Pennsylvania State Fire Academy

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Minimum Standard for Accreditation (MSA)

Date: February 1993
Last Revision: November 2001

Course Title: Truck Company Operations I

SFA Course Code: TRCO

Course Length: 16 Hours **Lecture/Lab Breakdown:** 12/4

Prerequisites: EBM

Referenced Text(s): Current editions of the following IFSTA manuals (or equivalent publications): Essentials of Fire Fighting; Building Construction; Forcible Entry; Ground Ladder Practices; Safety; Salvage Practices

Course Goal: The student will be introduced to the basic concept of truck company operations as part of an organized, coordinated structural fire suppression operation.

Course Description: Truck companies, regardless of whether they arrive on an aerial device, squad, or engine, are the 'combat engineers' of fire attack operations. This course, for *experienced* fire fighters, will introduce the student to the basic concept of truck company operations and duties, including organizing the delivery of truck company services, selection and use of key tools, advanced ventilation and forcible entry theory and practices, search and rescue, and other fire attack support functions.

Description of Methodology: Lecture, demonstration, and supervised practice. Precise practical scenarios may be adjusted within the established learning outcomes to make best use of the available facilities and equipment.

Student Equipment & Supplies: Pen/pencil and notebook; small notebook for field notes; full structural PPE including SCBA and spare cylinder.

Equipment/Audiovisual/Facility/Supply Requirements: Many applicable AV products are available in various formats. Selection of specific AV products (and, therefore, the equipment needed to support them) is left to the discretion of the instructor and Educational Training Agency.

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Equipment/Audiovisual/Facility/Supply Requirements: continued
Facilities and equipment needs and options will likewise vary greatly. As a minimum, they shall include the following:

1. Classroom with the usual amenities.
2. Apparatus with selection of forcible entry tools and ground ladders. An aerial apparatus is preferable.
3. Selection of powered forcible entry equipment (saws, "Rabbit" tool, etc.) based on local conditions, needs and preferences.
4. A structure that will allow for smoke generation or other form of vision obscuration, laddering, search and rescue, and forcible entry exercises. Forcible entry mock-ups such as roof cutting, door/window forcing, etc. which allow for repeated student operations are highly desirable.

Special Notes & Conditions: recommended maximum class size: 30 students. Maximum instructor/student ratio of 5 to 1 based on number of students actually engaged in supervised practice at any given time.

Course Outline

Time	Topic	Notes
1:00	Introduction to Truck Company Operations	
1:45	Organizing Truck Company Response	
2:00	Ventilation from the Truck Crew Perspective	
1:30	Search and Rescue	
1:30	Forcible Entry	
1:00	Utility Control	
7:00	Practical exercises (will vary per facilities available; should reinforce course learning outcomes)	
:15	Summary and Conclusion	

Competency Evaluation Mechanism: Directed questioning by instructor during lecture and demonstrations; instructor assessment of student mastery of practical skills during exercises.

Learning Outcomes (Behavioral Objectives): Upon completion of this course, the student will, to the satisfaction of the instructor:

1. Name the nine basic functions normally referred to as "truck work".
2. Explain and prioritize the importance of each function in the overall fire suppression operation.
3. Identify three methods of organizing and providing truck services in the typical fire department; list at least one advantage and disadvantage of each.
4. List and describe the personnel 'riding positions' normally comprising the "inside" and "outside" team; typical tool assignments for each; typical route and duties for each.
5. Relate how each team identified in Learning Outcome # 4 work together to provide initial truck company operations at a typical structure fire.

Learning Outcomes (Behavioral Objectives) (continued):

6. Describe options for delivering effective truck company services under low staffing conditions.
7. Relate the principles of combustion theory as they impact on structural fire ventilation practices.
8. Relate how properly performed ventilation benefits the control of fire spread and life safety; likewise relate how improperly performed ventilation practices can negatively affect the same factors.
9. Relate the importance of coordinating the fire attack and ventilation operations; state at least two negative consequences of failure to do so; describe the conditions present and precautions necessary when "venting for life" is justified.
10. Compare and contrast the following ventilation practices in terms of speed, effectiveness, safety, and inherent structural damage: horizontal ventilation; vertical ventilation; negative pressure mechanical ventilation; positive pressure mechanical ventilation; use of building's HVAC system.
11. Correctly identify at least 3 purposes for which the construction industry frequently uses trusses and/or other forms of lightweight construction (such as wooden "I" beams).
12. Given an actual building (or a photograph thereof) correctly rate the likelihood of the presence of truss-type or lightweight construction sub-assemblies in the building in question.
13. Correctly identify at least three deficiencies of truss design that render trusses unstable when exposed to fire or heat.
14. Describe the theory of positive pressure ventilation (PPV)
15. State the advantages and disadvantages of PPV and identify appropriate and inappropriate conditions for its use.
16. Given an actual or simulated situation appropriate for PPV, properly start and position a PPV blower and evaluate its effectiveness.
17. State the procedures appropriate to dealing with an "immediate" (jumper) rescue from a fire building.
18. Define the terms "primary search" and "secondary search".
19. Given an example of an occupancy (single family dwelling, mercantile, high-rise, etc.) and a scenario involving said occupancy, conduct an accurate life safety and search and rescue "size-up".
20. Given a structural fire search scenario, and acting as a member of a 2 or 3 person team, safely and effectively conduct both a primary and secondary search of the building, removing any occupants found by appropriate means.
21. Demonstrate the procedures for safely removing both conscious and unconscious persons from an upper story by ground ladder.
22. Define the terms "forcible entry"; "immediate entry"; and "delayed entry".

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Learning Outcomes (Behavioral Objectives) (continued:

23. Given a selection of hand and power tools and a scenario requiring forcible entry, demonstrate the ability to gain entry or create an opening through:
    a. A locked door;
    b. A locked window;
    c. A wall assembly;
    d. A roof assembly
24. Given an example of an occupancy, identify the likely locations and safe procedures for controlling the following utility services:
    a. Natural gas
    b. LPG/Propane (where used)
    c. Fuel oil (where used)
    d. Electricity
    e. Water
    f. Other (supplied steam service, etc.) as applicable to local conditions

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