

PELLISSIPPI STATE TECHNICAL COMMUNITY COLLEGE  
MASTER SYLLABUS

**HAZARDOUS WASTE SAFETY  
ENV 2010**

**Class Hours: 3.0**

**Credit Hours: 3.0**

**Laboratory Hours: 0.0**

**Date Revised: Fall 01**

**Catalog Course Description:**

This course is a study of job-related safety and hazardous waste legislation. Topics include safety philosophies and engineering factors involved in meeting safety standards of OSHA, RCRA, SASA and CERCLA. This course covers all the materials for SARA/OSHA 1910.120 certification.

**Entry Level Standards:**

Must be able to read and write at the college level.

**Prerequisites:**

None

**Textbook(s) and Other Reference Materials Basic to the Course:**

Required Textbooks:

*Occupational Safety Management and Engineering*, Willie Hammer, Prentice-Hall, Inc.  
Instructor Prepared Handbook

References:

*The OSHA Compliance Manual*, Dan Peterson, McGraw-Hill, Inc.

**I. Week/Unit/Topic Basis:**

This schedule is a guide and may vary slightly depending on progress of the class.

<b>Week</b>	<b>Topic</b>
1-2	OSHAact and its Administration Hazards of Toxic Materials
3-4	Personnel Planning for Emergencies Acceleration, Falls, Falling Objects and other Impacts Environmental Regulations
5-6	Hazards and Their Controls Mechanical Injuries Heat and Temperatures Vibration and Noise
7-8	Health Hazard Monitoring Asbestos

	Drums, Containers and Lab Packs Bloodborne Pathogens Confined-Space Entry
9-10	Pressure Hazards Electrical Hazards
11-12	Fires and Fire Suppression Explosions and Explosives
13-14	Introduction to Radiation Radiation II
15	Dress out using level A and B suits and all types of respirators
16	Final Exam

## II. Course Objectives\*:

- A. Understand the factors behind a "safe" and/or "unsafe" situation. I
- B. Become familiar with reasons behind the OSHA Act, Environmental Laws, and the Right to Know Laws. IV
- C. Interpret the codes and standards for their field. IV
- D. Understand the effects of chemical, biological, and radiological exposures. IV

\*Roman numerals after course objectives reference goals of the CHT program.

## III. Instructional Processes\*:

Students will:

1. Participate in classroom discussions, which challenge their abilities to think creatively and recognize complex environmental standards. *Communication Outcome, Problem Solving and Decision Making Outcome*
2. Use the resources including those at the Educational Resource Center, the internet, interviews with professionals, to research the importance of safety in the field of accident prevention. A five-minute oral presentation will be given to the class that describes an example of where this topic is used in industry. *Communications Outcome, Personal Development Outcome, Information Literacy Outcome, Transitional Strategy*
3. Use technology available to expand on problems presented during the course; example may include a search of the internet to find a material safety data sheet. *Technology Literacy Outcome, Information Literacy Outcome*
4. Prepare professional level reports to comply with the OSHA standards as well as well as written communications to advance the basic skills of writing. *Communications Outcome, Active Learning Strategy, Information Literacy Outcome*

\*Strategies and outcomes listed after instructional processes reference Pellissippi State' s goals for strengthening general education knowledge and skills, connecting coursework to experiences beyond the classroom, and encouraging students to take active and responsible roles in the educational process.

## IV. Expectations for Student Performance\*:

Upon successful completion of this course, the student should be able to:

1. Understand what is toxic and the measurement of toxicity. A
2. Develop a site safety and health plan. D
3. Interpret the 29 CFR 1910.120 standards. D
4. Interpret the environmental laws. B
5. Understand the effect of chemical exposures to hazardous substances. A
6. Interpret the effects of biological and radiological exposures. A
7. Understand confined space, tank and vault hazards, and entry procedures. A
8. Understand OSHA's requirements and responsibilities. C
9. Understand specific safety, health, and other hazards that are to be addressed at a site and in the site safety and health plan. D
10. Know the use of personal protective equipment. A
11. Know the function of safety personnel. A
12. Understand human error, production errors, accident proneness, and the biochemical machine. A
13. Understand how to determine the existence of a hazard, categorize hazards, and then provide safeguards. A
14. Understand how to promote safe practices. A, B
15. Understand how to appraise site safety and plan for emergencies. A, C
16. Interpret accidents caused by acceleration, falls, falling objects, and other impacts. A
17. Understand different mechanical injuries. A
18. Interpret different pressure hazards. A
19. Understand fires and fire suppression. A
20. Interpret the different hazards of toxic materials. A, B
21. Understand the Right to Know Laws. A
22. Understand how monitors work. A
23. Interpret real-time air monitoring. A, B

\*Letters after performance expectations reference the course objectives listed above.

#### **V. Evaluation:**

- A. Testing Procedures: 80% of grade

Tests at the completion of two or three chapters will include discussion questions, multiple choice questions, and true or false questions. A minimum of five such tests will be administered during the semester. Evaluation will also be made through a comprehensive final examination for all students who have not achieved an average of 92 or above on the chapter tests. No make-up tests will be administered. In case of medical problems or bona fide emergencies, see the instructor.

**B. Laboratory Expectations: 20% of grade**

A classroom project will comprise 20% of the final grade.

**C. Grading Scale:**

92 - 100	A
88 - 91	B+
87 - 83	B
79 - 82	C+
74 - 78	C
65 - 73	D
Below 65	F

**VI. Policies:**

**A. Attendance Policy:**

Pellissippi State Technical Community College expects students to attend all scheduled instructional activities. As a minimum, students in all courses must be present for at least 75 percent of their scheduled class and laboratory meetings in order to receive credit for the course. Individual departments/programs/disciplines, with the approval of the vice president of Academic and Student Affairs, may have requirements that are more stringent.

**B. Academic Dishonesty:**

Any student found cheating on an examination will receive a score of zero and will be dismissed from the course.