



# Pennsylvania State Fire Academy

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## Minimum Standard for Accreditation (MSA)

Revised January 1996

**Course Title:** Large Diameter Hose (LDHO)

**Length of Course:** 16 Hours

**Lecture/Lab Breakdown:** 8/8

**Prerequisites:** IST

**Course Goal:** Students attending this program will be familiar with large diameter hose and the benefits associated with it. They will be able to safely and effectively use large diameter hose for water supply purposes.

**Description of Course:** Participants in this program will be introduced to the concept and advantages of large diameter hose for the fire service. Through classroom and outside exercises the student will learn the safe and proper methods for using large diameter hose.

**Description of Methodology to be used: (Brief)** Combination of lecture, AV presentation, demonstration and practical exercises.

**Student Equipment/Supply Needs:** Turn out gear, note taking material.

**Equipment/Audiovisual/Supply requirements:** Classroom, chalkboard, handouts and audiovisuals per instructor discretion. Three engines, hydrant 1000 g.p.m. flow minimum, draft site 1000 g.p.m. flow minimum, 1000 ft. 2-1/2" or 3" hose, 1000 ft. 4" hose, 2000 ft. 5" hose, adaptors and fitting for 4" and 5" hose for hydrant operations, relay operations, and drafting operations; master stream device with stacked tips, pitot gauge, friction loss chart and nozzle pressure chart.

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

<b><u>Time</u></b>	<b><u>Content</u></b>	<b><u>Instructor Notes</u></b>
:30	Session 1	Registration, Introduction & Course Description
2:30	Session 2	Understanding Friction Loss
1:00	Session 3	Cost Effectiveness of L.D.H.
4:00	Session 4	L.D.H. Operations with Hydrants

continued

MINIMUM STANDARDS FOR ACCREDITATION

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

<b><u>Time</u></b>	<b><u>Content</u></b>	<b><u>Instructor Notes</u></b>
:30	Session 5 Review of Sessions 2-4	
1:30	Session 6 L.D.H. Equipment and Techniques	
1:00	Session 7 Relay Pumping	
4:00	Session 8 L.D.H. Operations from draft	
1:00	Session 9 Test and Conclusion	

**Competency Evaluation Mechanism (Brief description-attach copy):**

Written examination and instructor evaluation during practical exercises.

**Course Objectives (specific):**

The participant will:

- a. be able to demonstrate an understanding of friction loss.
- b. be able to explain the cost advantage of large diameter hose.
- c. participate in practical exercises comparing various sizes of fire hose from a hydrant water supply, both non-supported and supported with an engine.
- d. be able to explain the construction methods of L.D.H., proper loading and unloading techniques for L.D.H., various techniques for use of L.D.H. for fire ground operations, describe functions of L.D.H. appliances and maintenance required for L.D.H.
- e. be familiar with safe and proper procedures for operating in a pumper relay.
- f. participate in practical exercises comparing various sizes of fire hose from an engine at draft to another engine in relay.
- g. participate in relay of 5" hose, 2000 ft. in length, using an engine at draft and one other engine; then utilizing two other engines.
- h. successfully pass written exam with at least a 70% score.

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