

Hazardous Materials Course Syllabus 3 Rivers

Course: 10522 ENV K220 T01

Instructor: George Williamson

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Required Textbook: Environmental Health and Safety for Hazardous Waste Sites

October 17, 1986, President Reagan signed the Superfund Amendments and Reauthorization Act. (SARA). Part of the act required the Department of Labor's Occupational Safety and Health Administration (OSHA) to develop and implement safety and health regulations for employees who work at hazardous waste sites as defined by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), employees that may be exposed to hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA), and employees who respond to emergencies involving hazardous materials.

This course will include:

1. The requirements by OSHA for employers to protect employees who are engaged in hazardous waste operations.
2. Requirements by the Environmental Protection Agency (EPA) for waste generators to:
 - a. Evaluate their waste streams to determine if any waste would represent unreasonable risk to human health and the environment
 - b. Reduce hazardous waste through pollution prevention and recycling programs
 - c. Appropriately manage hazardous wastes at or near the point of generation
 - d. Dispose of hazardous wastes in accordance with the RCRA
3. Department of Transportation requirements for transporters, shippers, and receivers of hazardous materials (HAZMAT) to ensure that they:
 - a. Ship HAZMAT in approved containers
 - b. Properly segregate or isolate HAZMAT from other materials that may react with them
 - c. Label Containers and placard transportation vehicles properly
 - d. Properly complete shipping documents such as a Bill of Lading or Hazardous Waste Manifests so that the documents accurately reflect the contents and quantity of the HAZMAT shipment

You have a choice of doing a term paper or presentation.

Your final paper must be 8-15 pages typed, double spaced, and single sided and font size ≤ 12 . It can be on any topic relevant to hazardous waste operations. The following are a few suggested topics for your term paper:

- Health and Safety Plan (HASP)
- Hazardous Waste Generation and Accumulation
- Pollution Prevention
- Site Remediation Options
- Company policies and management of hazardous materials or hazardous waste

If you choose a presentation you may work individually or in a group of up to 3 persons and do a 10-15 minute power point or similar slide/overhead presentation on an applicable topic as previously mentioned. Applicable presentations may include results of a visit and interview with local companies or organizations on their environmental policies or pollution prevention. The presentation should include at least 10 slides comprising at least 50% bulleted discussion points. If done as a group, one grade will apply to all individuals involved. At least 2 library (published) references must be cited.

Each week you will turn in a 1 page summary of your reading assignment summarizing key points.

Class participation will be graded on classroom discussions, attendance and attention. Distractive behavior such as web surfing (other than research as part of class activity) and text messaging is not permitted.

Grades will be assigned as follows:

- Class participation – 10%
- Weekly reading summary – 10%
- Practical application (hands-on field exercises) – 25%
- Final exam – 35%
- Term Paper or Presentation – 20%

All weekly readings shall be submitted by email to me at gwillia698@yahoo.com. I will return comments on your weekly papers by email.

<u>Date</u>	<u>Topic(s)</u>	<u>Reading Summary of due for chapters below</u>
01/27	Course Introduction and Overview	
02/03	Overview of Environmental Laws and Regulations	1 & 2
02/10	Chemical Hazards and Toxicology Turn in proposed topic of term paper	3 & 4
02/17	Physical, Environmental and Radiation Hazards	5 & 6
02/24	Medical Monitoring (Surveillance) and Air Monitoring	7 & 8
03/03	Personal Protective Equipment & Decontamination	9 & 10
03/10	Site Control, Emergency Planning, & Spill Control	11 & 12
03/17	NO CLASS	13 & 14

03/24	Hazardous Waste Operations – Planning & Organization & Site Characterization-Field Trip to SUBASE CHRIMP Turn in outline of major discussions points of term paper by email	
03/31	Site Health and Safety Planning Group/Individual Presentations	15
04/07	HAZMAT Containers & Transportation Group/Individual Presentations	16 & 17
04/14	Confined Spaces, Trenching, Excavation & Shoring Field Trip to SUBASE HAZMAT Response Team	18 & 19
04/21	Group/Individual Presentations	
04/28	Hands-on: Proper Donning, Use and Care of PPE Turn in Final paper or Presentation	
05/05	Hands-on: Field Exercise Planning	
05/12	Hands-on: Field Exercise Including Dress-out, Air Monitoring & Decontamination Procedures; Turn in Final Exam: 50 Questions (Multiple Choice)	
05/19	Make-up Class	
05/22	Final Grades due	
05/28	Student Grades Available on Web	

If there is any reason that you think you can't make it to class, please send email or if it's less than 12 hours to class time, please call me on my cell phone @ 860-235-5525. Try not to miss hands-on activities or field trips. These are virtually impossible to make up. Hands-on activities are required in order to be issued a certificate that certifies you have successfully completed OSHA's training requirements for workers at Hazardous Waste Sites.