

SPRINGFIELD TECHNICAL COMMUNITY COLLEGE
ACADEMIC AFFAIRS

Course Number: EET-104 Class/Lect. Hours: 1 Lab Hours: 0 Credits: 1 Dept.: ELEC.AS/EROB.COC
Course Title: Safety & Health in Industry Semester: Fall Year: 2015

Course Description, Prerequisite, Corequisite:

This course is a cornerstone of preparation for working in an industrial environment. The course will emphasize topics and principles that can be applied in many circumstances to ensure the personal safety of oneself and others. Specific topics will include Safety Laws & Organizations, Personal Protective Equipment, Tool & Machine Safety, Safe Materials Handling, Electrical Safety & Protection, Fire Protection, Health Protection and Safe Work Practices. This course will meet for 5 weeks.

Prerequisites: None.



| Course Objectives | Competencies |
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| 1. Understand basic terminology regarding safety & health. | <ul style="list-style-type: none"> a. Distinguish between an accident and a hazard. b. List and define various types of accidents and hazards. c. Toxic substances. d. Understand ways a company can plan for an emergency. e. Understand reasons for prompt accident investigation. |
| 2. Safety Laws and Organizations. | <ul style="list-style-type: none"> a. Understand the purpose of the OSHA act b. Know what to do in a dangerous work situation c. Know how to keep workplace in compliance with OSHA d. Understand purpose and contents of MSDS |
| 3. Personal Protective Equipment. | <ul style="list-style-type: none"> a. Know employer & employee responsibilities regarding PPE. b. Understand importance of properly fitting clothing. c. Understand use of proper gloves when handling materials. d. Distinguish between eye glasses, safety glasses and safety goggles e. Understand noise level and hearing protection. f. Understand masks & respirators. |
| 4. Chemical Safety | <ul style="list-style-type: none"> a. Understand various chemical, physical and health hazards. b. Identify common symptoms of chemical exposure c. Understand ways of controlling hazards and exposures. d. Understand basic first aid procedures following chemical exposure. |
| 5. Tool & Machine Safety | <ul style="list-style-type: none"> a. Understand causes of hand tool accidents. b. Describe proper & improper dress for rotating power tools. c. Understand importance of grounding electric tools. d. Understand hazards of pneumatic & hydraulic tools. e. Know proper storage of gasoline, diesel fuel & propane. f. Understand Lockout/Tagout procedures. |
| 6. Safe Materials Handling | <ul style="list-style-type: none"> a. Understand safety rules for conveyors, slings & hoists. b. Understand proper lifting procedures. c. Understand proper storage procedures. |

| Course Objectives | Competencies |
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| <p>7. Electrical Safety & Protection</p> <p>8. Fire Protection.</p> <p>9. Health Protection</p> <p>10. Safe Work Practices</p> | <p>a. Understand voltage, current, resistance, power.</p> <p>b. Understand Ohm's Law</p> <p>c. Understand factors which contribute to electric shock severity.</p> <p>d. Understand static electricity and its potential dangers.</p> <p>e. Understand proper grounding and ground faults.</p> <p>f. Be able to explain fuses, circuit breakers and GFCI.</p> <p>g. Understand dangers of arc fault and arc flash.</p> <p>a. Understand the various fire classifications.</p> <p>b. Understand and know how to use a fire extinguisher.</p> <p>c. Know basic fire prevention safety.</p> <p>a. Know and understand ergonomics and its effect on the body.</p> <p>b. Know ways to protect your hearing.</p> <p>c. Understand various radiation hazards.</p> <p>a. Understand why work areas must be neat and maintained.</p> <p>b. Understand hazards working at elevations or confined spaces.</p> <p>c. Understand proper ladder placement.</p> <p>d. Understand proper storage of gas cylinders.</p> |