



Pennsylvania State Fire Academy

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Minimum Standard for Accreditation (MSA)

July 1992

Course Title: Ventilation Practices (TRVP)

Length of Course: 16 Hours

Lecture/Lab Breakdown: 8/8

Prerequisites: EBM

Referenced Texts: IFSTA: Essentials, 2nd Edition; Building Construction, 1st Edition; Ground Ladder Practices, 8th Edition; Safety, 1st Edition; Salvage/Overhaul, 7th Edition; "Truck Company Operations" by Hal Richman.

Course Goal: Students should be able to understand why ventilation is needed and the different means of obtaining adequate ventilation. Students should be able to safely and efficiently perform both natural and mechanical ventilation. Students should also be able to recognize the advantages and disadvantages of the different types of ventilation so they may operate safely at an incident.

Description of Course: This course will cover what ventilation is, why we do it, and how to obtain proper ventilation. Horizontal and vertical ventilation will be discussed along with the methods including natural and mechanical. Positive pressure ventilation will be introduced and demonstrated. Ventilation as a defensive operation will also be talked about including trench cutting. The course will have the students involved in hands-on exercises performing the skills listed on a mock roof and ventilating a building mechanically that is charged by a Roscoe machine.

Description of Methodology to be used: (Brief) A combination of classroom lecture, field demonstration, and skills practice will be used.

Student Equipment/Supply Needs: T.O.G., notebook, pen/pencil

Equipment/Audiovisual/Supply requirements: Generally, chalkboard or flip charts, 1/2" VCR and monitor, mock roof preferably 4' x 8' each side of peak, smoke generator machine, 2 axes flat or pickhead, 1 pike pole or multi-hook, 1 electric smoke ejector, and 1 gasoline blower.

COURSE OUTLINE

<u>Time</u>	<u>Content</u>	<u>Notes</u>
4:00	Introduction; Types of Ventilation; Methods of Ventilation	
4:00	Field Exercises - Basic Ventilation Techniques	
continued		

MINIMUM STANDARDS FOR ACCREDITATION

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COURSE OUTLINE continued

<u>Time</u>	<u>Content</u>	<u>Notes</u>
3:00	Positive Pressure Ventilation; Trench Cutting; Ventilation of Special Buildings	
4:00	Field Exercises - Positive Pressure Ventilation	
1:00	Summary; Conclusion; Test	

Competency Evaluation Mechanism: 20 question written examination and return demonstration during field work.

Course Objectives (specific): Upon completion, the student should be able to:

1. Explain why we ventilate.
2. Identify the types of ventilation.
3. Identify types of roofs and their construction.
4. Identify the different types of roofing material.
5. Demonstrate the use of smoke ejectors.
6. Demonstrate the proper set-up of positive pressure ventilation
7. Recognize the possibility of ventilation as a defensive tool (trench cutting).
8. Be able to recognize the concerns and problems with ventilation of special buildings including: Multiple Dwellings, Garden Apartments, High Rises, Taxpayers, Commercial Centers, Warehouses, and Cellar Fires.

**Questions/Comments: Rita Wessel, Curriculum Specialist: Extension 106
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