FIRE 241 Course Outline as of Fall 2017

CATALOG INFORMATION

Dept and Nbr: FIRE 241 Title: DRIVER OPERATOR 1A
Full Title: Driver Operator 1A
Last Reviewed: 10/23/2023

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	1.50	Lecture Scheduled	1.25	17.5	Lecture Scheduled	21.88
Minimum	1.50	Lab Scheduled	1.00	2	Lab Scheduled	17.50
		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: 43.75 Total Student Learning Hours: 83.13

Title 5 Category:	AA Degree Applicable
Grading:	P/NP Only
Repeatability:	00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:	
Formerly:	

Catalog Description:
Provide students with the information on fire apparatus preventive maintenance and driving/operating. Topics include routine tests, inspections and servicing functions, operation, backing, maneuvering and turning apparatus under a variety of conditions; and operation of all fixed systems on a fire apparatus. The course is based on the National Fire Protection Association (NFPA) 1002 Standard for Fire Apparatus Driver/Operator Professional Qualifications. The course fulfills the requirements for a Class C Firefighter Endorsement. Upon successful completion, students will be awarded a completion certificate from the State Board of Fire Services.

Prerequisites/Corequisites:

Recommended Preparation:

Limits on Enrollment:
Enrollment in this course is limited to students who currently possess a valid Class C California driver license as required by the California Vehicle Code.

Schedule of Classes Information:

Description: Provide students with the information on fire apparatus preventive maintenance and driving/operating. Topics include routine tests, inspections and servicing functions, operation, backing, maneuvering and turning apparatus under a variety of conditions; and operation of all fixed systems on a fire apparatus. The course is based on the National Fire Protection Association (NFPA) 1002 Standard for Fire Apparatus Driver/Operator Professional Qualifications. The course fulfills the requirements for a Class C Firefighter Endorsement. Upon successful completion, students will be awarded a completion certificate from the State Board of Fire Services. (P/NP Only)
Prerequisites/Corequisites:
Recommended:
Limits on Enrollment: Enrollment in this course is limited to students who currently possess a valid Class C California driver license as required by the California Vehicle Code.
Transfer Credit:
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

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

CSU Transfer:	Effective:	Inactive:
UC Transfer:	Effective:	Inactive:

CID:

Certificate/Major Applicable:
Both Certificate and Major Applicable

COURSE CONTENT

Student Learning Outcomes:
At the conclusion of this course, the student should be able to:
1. Describe the laws, regulations and policies governing the inspections, maintenance, repairs and operation of fire apparatus.
2. Demonstrate the ability to safely operate a fire apparatus under a variety of conditions in compliance with all applicable laws and regulations.

Objectives:
At the conclusion of this course, the student should be able to:
1. Identify the facility, classroom and course requirements
2. Describe the State Fire Training Fire Apparatus Driver/Operator Pump Apparatus Certification process
3. Demonstrate the ability to perform routine inspections, tests and service functions on a fire apparatus
4. Demonstrate the ability to properly document inspections, service activities, deficiencies and apparatus repairs
5. Demonstrate the ability to safely operate a fire apparatus following a predetermined route on a public way in compliance with all applicable state and local laws and agency policies and procedures

6. Demonstrate the ability to operate a fire apparatus during emergency and non-emergency responses using defensive driving techniques
7. Demonstrate the ability to back a fire apparatus from a roadway and park into a location with restrictions on all sides
8. Demonstrate the ability to maneuver a fire apparatus around roadway obstructions in both forward and reverse
9. Demonstrate the ability to turn a fire apparatus 180 degrees within a confined space
10. Demonstrate the ability to maneuver a fire apparatus in areas with restricted vertical and horizontal clearances
11. Demonstrate the ability to operate fixed apparatus systems and equipment in accordance with the applicable instructions and policies

Topics and Scope:

