

El Paso Community College

Syllabus

Part II

Official Course Description

SUBJECT AREA	<u>Fire Technology</u>
COURSE RUBRIC AND NUMBER	<u>FIRS 1433</u>
COURSE TITLE	<u>Firefighter Certification VII</u>
COURSE CREDIT HOURS	<u>4 2 :</u> Credits Lec Lab

I. Catalog Description

Provides one in a series of courses in basic preparation for a new firefighter. Should be taken in conjunction with Firefighter Certification I, II, III, IV, V, and VI to satisfy the Texas Commission on Fire Protection (TCFP) curriculum for Basic Structural Fire Suppression, Course #100. Student must participate in a Fire Technology Academy orientation; pass an agility exam, and see the Fire Technology counselor at the Valle Verde campus before enrolling in FIRS courses. **Prerequisites: READ 0308 (can be taken concurrently) or by placement exam and FIRS 1103 and FIRT 1301 and FIRT 1319. Corequisites: FIRS 1401 and FIRS 1407 and FIRS 1413 and FIRS 1419. ***THIS COURSE MAY BE OFFERED ONLY BY INSTITUTIONS CERTIFIED AS A TRAINING FACILITY BY THE TEXAS COMMISSION ON FIRE PROTECTION. *** (2:6).**

II. Course Objectives

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

A. Section 156, Fire Service Hose (8 Hours)

- 1.00 Demonstrate procedures for testing fire hose.
- 2.00 Describe and demonstrate the proper techniques for operating hose lines.

B. Section 158, Fire Service Overhaul (2 Hours)

- 1.00 List and describe dangerous building conditions.
- 2.00 Identify and describe the methods of preserving evidence for fire cause and origin determination.

C. Section 159, Fire Streams (26 Hours)

- 1.00 Identify and define foam making appliances, and shall demonstrate a foam stream from each.
- 2.00 Demonstrate the use of mathematical calculations as required to solve fire department pumper hydraulic problems.

D. Section 160, Ventilation (4 Hours)

- 1.00 Recognize the characteristics of ventilating a basement.
- 2.00 Describe and demonstrate the use of forced ventilation equipment.

3.00 Identify and describe built-in ventilating systems within structures.

E. Section 161, Rescue (24 Hours)

- 1.00 Demonstrate the extrication of a victim from a vehicle.
- 2.00 Identify various life safety harnesses, webbing, and associated hardware.
- 3.00 Demonstrate the proper techniques for lowering a person from a second floor level using ropes, harnesses, or ladders.
- 4.00 Describe various rescue techniques and their proper safety procedures.
- 5.00 Demonstrate and describe the use of rescue tools and define raking, flying, and dead or vertical shores.
- 6.00 Describe and demonstrate the service and maintenance of power supply and lighting equipment.

F. Section 162, Inspections (4 Hours)

- 1.00 Identify the types of fire extinguishers in an occupancy and ensure that they conform to the fire prevention requirements for that occupancy.
- 2.00 Identify and describe standard types of chimneys and flues and recognize deficiencies likely to cause fires.
- 3.00 Inspect fire protection standpipe systems for readiness.
- 4.00 Complete a building inspection report.

G. Section 163, Water Supplies (8 Hours)

- 1.00 Identify and describe water systems and their fundamental components.
- 2.00 Identify and describe components of a water distribution system, and define the following terms relating to distribution systems.
- 3.00 Identify the pipe sizes used in water distribution systems for residential, business, and industrial districts.
- 4.00 Identify various types of valves and determine their position.
- 5.00 Describe causes of increased resistance and friction loss in water mains.
- 6.00 Define various terms as they relate to water supply.
- 7.00 Describe how certain conditions reduce hydrant effectiveness.
- 8.00 Determine flow pressure from varied orifice sizes.

H. Section 164, Fire Protection Systems (8 Hours)

- 1.00 Identify the features and characteristics of automatic sprinkler systems.
- 2.00 Identify the types, components, and operation of automatic sprinkler systems.
- 3.00 Identify the types, components, and operation of standpipe systems.
- 4.00 Identify alarm initiating devices.

**I. Section 166, Hazardous Materials Operations
(Minimum – 16 Hours)**

- 1.00 Identify and be able to describe the purpose, goals, and definitions of the NFPA standards applicable to Hazardous Materials.
- 2.00 Demonstrate a knowledge of safety principles applicable to hazardous materials response at the operations level.
- 3.00 Demonstrate a knowledge of hazardous material incident management concepts as applicable to hazardous materials incident response.
- 4.00 Identify principles pertaining to the recognition of hazardous materials.

