

El Paso Community College
Syllabus
Part II
Official Course Description

SUBJECT AREA	<u>Fire Technology</u>
COURSE RUBRIC AND NUMBER	<u>FIRT 1311</u>
COURSE TITLE	<u>Fire Service Hydraulics</u>
COURSE CREDIT HOURS	<u>3 2 : 2</u> Credits Lec Lab

I. Catalog Description

Includes application of hydraulic principles to analyze and solve water supply problems related to fire protection. (2:2).

II. Course Objectives

Upon satisfactory completion of this course the student will be able to:

- A. Describe fire and the burning process, characteristics of fire and basic tactics and strategies for extinguishment.
- B. Describe the fundamental principles of hydraulics including the characteristics of fluids, pressure and force, the principles of fluid pressure, and the principles of fluids in motion.
- C. Identify and describe the components of water supply management including the types of fire hydrants, water supply distribution systems, inspection and maintenance practices and fire flow tests.
- D. Calculate fire flows for various types of occupancies and construction.
- E. Identify and describe the types of apparatus with fire pumps including driving operations, the primary application of each type, associated auxiliary devices, and various pumping operations.
- F. Calculate friction loss and pump pressures for various sizes of fire hose and hose lay configurations and supplying Sprinkler and Standpipe Systems. Develop rule-of-thumb methods for calculating pump pressures for fire ground operations.
- G. Describe the types of fire streams and nozzles including the advantages, disadvantages, limitations, and operational considerations of each type.
- H. Identify the types of firefighting foams and foam application devices and systems.

III. THECB Learning Outcomes (WECM)

- 1. Describe basic principles of hydraulics.
- 2. Identify components of a water distribution system.
- 3. Calculate fire flows for various types of occupancies.
- 4. Explain various types of fire pumps and pump operational procedures.
- 5. Calculate pump pressure for various types of hose lays.
- 6. Describe various types of nozzles and the application of each type.

IV. Evaluation

Attendance Policy: Students absent for two or more class periods without a valid excuse as determined by the instructor may be dropped from the course. Any exam or assignment not completed as a result of an unexcused absence will receive a grade of "0" for that exam or assignment.

Students who have not attended class before or on the census date listed in the Credit Course Schedule and the Course Calendar and have not contacted the instructor with a valid excuse will be dropped from the course.

Tardiness Policy: Students must be seated and ready to begin class at the scheduled time. Students tardy for two or more class periods without a valid excuse as determined by the instructor may be dropped from the course.

Expect class to last the entire scheduled time. Students may not leave class early without a valid excuse or without having made arrangements with the instructor. Students doing so will be considered absent for that class period.

Withdrawal Policy: Students who desire to withdraw are responsible for initiating withdrawal action through the EPCC Registrar's Office according to the policy in the Credit Class Schedule. **After the drop date listed in the Credit Class Schedule and the Course Calendar, students will receive a grade based upon all required items. Items not completed will be given a grade of "0".**

Students requesting an Incomplete, "I", must comply with EPCC policies and procedures listed in the Credit Class Schedule.

Grading Scale

A: 90 - 100
B: 80 - 89
C: 75 - 79
D: 70 - 74
F: 0 - 69

V. Disability Statement (Americans with Disabilities Act [ADA])

EPCC offers a variety of services to persons with documented sensory, mental, physical, or temporary disabling conditions to promote success in classes. If you have a disability and believe you may need services, you are encouraged to contact the Center for Students with Disabilities to discuss your needs with a counselor. All discussions and documentation are kept confidential. Offices located: VV Rm C-112 (831-2426); TM Rm 1400 (831-5808); RG Rm B-201 (831-4198); NWC Rm M-54 (831-8815); and MDP Rm A-125 (831-7024).

VI. 6 Drop Rule

Students who began attending Texas public institutions of higher education for the first time during the Fall 2007 semester or later are subject to a 6-Drop limit for all undergraduate classes. Developmental, ESL, Dual Credit and Early College High School classes are exempt from this rule. All students should consult with their instructor before dropping a class. Academic assistance is available. Students are encouraged to see Counseling Services if dropping because exemptions may apply. Refer to the EPCC catalog and website for additional information.