FST 116

HAZARDOUS MATERIALS AWARENESS AND OPERATIONS

2 Credit Hours

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Revised by:
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Career and Technical Education
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FST116 Hazardous Materials Awareness and Operations

I. CATALOG DESCRIPTION

A. Corequisite: FST110

B. 2 semester hours credit

C. Hazardous Materials Awareness and Operations consists of an awareness section and an operations section. The awareness portion of this course educates and trains emergency responders in hazardous materials recognition and identification, in how to assess whether to intervene, and in the background of laws and regulations affecting the standard care for hazardous materials emergency responders. The operations portion of this course is designed to enable emergency first responders to operate in a defensive mode, minimizing harm to people, property, and the environment while maintaining their own safety. Both portions are designed to provide first responders with the cognitive knowledge and hands-on skill required by OSHA 1910.120 (q) NFPA 472, and the Hazardous Materials Emergency Preparedness (HMEP) Guidelines for Public Sector Hazardous Materials Training. (F,S).

II. EXPECTED LEARNING OUTCOMES/ASSESSMENT MEASURE

| Students will compare and contrast hazardous materials incidents and regular emergencies. | In-class projects, homework, simulation, and exam. |
| Students will identify the four main objectives of the first responder. | In-class projects, homework, simulation, and exam. |
| Students will utilize recognition and identification clues to make operations level decisions. | In-class projects, simulation, and practical application. |
| Students will use personal protective equipment. | In-class projects, simulation, and practical application. |
| Students will utilize monitoring equipment. | In-class projects, simulation, and practical application. |
| Students will implement mitigation options at the scene of an accident. | In-class projects, simulation, and practical application. |
| Students will evaluate scene control. | In-class projects, simulation, and practical application. |
| Students will initiate the emergency management system. | In-class projects, simulation, and practical application. |
| Students will demonstrate effective defensive operations at the scene of an accident. | In-class projects, simulation, and practical application. |
III. COURSE OUTLINE WITH UNIT OBJECTIVES

A. Introduction to Hazardous Materials
   1. Overview of Hazardous Materials
   2. Identification of Hazardous Materials Incidents
   3. Responsibilities of First Responders

B. Standards and Regulations
   1. Hazardous Materials Legislation
   2. Effects of Legislation on Hazardous Materials Standards of Care
   3. OSHA 29
   4. CFR 1910.120

C. Gathering and Analyzing Information
   1. Identifying Hazardous Materials
      A. Placarding
      B. Labeling
      C. Container Shapes
   2. Flammability and Reactivity of Material
   3. Priority Sequence
   4. Protective Area Zones
   5. Use of Emergency Response Guidebook (2004 ERG)

D. Hazardous Materials Protection
   1. Affects of Exposure on First Responders
   2. Personal Protective Equipment

E. Hazardous Materials Incidents
   1. Monitoring Equipment
   2. Hazardous Materials Conditions
   3. Mitigation Options
   4. Decontamination

F. Criminal and Terrorist Events Using Hazardous Materials
   1. Terrorist Attacks
   2. First Responder Response
IV. METHOD OF INSTRUCTION

A. Lecture

B. Discussion

C. Practical Simulations

V. REQUIRED TEXTBOOK(S) WITH PUBLICATION INFORMATION

          Hazardous Materials Incident Response: Awareness

VI. REQUIRED MATERIALS (STUDENT)

A. None

VII. SUPPLEMENTAL REFERENCES

A. None

VIII. METHOD OF EVALUATION (basis for determining grade)

A. Homework, 0-20%

B. Quizzes, 0-20%

C. Tests, 30-60%

D. Comprehensive final examination, 15-25%

IX. ADA STATEMENT

Any student requiring special accommodations should inform the instructor and
the Coordinator of Disability Support Services (Library; phone 636-797-3000, ext.
169).

X. ACADEMIC HONESTY STATEMENT

All students are responsible for complying with campus policies as stated in
the Student Handbook (see College Website).