- 5.00 Demonstrate a knowledge of principles of classification, identification, and verification of hazardous materials and, given examples of facility and transportation hazardous materials incidents, shall describe, identify, and demonstrate the actions to be taken in hazardous materials incidents.
- 6.00 Demonstrate a knowledge of the chemistry of hazardous materials.
- 7.00 Demonstrate a knowledge of hazard and risk assessment in estimating the potential harm within the endangered area.
- 8.00 Demonstrate a knowledge of personal protective equipment as related to hazardous materials response.
- 9.00 Demonstrate a knowledge of the standard operating procedures and the local emergency response plan adopted by the authority or authorities having jurisdiction.
- 10.00 The fire fighter trainee, given a simulated hazardous materials incident involving a specified fixed facility and/or a specified transportation incident, shall demonstrate a knowledge of hazardous materials defensive control techniques available to the first responder.
- 11.00 Demonstrate a knowledge of emergency decontamination at hazardous materials incidents.
- 12.00 Identify the threat posed by the intentional releases of hazardous materials due to acts of terrorism or other criminal activity.

J. Section 173, Building Construction (4 Hours)

- 1.00 Identify and describe the basic types of building construction and the general fire behavior expected with each type of construction.
- 2.00 Describe the effects of fire and fire suppression activities on common burning materials.
- 3.00 Define basic building construction terms.
- 4.00 Describe lightweight and truss construction hazards.

K. Section 174, Live Fire Training (16 Hours)

- 1.00 Extinguish or control live fires.

L. Section 175, Fire Cause and Origin Determination (4 Hours)

- 1.00 Identify the methods for protecting evidence for fire cause determination.
- 2.00 Identify legal considerations regarding fire cause determination.
- 3.00 Identify the responsibilities of the fire fighter after the fire.

M. Section 176, Incident Management System (8 Hours)

- 1.00 Identify and describe the purpose of an incident management system.
- 2.00 Identify and describe the purpose of an incident management system.
- 3.00 Identify the major operational areas within the Incident Management System.
- 4.00 Describe the incident management system components and their functions.
- 5.00 Describe the procedure for implementing an incident management system.
- 6.00 Describe the responsibilities in assuming and transferring command.
- 7.00 Identify necessary communication information required of the incident commander.
- 8.00 Identify and describe critical elements of the Incident Management System.

N. Section 177, Reports and Records (2 Hours)

- 1.00 Identify fire incident reporting systems.
- 2.00 The fire fighter trainee shall identify the three fundamental elements of a fire incident reporting system.
- 3.00 The fire fighter trainee shall complete basic fire incident reports.

O. Section 178, Pre-incident Planning (8 Hours)

- 1.00 Identify and describe the benefits and components of pre-incident planning.
- 2.00 Identify and define survey components and conduct a facility survey.
- 3.00 The fire fighter trainee shall prepare diagrams or sketches of a facility using standard map symbols to record the locations of items of concern obtained from a pre-incident survey.

P. Section 179, Fire Apparatus Familiarization (6 Hours)

- 1.00 Describe various types of automotive fire apparatus, their functions, and their features.
- 2.00 The fire fighter trainee shall identify various types of aerial apparatus components and their function.

Q. Section 180, Fire Apparatus Pump Theory (8 Hours)

- 1.00 Identify various types of fire apparatus pumps and pump components, and shall identify their function(s), theory(s), and principle(s) of operation.
- 2.00 Identify terms, methods, and procedures relating to pumping operations.
- 3.00 Demonstrate methods and procedures for pump operation.

III. THECB Learning Outcomes (WECM)

Demonstrate competencies, for subjects taught, set forth in the TCFP curriculum for Basic Fire Suppression.

IV. Evaluation

Attendance Policy: Students absent for two 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 do not attend 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.

Cheating Policy: Students determined to be cheating on an exam or plagiarizing another student's assignment will be given a grade of "0" for that exam or assignment. An incident report documenting the circumstances will be prepared by the Instructor and submitted to the Instructional Coordinator of Fire Technology and then forwarded to the Instructional Dean Occupational Education. A copy of the report will be provided to the student. A second such incident will be grounds for dismissal of the student from the course with a grade of "F".

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.