

The Engineers Club of Philadelphia
215-985-5701

FIRE PROTECTION ENGINEERING COURSES

SPRINKLER SYSTEMS BASICS

This course will be an in-depth review of water based fire protection systems including Underground, Water Supplies & Storage standards., 13D, 13R the BOCA code and insurance factors. NFPA Sprinkler Handbook will be supplied. Two Continuing Education Units will be earned for completion of this course.

This class will be taught by Philip L. Gaughan, NICET Level IV designer and member of All State Design Group, who has over 40 years experience in the sprinkler industry. He will be assisted by members of the Society of Fire Protection Engineers, including Jim Gourley and Phil Sconyo.

SESSION 1 – INTRODUCTION – The history and development of water based fire protection systems and what we hope to accomplish by the end of the course is discussed. Review and study of NFPA-13, Chapters 1 through 4. – Phil Gaughan, Instructor

SESSION 2 – CLASSIFICATION OF OCCUPANCIES & COMMODITIES & DESIGN APPROACHES – An in-depth study of how Occupancies & Storage Commodities affect the design and type of sprinklers that are utilized in a building. Review and study of NFPA-13, Chapters 5 & 11. Tony Carmona, Instructor

SESSION 3 – SPRINKLER SYSTEM COMPONENTS, HARDWARE & REQUIREMENTS – A discussion on types of systems, including wet, antifreeze, dry deluge and pre-action; and also the acceptable components required to provide an approved system. Review and study of NFPA-13, Chapters 6,7 & 9. Phil Sconyo, Instructor.

SESSION 4 – OBSTRUCTIONS & SPECIAL CONDITIONS – Designing layouts of sprinkler systems with respect to obstructions by building components and conditions. A study of where sprinklers can be excluded. Review & study of NFPA-13, Chapter 8. Phil Gaughan, Instructor

SESSION 5 – SPACING, LOCATION & POSITION OF SPRINKLERS – Standards for the design of sprinklers with respect to structure and room configuration. Review & study of NFPA-13, Chapter 10. Instructor:

SESSION 6 – PLANS & CALCULATIONS – Hydraulic calculations of Tree Systems including friction loss for piping systems and sprinkler discharge characteristics. Review and study of NFPA-13, Chapter 14. Instructor:

SESSION 7 – WATER SUPPLIES – Underground piping from public and private water supplies, pumps, booster pumps and stored water supplies. Review and study of NFPA-13, Chapter 10. Instructor: Tony Carmona

SESSION 8 – FINAL DESIGN – A review of design approaches, plans for review, hydraulic calculations, water supplies and system acceptance. Review and study of NFPA-13, Chapters 11, 14, 15 & 16. Instructor: Phil Gaughan

SESSION 9 – STORAGE AND SPECIAL OCCUPANCIES – Special design criteria for different storage configurations and criteria for special type commodities. Review & study of NFPA-13, Chapter 13. Instructor: Tony Carmona

SESSION 10 – RESIDENTIAL SPRINKLER SYSTEMS & GENERAL SUMMARY – Discussion of requirements for Residential Occupancies that relate to the three standards that cover them. Review and study of NFPA- Instructor: Jim Gourley.