I. Identify Course Requirements
   A. Facility requirements
   B. Classroom requirements
   C. Course requirements and syllabus
II. Fire Apparatus Driver/Operator Pump Apparatus Certification Process
   A. Courses required for Fire Apparatus Driver/Operator-Pumping Apparatus certification
      1. Fire Apparatus Driver/Operator 1A: Driver Operator
      2. Fire Apparatus Driver/Operator 1B: Pumping Apparatus Operations
   B. Other Fire Apparatus Driver/Operator-Pumping Apparatus certification requirements
      1. State Fire Marshall Firefighter I
      2. one year full-time paid or two years volunteer experience in a California fire department as a pumping apparatus driver/operator
      3. be appointed to the position of Fire Apparatus Driver/Operator
   C. The Certification Task Book process
   D. The Certification Testing process
III. Performing Routine Tests, Inspections and Servicing Functions
   A. Manufacturer's specifications and requirements
   B. Agency's driving policies and procedures
   C. Fire apparatus systems and components
      1. braking systems
      2. coolant systems
      3. electrical systems
      4. exhaust systems
      5. fuel systems
      6. steering and suspension systems
      7. batteries
      8. belts
      9. body, frame and the cab
      10. fluids
      11. lighting
      12. oil and lubrication
      13. tires
      14. tools, appliances and equipment
   D. Use of tools and equipment
   E. Inspecting fire apparatus
   F. Recognizing equipment problems and out-of-service criteria
   G. Correcting deficiencies according to policies and procedures and/or manufacturer's

specifications

IV. Documenting Routine Tests, Inspections and Servicing Functions
- A. Agency requirements for documentation of maintenance performed
- B. Importance of keeping accurate records
- C. Consequences of falsifying information

V. Operating Fire Apparatus on Public Ways
- A. Operation of and importance of wearing passenger restraint devices
- B. Common causes of fire apparatus accidents
- C. Fire Apparatus Driver/Operator responsibilities
- D. Proper positioning of fire apparatus at highway emergencies
- E. Effects of water surge, braking reaction time and load factors
- F. Effects of high center of gravity, roll-over potential, steering reactions, speed and centrifugal force
- G. Applicable driver's laws and requirements
  1. driver's license requirements
  2. medical requirements
- H. Department driving policies and procedures
- I. Principles of skid avoidance, night driving, gear shifting, and gear patterns
- J. Negotiating intersections, railroad crossings and bridges
- K. Weight and height limitations of bridges
- L. Automatic braking systems in wet and dry conditions
- M. Identification and use of apparatus gauges and their operation
- N. Operational limits of fire apparatus
- O. Maintaining safe following distances
- P. Maintaining control of apparatus when accelerating decelerating and turning given road, weather and traffic conditions
- Q. Operation under adverse environmental or driving surface conditions

VI. Use of Defensive Driving Techniques
- A. Agency policies and procedures related to emergency response
- B. Laws and regulations related to emergency response
  1. California Vehicle Code
  2. local agency requirements
- C. Defensive driving techniques for emergency and non-emergency response

VII. Backing Apparatus
- A. Fire apparatus dimensions
- B. Principles of safe backing
- C. Use of mirrors to judge clearances

VIII. Maneuvering Around Roadway Obstructions While Moving Forward and Reverse
- A. Fire apparatus dimensions
- B. Principles of safe fire apparatus operation
- C. Use of mirrors to judge fire apparatus clearance

IX. Turning Apparatus 180 Degrees within a Confined Space
- A. Principles of safe turning
- B. Use of mirrors to judge clearances

X. Maneuvering Fire Apparatus in Areas with Restricted Horizontal and Vertical Clearances
- A. Fire apparatus dimensions
- B. Principles of safe maneuvering
- C. Use of mirrors to judge clearances

XI. Operating Apparatus Fixed Systems and Equipment
- A. Fixed systems and equipment on fire apparatus
  1. electrical power generators
  2. scene lighting

3. electrical power distribution equipment
4. rescue tools

B. Manufacturers specifications and requirements
C. Jurisdiction policies and procedures
D. Deploying, activating and monitoring apparatus equipment
E. Correcting deficiencies according to jurisdictional policies and manufacturers requirements

All topics are covered in both the lecture and lab parts of the course.

Assignment:

1. One to three quizzes and summative exam

Lab Assignments:
1. Perform pre-trip apparatus inspections
2. Demonstrate defensive driving techniques
3. Conduct an alley dock exercise
4. Conduct a station parking exercise
5. Conduct a serpentine exercise
6. Conduct a confined space turn-around exercise
7. Conduct a diminished clearance exercise

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.

Completion of fire apparatus inspection form	Writing 5 - 10%

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

Fire apparatus inspection	Problem solving 20 - 40%

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

Emergency vehicle driving and parking exercises	Skill Demonstrations 20 - 40%

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

Multiple choice, essay exam	Exams 20 - 40%

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

None	Other Category 0 - 0%

Representative Textbooks and Materials:
California Commercial Driver Handbook, DMV, current edition
Pumping Apparatus Driver/Operator Handbook. 3rd ed. International Fire Service Training Association. 2015
California State Fire Training Student Supplement, current edition
Instructor prepared materials