

**Seminar Title:** Layout Technician Training Course

**Seminar Description:** This two-week course is to take a person with basic knowledge of math, physical science and drafting skills and teach them to be productive basic sprinkler layout and detailing technicians. All of the skills necessary for NICET Level II Certification will be covered by the course.

**Total Instructional Time:** 80 Contact Hours

### Learning Objectives

**Day 1** At the end of this day the participant will be able to:

1. Discuss the History of Sprinklers,
2. Describe the Principles of combustion,
3. Identify the Rules Governing Installation, Plan Preparation and Formatting,
4. Describe How Sprinklers Work,
5. Discuss Contracts and Specifications and the Layout Process,
6. Identify the Components and Operation of Wet Pipe and Dry-Pipe Sprinkler systems,
7. Apply Basic Math

**Day 2** At the end of this day the participant will be able to:

1. Apply Units of Measure,
2. Identify the Components and Operation of Preaction and Deluge Systems, Public Mains as Water Supplies, Underground Piping, Backflow Prevention,
3. Discuss Types of Construction and Structures,
4. Identify Hazard Classifications

**Day 3** At the end of this day the participant will be able to:

1. Differentiate Types of Sprinklers, Spray Sprinkler Spacing and Location (upright, pendent and sidewall),
2. Apply Sprinkler Obstruction Rules for Standard Spray Sprinklers, Extended Coverage Sprinklers, Obstructions to Extended Coverage Sprinklers

**Day 4** At the end of this day the participant will be able to:

1. Describe and discuss the rules governing System Configurations, Aboveground Pipe and Fittings, Hangers and Support, Seismic Considerations

**Day 5** At the end of this day the participant will be able to:

1. Select Materials for the Job,
2. Discuss the principles of Hydraulic Calculations,
3. Review of First Week

**Day 6** At the end of this day the participant will be able to:

1. Apply Hydraulic Calculation to Examples,
2. Describe the requirements for Alarm and Supervision Requirements,
3. Discuss and apply the requirements for Fire Pumps
4. Discuss and apply the requirements for Standpipe System Layout

**Day 7** At the end of this day the participant will be able to:

1. Apply Standpipe System Hydraulics,
2. Layout and calculate a Wet Pipe Sprinkler System

**Day 8** At the end of this day the participant will be able to:

1. Discuss and apply the requirements for Tanks,
2. Layout and Calculate a Dry-Pipe System

**Day 9** At the end of this day the participant will be able to:

1. Identify and apply the requirements for Residential Sprinkler Systems in NFPA 13, 13D and 13R

**Day 10** At the end of this day the participant will be able to:

1. Conduct a Plan Review,
2. Describe System Acceptance Testing,
3. Describe and discuss Stock Listing,

**Seminar Format(s):** Lecture, Discussion, Activities, Homework, Case Studies

**Participant Materials:** NFPA 13, Layout Technician Textbook, Student Workbook, Drawings

**Assessment Method:** In class discussion, exercises and homework