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: 108
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:
Sports/Physical Education Course: N
Taxonomy of Program: 213300