

Revised by: D. Thornsberry
Reviewed by: IES Advisory Committee
Reviewed by: K. Bandy
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Textbook Review: September 15, 2016
C & GE Approval: October 10, 2016
Board Approval: November 9, 2016
Semester Effective: Fall 2017

Industrial Education Safety (IES) 1532 Industrial Hygiene (3 Units) CSU

Advisory: Eligibility for English 1500 strongly recommended

Total Hours: 48 hours lecture

Prerequisite: None

Catalog Description: This course covers industrial hygiene practices and related Occupational Safety and Health Administration (OSHA) regulations and procedures. Topics include permissible exposure limits (PEL's), OSHA health standards, principles of ergonomics, engineering controls, hazard communication, OSHA sampling procedures and strategy, workplace health program elements, and other industrial hygiene topics. The course features workshops in health hazard recognition, OSHA health standards, and a safety and health program workshop.

Type of Class/Course: Degree Credit

Required Textbook:

MANCOMM 29 CFR §1910 General Industry Regulations. MANCOMM: Davenport, Iowa, 2016

MANCOMM State of California General Industry & Electrical Safety Orders. MANCOMM: Davenport, Iowa, 2016

Course Objectives:

By the end of the course a successful student will be able to:

1. evaluate the elements required for an effective workplace health protection program,
2. describe, evaluate and control safety and health hazards associated with confined space entry,
3. identify work-related musculoskeletal and nerve disorders,
4. mitigate risk factors associated with work-related musculoskeletal and nerve disorders,
5. describe components of a successful ergonomics program.

Course Scope and Content (Lecture)

- Unit I Code of Federal Regulations CFR 1910 OSHA
- A. Safety and Health Programs (1910 Subpart A-General)
 - B. Air Contaminant Standards (1910.1000 Subpart Z)
 - C. Asbestos Standard (1915.1001 Subpart Z)
 - D. Detector Tube Sampling (OSHA Method ID-172)
 - E. Cal-OSHA Equivalents and Differences
- Unit II Code of Federal Regulations CFR 1910 OSHA
- A. Ventilation Standard (1910.94 Subpart G)
 - B. Noise Standard (1910.95 Subpart G)
 - C. Cal-OSHA Equivalents and Differences
- Unit III Title 8 Cal OSHA
- A. Ergonomic Guidelines
 - 1. Musculoskeletal Disorders (§5120)
 - 2. Work-related musculoskeletal disorders related to §5120 5(a)(1) & §5110
 - 3. Job evaluation methods for identification of work-related musculoskeletal disorders (OSHA.gov Prevention of MSDs)
 - 4. Office ergonomics (OSHA.gov Prevention of MSDs)
 - B. Cal-OSHA Equivalents and Differences
- Unit IV CFR 1910 OSHA
- A. Confined Space Standards (Subpart J)
 - 1. Scope and definitions (1910.146(a & b))
 - 2. General Requirements (1910.146(c))
 - 3. Permits (1910.146)(c)(1)
 - 4. Workshop (complete confined space entry permit)
 - B. Cal-OSHA Equivalents and Differences

Learning Activities Required Outside of Class:

The students in this class will spend a minimum of 6 hours per week outside of the regular class time doing the following:

1. Studying assigned text, handout materials, and class notes
2. Reviewing and preparing for quizzes and examinations
3. Reviewing case studies
4. Completing written assignments and projects

Methods of Instruction:

1. Lecture and discussions
2. Group Activities/Projects

3. Presentations
4. Guest lectures/presentations

Methods of Evaluation:

1. Quizzes
2. Exams
3. Participation
4. Individual and group exercises and projects
5. Reports and written assignments
6. Oral Presentations

Supplemental Data:

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| TOP Code: | 095670: Indus Occupational Safe Health |
| SAM Priority Code: | C: Clearly Occupational |
| Distance Education: | Not Applicable |
| Funding Agency: | Y: Not Applicable(funds not used) |
| Program Status: | I: Program Applicable |
| Noncredit Category: | Y: Not Applicable, Credit Course |
| Special Class Status: | N: Course is not a special class |
| Basic Skills Status: | N: Course is not a basic skills course |
| Prior to College Level: | Y: Not applicable |
| Cooperative Work Experience: | N: Is not part of a cooperative work experience education program |
| Eligible for Credit by Exam: | NO |

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|---------------------------------|------|
| Eligible for Pass/No Pass: | NO |
| Taft College General Education: | NONE |