SYLLABUS

DATE OF LAST REVIEW: 02/2013

CIP CODE: 15.0508

SEMESTER: Departmental Syllabus

COURSE TITLE: Industrial Health & Safety

COURSE NUMBER: HZMT-0125

CREDIT HOURS: 3

INSTRUCTOR: Departmental Syllabus

OFFICE LOCATION: Departmental Syllabus

OFFICE HOURS: Departmental Syllabus

TELEPHONE: 913-334-1100

PREREQUISITE(S): None

REQUIRED TEXT(S):
Please see bookstore for current textbook(s) and other required material.

COURSE DESCRIPTION:
Emphasis is placed on where hazardous materials are used and generated in various types of industrial processes. Understanding the constraints of product lines are discussed. Special attention is paid to potential acute and chronic hazard exposures from various industrial processes. Also, emphasis is placed on how to achieve greater safety and efficiency and to eliminate costly accidents.

METHOD OF INSTRUCTION:
A variety of instructional methods may be used depending on content area. These include but are not limited to: lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, and panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE:
The course outline is indicated below and is subject to change as course development dictates:

1. Introduction to Industrial Processes
2. Introduction to Principles of Flow of Materials
3. General Manufacturing
4. The Basis and Philosophy of Accident Prevention  
5. Accident Prevention Methods  
6. Safety Organizations  
7. Safety Psychology  
8. Occupational Disease  
9. Illumination and Vision  
10. Fire Prevention  
11. Confined Space Entry  
12. Electrical Safety  
13. Personnel Protective Devices  
14. Chemical Hazards and Wastes  
15. Physical Hazards

EXPECTED LEARNER OUTCOMES
1. The learner will be able to analyze an industry for health and safety problems  
2. The learner will be able to reduce company costs by recommending product substitution  
3. The learner will be able to guide a facility to compliance with all hazardous materials and waste regulations.  
4. The learner will be able to protect work and community in health and safety issues  
5. The learner will be able to reduce costly accidents

COURSE COMPETENCIES:
1. Student should be able to make a complete material balance for a continuous process industry.  
2. Student should be able to identify the various regulatory programs that affect the handling and management of hazardous materials/wastes, and air and water emissions from industrial plants.  
3. Student should be able to recognize unit operations and flow of materials within a general manufacturing industry; be familiar with specific regulatory agenda and constraints which pertain to the general manufacturing industry; and given case studies, be able to formulate an approach to hazardous waste minimization or source reduction in general manufacturing.  
4. Student should be able to outline an accident prevention program by using:  
   a. facts and fact finding  
   b. accident analysis  
   c. knowledge of hazards and remedies  
5. Student should be able to organize and develop a safety group or committee.  
6. Student should be able to use and create programs to reduce accidents and wastes.  
7. Student should be able to outline the potential of acute exposure.  
8. Student should be able to outline the potential of chronic hazards.  
9. Student should be able to demonstrate how to research chemical hazards.  
10. Student should be able to demonstrate how to conduct an investigation concerning a chemical exposure.  
11. Student should be able to explain how chemical processes impact on human systems.  
12. Student should be able to outline how to conduct a safety audit.  
13. Student should be able to demonstrate how to use equipment to determine a safe and
A healthy environment.
14. Student will outline how acids impact health.
15. Student will explain how toxins impact health.
16. Student will explain how flammables impact health and safety
17. Student will explain how biological agents affect health and safety.
18. Student will outline how oxidizers impact health and safety.
19. Student will explain how explosives impact health and safety.
20. The student will explain how radioactive agents impact health and safety.
21. The student will discuss how poisons impact health and safety.
22. The student will outline how gases impact health and safety.
23. The student will outline the dangers of compressed cylinders.
24. The student will explain how germs impact health and safety.
25. The student will outline the procedures to follow when a chemical agent is released into the environment.
26. The student will explain how to document a health issue/
27. The student will explain noise pollution.
28. The student will outline heat trauma situations
29. The student will explain carbon monoxide poisoning.
30. The student will outline how to handle etiological incidents.

**Demonstrate Proficiency in**
1. Outline the potential of acute exposure
2. Outline the potential of chronic hazards
3. Demonstrate how to research chemical hazards
4. Demonstrate how to conduct an investigation concerning a chemical exposure
5. Explain how chemical processes impact on human systems
6. Outline how to conduct a safety audit
7. Demonstrate how to use equipment to determine a safe and healthy environment

**ASSESSMENT OF LEARNER OUTCOMES:**
Assessment methods may include, but are not limited to, the following: Homework, Assignments, Quizzes, Class Participation, Chapter Tests, and Final Exam. The grading scale and the process for calculating the course grades are to be determined by the individual instructors. This information will be included in each instructor’s syllabus.

**SPECIAL NOTES:**
This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student’s progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty, and staff that is free of bigotry and discrimination. Kansas City Kansas Community College is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.
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