

J. Sargeant Reynolds Community College
Course Content Summary

Course Prefix and Number: FST 216

Credits: 3

Course Title: Automatic Sprinkler System Design I

Course Description: Presents a comprehensive study of treatment of automatic sprinkler systems, including a study of sprinkler standards, design features, water supply adequacy, sprinkler limitations, and appropriate building and fire code applications. Prerequisite: FST 205 or program permission. Lecture 3 hours per week.

General Course Purpose:

- a. Sprinkler standards, building, and fire codes
- b. Sprinkler design concepts, occupancy, and commodity classifications
- c. Water supplies for sprinkler systems, including fire pumps and storage tanks
- d. Sprinkler system types and the operations and limitations of each
- e. System components (equipment, pipe, fittings, and valves)

Course Prerequisites and Co-requisites:

Prerequisite: FST 205 or program permission

Student Learning Outcomes:

Upon completing the course, the student will be able to

- a. Identify and cite applicable codes and standards for sprinkler systems, buildings, fire alarm, and system maintenance;
- b. Apply sprinkler design concepts, codes, and standards to sprinkler system layout;
- c. Measure and ensure adequacy of water supply system for sprinkler system;
- d. Identify operational features of sprinklers including limitations; and
- e. Select the appropriate system type.

Major Topics to Be Included:

- a. Sprinkler standards, building, fire, and other applicable codes and standards
- b. Sprinkler design concepts
- c. Sprinkler layout design concepts
- d. Design adequate water supply
- e. Measure adequacy of water supply
- f. Identify operational features of sprinkler systems
- g. Identify limitations of sprinkler systems
- h. Given parameters of structure, select appropriate system

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