SPRINGFIELD TECHNICAL COMMUNITY COLLEGE

ACADEMIC AFFAIRS

Course Number: FST-210 Class/Lect. Hours: 3 Lab Hours: ____ Credits: 3 Dept.: Fire Protection and Safety Technology

Course Title: Fire Hydraulics and Equipment Semester: Spring Year: 2020

Course Description, Prerequisite, Corequisite:

This course covers incompressible fluids, including fluid properties, principles of fluid status, fluid flow system principles, pipe friction and heat loss, flow measurements, pumps, and other hydraulic devices and machinery. Applications are related to fire protection systems such as sprinklers, standpipes, hoses, nozzles, pumpers, and water supply systems. Demonstrations will illustrate and supplement the principles developed in class.

OBJECTIVES/COMPETENCIES

Course Objectives	Competencies
1 Apply water hydraulic principles 2. Demonstrate knowledge of water hydraulics as it relates to fire protection.	Upon completion of this course, the student will be able to: a. Apply the application of mathematics and physics to the movement of water in fire suppresson activiites. b. Identify the design princiiples of fire service pumping apparatus c. Analyze community fire flow demand criteria. d. Deomnostrate, a thorough understanding of the principles of forces that affect water, both at rest and in motion. e. List and describe the various types of water distribution systems f. Discuss the variouis ty pes of fire pumps