

# FIRE 0634 - DRIVER OPERATOR 1A

## Catalog Description

Prerequisite: Hold a valid Class C driver's license

Hours: 40 (23 lecture, 17 activity)

Description: Provides information on fire apparatus, preventative maintenance and driving/operating. Topics include routine tests, inspections, and servicing functions; operate, back, maneuver, and turn a fire apparatus in a variety of conditions; and operate all fixed systems and equipment on a fire apparatus. Students must provide full structural personal protective equipment and fire apparatus for the final two days of class. Fulfills the requirements for a Class C Firefighter Endorsement. (not transferable) (not degree applicable) (pass/no pass grading)

## Course Student Learning Outcomes

- CSLO #1: Differentiate between recognized standards and related laws for fire apparatus.
- CSLO #2: Analyze information and techniques on basic inspections, documentation, maintenance, and troubleshooting of fire apparatus.
- CSLO #3: Demonstrate the techniques to increase driving skills during simulated driving conditions.

## Effective Term

Fall 2019

## Course Type

Credit - Nondegree-applicable

## Contact Hours

40

## Outside of Class Hours

54.5

## Total Student Learning Hours

94.5

## Course Objectives

Lecture Objectives:

1. Identify the courses and requirements for the Fire Apparatus Driver/Operator – Pumping Apparatus certification, and be able to describe the certification task book and testing process.
2. Describe how to perform routine tests, inspections and servicing functions on fire apparatus.
3. Describe fire apparatus systems and components.
4. Identify jurisdictional requirements for documenting maintenance.
5. Describe the importance of keeping accurate records.
6. Describe the importance of wearing passenger restraint devices to ensure crew safety.
7. Identify common causes of fire apparatus accidents.
8. Recognize that fire apparatus drivers/operators are responsible for the safe and prudent operation of the apparatus under all conditions.
9. Discuss proper positioning of a fire apparatus.

10. Explain the effects of liquid surge, braking reaction time, and load factors.
11. Explain the effects of high center of gravity on roll-over potential, general steering reactions, speed, and centrifugal force.
12. Describe applicable laws and regulations for driver's license requirements and medical requirements.
13. Review policies and procedures of the jurisdiction.
14. Explain the principles of skid avoidance, night driving, shifting, and gear patterns.
15. Explain negotiating intersections, railroad crossings, and bridges.
16. Describe the weight and height limitations for both roads and bridges.
17. Discuss automatic braking systems in wet and dry conditions.
18. Identify automotive gauges and their operation.
19. Discuss the operational limits of the various types of fire apparatus.
20. Operate passenger restraint devices.
21. Maintain safe following distances.
22. Maintain control of the fire apparatus while accelerating, decelerating, and turning, given road, weather, and traffic conditions.
23. Operate under adverse environmental or driving surface conditions.
24. Describe the use of automotive gauges and controls.

Laboratory Objectives:

1. Perform routine tests, inspections, and servicing functions on the systems and components of a fire apparatus to verify their operational status.
2. Demonstrate the ability to perform routine tests, inspections, and servicing functions on the systems and components of a fire apparatus to verify their operational status.
3. Demonstrate ability to operate a fire apparatus following a predetermined route on a public roadway in compliance with all applicable state and local laws, policies and procedures of the jurisdiction.
4. Demonstrate the ability to operate a fire apparatus during emergency and non-emergency responses using defensive driving techniques while maintaining control of the apparatus.
5. Demonstrate how to back a fire apparatus from a roadway and park in a space with restrictions on both the right and left sides of the apparatus without stopping, pulling forward, and without striking any obstructions.
6. Demonstrate how to maneuver a fire apparatus around obstructions on a roadway while moving forward and in reverse without stopping to change the direction of travel and without striking any obstructions.
7. Perform a U-turn without stopping and backing up, and be able to turn a fire apparatus 180 degrees within a confined space without striking any obstructions.
8. Demonstrate how to maneuver a fire apparatus in areas with restricted horizontal and vertical clearances and accurately judge the ability of the apparatus to pass through the openings without striking any obstructions.
9. Demonstrate how to operate all fixed systems and equipment on a fire apparatus not specifically addressed elsewhere in this standard in accordance with the applicable instructions and policies.

## General Education Information

- Approved College Associate Degree GE Applicability
- CSU GE Applicability (Recommended-requires CSU approval)
- Cal-GETC Applicability (Recommended - Requires External Approval)
- IGETC Applicability (Recommended-requires CSU/UC approval)

## Articulation Information

- Not Transferable

## Methods of Evaluation

- Objective Examinations
  - Example: Students will be given a multiple choice examination of fire apparatus inspection. Exam will be evaluated via standard grading. Example Question: To ensure their readiness, the fire apparatus and equipment must be inspected at least weekly and within how many hours after being used during an emergency. A. 24, B. 12, C. 2, D. 48
- Problem Solving Examinations
  - Example: Given a fire apparatus with instructor predetermined problems/safety concerns, students are to perform a fire apparatus inspections and identify the problems/safety concerns. Pass/fail grading based on industry standard.
- Skill Demonstrations
  - Example: Given a fire engine, students will properly demonstrate how to back the fire engine and park into a space with restrictions on both the right and left sides without stopping, pulling forward and without striking any obstructions. Pass/fail grading based on industry standards.

## Repeatable

No

## Methods of Instruction

- Activity
- Lecture/Discussion

Activity:

1. The instructor will demonstrate how to preform a pre-trip inspection and the students will then perform a DMV inspection on their fire engine.

Lecture:

1. The instructor will lead a discussion of current statistics relating to code 3 driving accidents as reported by NFPA. Specific accidents will be examined by the students and violations of driving standards or laws will be identified and discussed.

## Typical Out of Class Assignments

### Reading Assignments

1. The student will read the material in the textbook on the principles of defensive driving and complete a worksheet on the Smith System of Defensive Driving. 2. The student will read the material on criminal and civil liability and be prepared to analyze and discuss in class the difference as it applies to the driver of an emergency vehicle.

### Writing, Problem Solving or Performance

1. Identify and list the Rules of the Road that the driver of an emergency vehicle is exempt from while responding to an emergency under code 3 conditions. 2. Diagram the procedures for troubleshooting a faulty charging system.

## Other (Term projects, research papers, portfolios, etc.)

### Required Materials

- Fire Apparatus Driver/Operator
  - Author: International Association of Fire Chiefs and National Fire Protection Association
  - Publisher: Jones and Bartlett Learning
  - Publication Date: 2016
  - Text Edition: 2nd
  - Classic Textbook?:
  - OER Link:
  - OER:
- Pumping Aerial Apparatus Driver/Operator Handbook
  - Author: International Fire Service Training Association
  - Publisher: Fire Protection Publications
  - Publication Date: 2015
  - Text Edition: 3rd
  - Classic Textbook?:
  - OER Link:
  - OER:

## Other materials and-or supplies required of students that contribute to the cost of the course.