Course Outline

COURSE:  JFT 7C  DIVISION:  50  ALSO LISTED AS:

TERM EFFECTIVE:  Fall 2014  CURRICULUM APPROVAL DATE: 03/10/2014

SHORT TITLE: AERIAL TILLER TRUCK OPERATION

LONG TITLE: Fire Driver/Operator Aerial/Tiller Truck Operations

<table>
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<th>Units</th>
<th>Number of Weeks</th>
<th>Type</th>
<th>Contact Hours/Week</th>
<th>Total Contact Hours</th>
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<td>Lecture</td>
<td>.66</td>
<td>11.88</td>
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<td>Lab</td>
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COURSE DESCRIPTION:

This course is for students responsible for operating fire apparatus equipped with an aerial device. Topics include inspecting, maintaining, and testing of aerial devices. Practical application requires driving an aerial apparatus including tiller operations, positioning and stabilizing the apparatus, and operating the aerial device. ADVISORY: JFT 7A and JFT 7B.

PREREQUISITES:

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. Recognize standards, and related laws for tiller and straight bodied aerial fire apparatus.

   Measure: written exam

   PLO: 2, 3

3/17/2014  1
ILO: 3, 7
GE-LO:
Year Assessed: 2013

2. Increase their driving skills during simulated driving conditions
Measure: Skills demonstration
PLO: 3, 7, 6
ILO: 3, 7
GE-LO:
Year Assessed: 2013

CONTENT, STUDENT PERFORMANCE OBJECTIVES, OUT-OF-CLASS ASSIGNMENTS
Curriculum Approval Date: 03/10/2014
.5 Hours
Content: Unit I
A. Introduction
1. Orientation and Administration
Student Performance Objectives (SPO): Identify classroom and facility requirements
Out-of-Class Assignments: Unit 2
A. Basic pre-trip inspection
1. Batteries
2. Braking
3. Cooling
4. Electrical
5. Fuel
B. Inspection requirements for the different systems on aerial device
1. Cables
2. Aerial hydraulics
3. Slides and rollers
4. Stabilizing devices
C. Inspection for Tiller apparatus
1. Steering system
2. Brakes
3. Trailer
4. Lubrication
4 Hours
Content: Unit 2: Inspections, Tests, and Servicing Functions
I. Basic Inspection Requirements for Aerial and Tillers
A. Review a basic pre-trip inspection
B. The specific inspection requirements for the different systems on aerial device
C. The specific inspection requirements for a tiller apparatus
D. Identify out of service criteria for an aerial/tiller apparatus
E. Pre-trip inspection of a aerial/tiller apparatus
II. Test Requirements for Aerial and Tillers
A. Descriptions of various aerial devices
B. Emergency operations of an aerial device
III. Servicing of Aerial and Tillers Apparatus
A. Identify the service requirements for an aerial device
B. Servicing an aerial device based on manufacturer’s recommendations

Student Performance Objectives (SPO):
Describe the specific inspection requirements for the different systems on aerial device

Out-of-Class Assignments: Review class handouts
1 Hours

Content: Unit 3: Review of Driver Operator Responsibilities
I. California Vehicle Codes
A. California Vehicle Code (CVC) sections associated with the operation of emergency vehicles
B. CVC sections associated with liabilities

II. Driver’s Responsibilities
A. Expectations of emergency vehicle operator
B. The authority having jurisdiction (AHJ) policies and procedures for the operation of an aerial/tiller
C. National Fire Protection Association (NFPA) standards that are relevant to emergency vehicle operations
D. Requirements of Title 49 CFR on a driver’s license

Student Performance Objectives (SPO): Describe the laws associated with the operation of emergency vehicle.

Out-of-Class Assignments: Reading California Vehicle Codes
13 Hours

Content: Unit 4: Operation of an Aerial/Tiller Fire Apparatus
I. Operating and Control of Aerial/Tiller Fire Apparatus
A. Characteristics of a defensive driver
B. Principles of tiller operations
C. Effects on vehicle control of general steering reaction
D. Methods of communication between the driver and the tiller position
E. Methods used to negotiate intersection
F. Principle of driving at night and in adverse weather conditions
G. Manufactures operational limitation of the apparatus

II. Operating Aerial and Tiller Apparatus
A. Operate aerial apparatus through the practical driving exercises as specified in §4.3.2 through §4.3.5 of NFPA 1002 current edition
B. Operate aerial apparatus on a public way meeting the specific maneuvers as identify in §4.3.1 of NFPA 1002

Student Performance Objectives (SPO): Identify and describe the characteristics of defensive driving, the principles of tiller operations, what effects vehicle control, how to communicate between the tiller and driver and the principles of driving at night and in adverse weather conditions.

Out-of-Class Assignments: Reading assignment NFPA
15 Hours

Content: Unit 5: Aerial Device Operations
I. Stabilizing Aerial Apparatus
A. The Hydraulic System
B. Recommendation for Stabilization
C. Effects of topography and ground conditions for stabilization
D. Operate the stabilization system creating a stable platform for operating the aerial device

II. Maneuvering and Positioning an Aerial Device
A. Safe Operating limits
B. Gauges and operating controls of the aerial device
C. Emergency operating system
D. Electrical and communication system
E. Manual rotation and lower systems
F. Safety override and the hazards of using them
G. Aerial device safety
H. Procedures for bedding the aerial device

III. Operating the Aerial Device
A. Operation of the aerial device
B. Bedding the aerial device

Student Performance Objectives (SPO):
Students will demonstrate the operation of the hydraulic stabilization systems providing for a stable platform for the operation of the aerial device.

Out-of-Class Assignments: Reading Assignment

6 Hours
Content: Unit 6: Apparatus Placement
I. General Apparatus Placement
A. Considerations for apparatus placement at structure fires
B. Consideration for apparatus placement at a rescue
C. Consideration for placement at other types of emergencies

II. Apparatus Placement for use of an Elevated Master Stream
A. Nozzle reactions
B. Range of operation
C. Weight limitations when operating with an elevated master stream
D. Deploying and connecting a water supply to a master stream device
E. Elevated master stream manually or remotely

Student Performance Objectives (SPO): Deploy and operate an elevated master stream and flow the desired amount of water at an incident.

METHODS OF INSTRUCTION:
Skills Demonstration, Lecture, Scenario Training

METHODS OF EVALUATION:
CATEGORY 1 - The types of writing assignments required:
Percent range of total grade: 10 % to 15 %
Reading Reports
Course primarily involves skill demonstration or problem solving

CATEGORY 2 - The problem-solving assignments required:
Percent range of total grade: 50 % to 60 %
Field Work
Exams
Other: Skills Exam

CATEGORY 3 - The types of skill demonstrations required:
Percent range of total grade: 60 % 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 %
Other: Skills Demonstration

REPRESENTATIVE TEXTBOOKS:
NFPA 1002, Current Edition
or other appropriate college level text.
Reading level of text, Grade: 12

ARTICULATION and CERTIFICATE INFORMATION
Associate Degree:
CSU GE:
IGETC:
CSU TRANSFER:
  Transferable CSU, effective 201470
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: 7C
Prior to College Level: Y
Non Credit Enhanced Funding: N
Funding Agency Code: Y
In-Service: N
Occupational Course: C
Maximum Hours: 1
Minimum Hours: 1
Course Control Number:
Sports/Physical Education Course: N
Taxonomy of Program: 213300