



# Pennsylvania State Fire Academy

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## Minimum Standard for Accreditation (MSA)

August 1995  
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**Course Title:** Foam Fire Fighting Basic (National Foam)

**SFA Course Code:** NFFB

**Length of Course:** 7 Hours

**Lecture/Lab Breakdown:** 3.5/3.5

**Prerequisites:** ELIF or EBM

**Referenced Texts:** National Foam, Inc. Instructional Package

**Course Goal/Description:** A student in this course will be introduced to basic information concerning the use foam, as flammable liquid fire extinguishing agent. This module is targeted at the first responder, who will be faced with the task of fire suppression.

**Description of Methodology to be used:** (Brief) Combination of lecture, guided discussion, and demonstration. The course is divided into 2 modules and delivered sequentially.

**Student Equipment/Supply Needs:** Pencil or pen, note pad, and turn out gear.

**Equipment/Audiovisual/Supply requirements:** Chalkboard, VCR with monitor, 35 mm carousel slide projector and screen, a large table for demonstration; AV kit for course in question (available from National Foam, Inc.)

**Field Evolution Equipment Requirements:** Pumper, foam concentrate, hose, line proportioner, a 5 gallon clear pail, fog nozzle, air-aspirating foam nozzle and a mid expansion foam nozzle or attachment.

### Course Outline (General Not Detailed)

Instructor  
Notes

#### MODULE I - CLASSROOM LECTURE, 3.5 Hours

1. History of Foam, Chemical Foams, Mechanical Foams
2. Foam Terminology, Concentrate, Solution, Finished Foam
3. Understanding the Hazard, Flammable Liquids, Hydrocarbons, Polar Solvents, Blended Fuels

continued

**MINIMUM STANDARDS FOR ACCREDITATION**

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**COURSE OUTLINE continued**  
**(General - Not Detailed)**

**Instructor**  
**Notes**

4. Line Proportioners
5. Aspirating v/s Non-Aspirating Nozzles
6. Application Techniques, Applying with Hand Held Nozzles, Preserving the Foam Blanket.

**MODULE II - FIELD PRACTICAL EVOLUTION'S, 3.5 Hours**

**Eductor Objectives**

Basic set up  
Eductor Failures  
Gate Back Nozzle Bale  
Mis-Matched Nozzle to Eductor  
Incorrect Line Pressure  
Length of Hose Lay  
Elevation  
Kinked Hose Lines

**Nozzle Objectives**

Non Air-Aspirating Structural Fog Nozzles  
Fog Nozzles with Foam Attachments  
Low and Mid Expansion Foam Nozzles

**Stream Reach**

Non Air-Aspirating Structural Fog Nozzles  
Fog Nozzles with Foam Attachments  
Low and Mid Expansion Foam Nozzles

**Application Techniques**

Bank-In  
Bounce Off  
Rain Down

**Competency Evaluation Mechanism (Brief description-attach copy):** 100%  
attendance; 72% on written test.

**Student Knowledge Objectives:** The student shall have an understanding of:

1. how foam is used to control and extinguish flammable .
2. foam concentrate percentages.
3. proper application techniques.
4. selecting the proper foam concentrate for a given
5. flammable liquids.

## **MINIMUM STANDARDS FOR ACCREDITATION**

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**Student Skill Objectives:** The student shall demonstrate the ability to:

1. properly set-up and use foam by means of a line proportioner.
2. roll a finished foam blanket onto a fire.
3. apply foam using the rain-down method.
4. apply finished foam by the banking method.
5. troubleshoot line proportioner failures.
6. properly clean and maintain the foam appliances after use
7. visually determine properly expanded finished foam and the difference between low and medium expanded finished foam.

**Questions/Comments: Contact the Curriculum Specialist**