

FIRE 258 Course Outline as of Fall 2013**CATALOG INFORMATION**

Dept and Nbr: FIRE 258 Title: DRIVER OPERATOR 1B

Full Title: Driver Operator 1B

Last Reviewed: 2/26/2024

Units	Course Hours per Week		Nbr of Weeks		Course Hours Total	
Maximum	2.00	Lecture Scheduled	2.00	17.5	Lecture Scheduled	35.00
Minimum	2.00	Lab Scheduled	0.25	5	Lab Scheduled	4.38
		Contact DHR	0		Contact DHR	0
		Contact Total	2.25		Contact Total	39.38
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 70.00

Total Student Learning Hours: 109.38

Title 5 Category: AA Degree Applicable

Grading: P/NP Only

Repeatability: 21 - Legally Mandated Repetition

Also Listed As:

Formerly: FIRE299.63

Catalog Description:

This is a State certified Fire Service Training and Education Program (FSTEP) course that provides specific training on fire hydraulics, fire apparatus pump construction, operations, inspection, maintenance and troubleshooting. Upon satisfactory completion, the student will receive a certificate from the State Fire Marshal's Office.

Prerequisites/Corequisites:**Recommended Preparation:**

Course Completion of FIRE 71 or equivalent

Limits on Enrollment:

Valid California Driver's License and an endorsement to operate a fire apparatus issued by the Department of Motor Vehicles and signed by the fire chief of a recognized fire agency.

Schedule of Classes Information:

Description: This is a state certified (FSTEP) course that provides specific training on fire hydraulics, fire apparatus pump construction, operations, inspection, maintenance and troubleshooting. Upon satisfactory completion, the student will receive a certificate from the State Fire Marshal's Office. (P/NP Only)

Prerequisites/Corequisites:

Recommended: Course Completion of FIRE 71 or equivalent

Limits on Enrollment: Valid California Driver's License and an endorsement to operate a fire apparatus issued by the Department of Motor Vehicles and signed by the fire chief of a recognized fire agency.

Transfer Credit:

Repeatability: Legally Mandated Repetition

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	Area	Effective:	Inactive:
CSU GE:	Transfer Area	Effective:	Inactive:

IGETC:	Transfer Area	Effective:	Inactive:
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CSU Transfer:	Effective:	Inactive:
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UC Transfer:	Effective:	Inactive:
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CID:

Certificate/Major Applicable:

Certificate Applicable Course

COURSE CONTENT

Outcomes and Objectives:

1. Student will identify the different types of pump construction and the theory of pump operations.
2. Student will perform basic hydraulics methods.
3. Demonstrate techniques for basic inspections, documentation, maintenance, and troubleshooting fire apparatus pumps.
4. Provide students with the opportunity to practice their pumping skills during simulated pumping activities.

Topics and Scope:

I. Fire Apparatus Driver/Operator Regulations, Standards and Responsibilities

II. Fire Apparatus Pumps

1. Types of fire pumps
2. Pump mounting and drive arrangements
3. Pump piping and valves
4. Pressure control devices
5. Priming devices
6. Pump panel instrumentation
7. Auxiliary cooling devices

III. Hydraulics

1. Hydraulic terminology and symbols
2. Water characteristics and pressure principles
3. Nozzle theory
4. Calculating flows

5. Friction loss principles and calculations
 6. Pump discharge pressures
 7. Fire ground hydraulic calculations
- IV. Fire Apparatus Pump Inspection, Testing and Maintenance
1. Pump inspection
 - a. Drive system
 - b. Priming system
 - c. Pressure control system
 2. Pump service testing
 3. Pump and control system maintenance
- V. Pump Operations
1. Operating the pump from tank
 2. Transitioning to an external water supply
 3. Operating from a hydrant
 4. Drafting operations
 5. Relay pump operations
 6. Troubleshooting pump operations
 7. Tandem pumping operations
 8. Dual pumping operations
 9. Foam operations
 10. Sprinkler and standpipe operations
- VI. Pumping Exercises
1. Draft pumping
 2. Forward lay
 3. Reverse lay

Assignment:

1. Experience and operate a variety of fire pumps
2. Perform the proper technique and operation of fire pumps
3. Draft water for firefighting operations and operate pumps, nozzles and appliances in a safe and effective manner at different elevations and with different fire apparatus
4. State exam

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

None, This is a degree applicable course but assessment tools based on writing are not included because problem solving assessments and skill demonstrations are more appropriate for this course.

Writing
0 - 0%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Fire pump operation

Problem solving
10 - 20%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Fire pump operation

Skill Demonstrations
30 - 40%

Exams: All forms of formal testing, other than skill performance exams.

State exam; multiple choice

Exams
50 - 60%

Other: Includes any assessment tools that do not logically fit into the above categories.

None

Other Category
0 - 0%

Representative Textbooks and Materials:

CFSTES Manual Fire Apparatus Driver/Operator 1B, California Fire Service Training and Education System, Sacramento, CA, 2008