

Basic Pump Operations (1993) Course Plan

Course Details This course provides the student with the information and skills training for Description: operating fire service pumps. Topics include types of pumps, engine and pump gauges, maintenance, unsafe pumping conditions, pressure relief devices, cooling systems, water supplies, drafting, and field hydraulics. Each student also has the opportunity to increase his or her pumping skills during simulated pumping conditions. **Designed For:** All fire service personnel. Authority: Office of the State Fire Marshal Prerequisites: None Standard: N/A 16 hours Hours: **Maximum Class Size:** 25 **Instructor Level: Primary instructor** Instructor/Student Ratio: 1 primary instructor per 25 students **Restrictions:** This course requires a site with adequate materials and equipment to deliver the training according to the course outline. SFT Designation: **FSTEP**

Required Resources

Instructor Resources

To teach this course, instructors need:

Required

• Instructor Guide

Student Resources

To participate in this course, students need:

• None

Facilities, Equipment, and Personnel

The following facilities, equipment, or personnel are required to deliver this course:

Facilities

- Standard classroom equipped for 25 students
- Whiteboards or easel pads with appropriate writing implements
- Projector/TV with appropriate laptop connections
- Wifi/Internet access

Time Table

Segment	Total
Introduction to Pump Operations	0.5
Types of Pumps	0.5
Types of Priming Devices	0.25
Single and Multi-Stage Centrifugal Pumps	0.5
Engine and Pump Gages	0.25
Maintenance Records and Reports	0.25
Rated Performance of Fire Service Pumps	0.25
Unsafe Pumping Conditions	0.5
Pressure Relief Valves	0.25
Auxiliary Cooling Systems	0.25
Check Valves	0.25
Water Supplies for Pump Operations	0.25
Tank Supply Operations	0.25
Water Tender Relay Operations	0.25
Fire Hydrant Operations	0.5
Tandem Pumping Operations	0.5
Forward Hose Lay Supply Operations	0.5
Drafting Theory	0.5
Static Water Supply Operations	0.5
Ejector Pump Operations	0.5
Relay Pumping Operations	0.5
Field Hydraulics	2.0
How to Provide Power to the Pump	1.0
How to Use Tank Water	1.0
How to Use a Hydrant	1.0
How to Relay Pump	1.0
How to Draft Water	1.0
How to Use an Ejector Pump	1.0
Course Total	24.0

Time Table Key

- 1. The Time Table documents the amount of time required to deliver the content included in the course plan.
- Time is documented using the quarter system: 15 min. = .25 / 30 min. = .50 / 45 min. = .75 / 60 min. = 1.0.
- 3. The Course Totals do not reflect time for lunch (1 hour) or breaks (10 minutes per each 50 minutes of instruction or assessment). It is the instructor's responsibility to add this time based on the course delivery schedule.
- 4. Application (activities, skills exercises, and formative testing) time will vary depending on the number of students enrolled and the acquired structure selected for training. The Application time documented is based on the maximum class size identified in the Course Details section.
- 5. Summative Assessments are determined and scheduled by the authority having jurisdiction. These are not the written or psychomotor State Fire Training certification exams. These are in-class assessments to evaluate student progress and calculate course grades.

Objectives

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- 1. Information and theory on pump operation.
- 2. Methods of performing basic field hydraulics.
- 3. Methods and techniques for routine maintenance on pumping apparatus.
- 4. Methods and procedures for pump operations from the tank, a hydrant and at draft.