

# PLANT SAFETY



Manufacturers are challenged with making their units last longer and are being required to bring older units up to safety standards, understanding Safety Integrity Level (SIL) ratings and Safety Instrumented Systems (SIS). New technologies available in field devices and control systems can have a significant impact in helping manufacturers comply with OSHA standards for process safety.

Clearly, safety is an area everyone involved in process operations needs to be educated about. In addition to the plant safety that can be derived from knowing how to properly choose, configure and operate automation systems, field devices and other process control elements, basic understanding of the underpinnings of regulatory compliance is critical to operational safety.

Taught by safety experts, these courses provide managers, engineers, and others responsible for plant safety a working knowledge of OSHA standards, process hazard analysis, and the fundamentals of process safety management.



**Plant Safety** Leading business schools rarely devote time to one of the most necessary and practical aspects of managing any industrial process - employee safety and the safe operation of equipment. Yet, poor safety practices can have a major negative impact on any business enterprise. Emerson Process Management recognizes the importance of management leadership in setting high safety standards and enforcing safety rules throughout every plant. Safety begins at the top, and our expanding offerings in the realm of safety are designed for top operating managers as well as safety professionals.

**PSM (Process Safety Management) Fundamentals**

**Course 2720 CEUs: .7**

This one day course is designed for managers, engineers, technicians, mechanics, operators, and other personal that work in a facility covered by OSHA's Process Safety Management standard.

**Overview**

If you want to quickly introduce your workers to the OSHA PSM standard this is the course. Participants will learn about each of the 14 elements of Process Safety Management, with special emphasis on Management of Change, Process Hazard Analysis and Pre-startup safety reviews. Each participant will be provided with a work manual to assist in future compliance and the strengthening of PSM program elements that exist in their facilities.

**Topics**

- The Regulations: Regulation History, Summary, Definitions, Compliance, Interpretations, and Citation Insights  
Covered Processes and Application Issues for Both PSM and RMP
- Elements of the Regulations: Employee Participation  
Process Safety Information  
Process Hazard Analysis  
Operating Procedures  
Training  
Contractors  
Pre-Startup Safety Review  
Mechanical Integrity  
Hot Work Permit  
Management of Change  
Incident Investigation  
Emergency Planning and Response  
Compliance Auditing  
Trade Secrets
- Hands on Sample Problems Worked During Course

**Price \$675**

**Location** Call to Schedule  
**Start Dates** 512-834-7689

**OSHA 10 Hour General Industry Outreach**

**Course 2722 CEUs: 1.0**

This 10-hour course is designed for managers, engineers, technicians, mechanics, operators, and other personal that work in any manufacturing facility.

**Overview**

If you want to quickly introduce your workers to the application of OSHA standards in the work environment this is the course. It covers the OSHA standards that are most commonly cited and provides participants with an intensive study of occupational safety and health compliance. The objective is to reduce/ prevent costly, time-consuming injuries/illnesses.

**Topics**

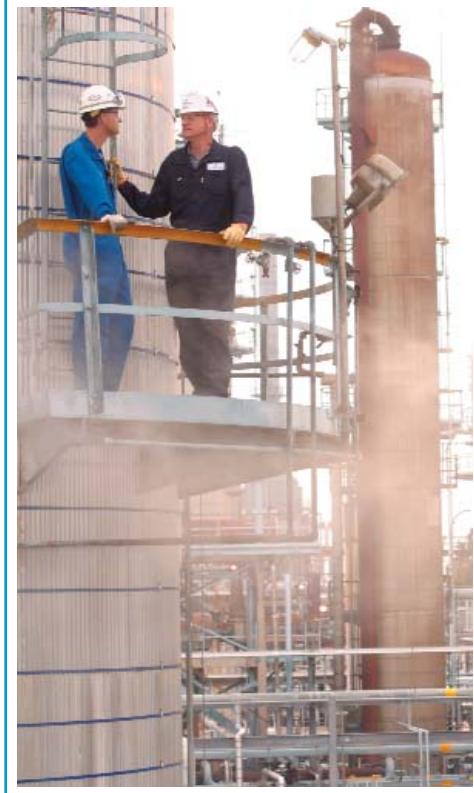
- Introduction to OSHA
- OSHA and Your Company
- The OSH Act
- General Duty Clause 5 (a) (1)
- Inspections/Citations/Penalties CFR Part 1903
- Subpart D: Walking and Working Surfaces
- Subpart E: Means of Egress/Evacuation
- Subpart H: Flammable/Combustible Liquids
- Subpart I: Personal Protective Equipment
- Subpart J: Lockout/Tagout
- Subpart L: Fire Protection-Emergency Action Fire Teams
- Subpart O: Machine Guarding
- Subpart S: Electrical
- Subpart Z: Hazard Communication

**Students completing this course should:**

- Discuss OSHA's current emphasis and enforcement policy.
- Describe the OSH Act and 29CFR 1910;
- Identify selected safety and health hazards and OSHA standards;
- Describe abatement methods for selected safety and health hazards;
- Explain and apply workplace inspection procedures consistent with OSHA policies, procedures, and directives.

**Price \$350**

**Location** Call to Schedule  
**Start Dates** 512-834-7689



To enroll in Plant Safety courses please call 512-834-7689. For additional contact information refer to the appropriate contact on page 107. Updated dates & locations are available on our website at [www.emersonprocess.com/education](http://www.emersonprocess.com/education).

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## Incident Analysis

### Course 2728 CEUs: .7

This course is for process safety personnel who participate in or lead incident investigation teams.

#### Overview

This one-day, instructor-led course uses a combination of lecture, discussion, and hands-on exercises to teach the skills necessary to effectively function as the leader of an incident investigation committee, and to analyze incidents in a systematic manner that assures improvement of the process that generated the incident.

#### Topics

- ESH Management Theory
- Human Behavior
- The Incident Analysis Process
- Interviewing Techniques
- Practice Cases

**Price** \$675

Call to discuss pricing at your location

**Location**            **Start Dates**  
Call to Schedule    512-834-7689

## Safety Engineering Overview

### Course 2730 CEUs:1.4

This course is for project managers, supervisors, and team members who provide supporting roles on a Safety Instrumented System (SIS) Project.

**Overview** This 2-day instructor led course covers the Safety Lifecycle, terminology, and an introduction to industry standards such as IEC61508, IEC61511, and S84. Practical examples will cover the analysis, realization and operation of a safety instrumented system.

#### Topics

- SIS Terminology
- The Safety Lifecycle
- Risk and Probability
- Process Hazard Analysis (PHA)
- Risk Analysis
- SIL Determination
- Reliability Engineering
- SRS and SIS Design
- Start-up and Operation

**Price** \$1,200

Call to discuss pricing at your location

**Location**            **Start Dates**  
Call to Schedule    512-834-7689

## Safety Engineering

### Course 2731 CEUs:2.8

This course is for professionals responsible for specifying and implementing Safety Instrumented Systems (SIS).

**Overview** This 4-day instructor led course covers the complete Safety Lifecycle. The IEC 61511 standard will be referenced and used as a guide through the analysis, realization, and operation of an SIS. Exercises will include process hazard analysis, SIL determination, SRS definition, and SIF design.

#### Topics

- SIS Terminology
- The Safety Lifecycle
- Risk and Probability
- Process Hazard Analysis (PHA)
- Risk Analysis
- SIL Determination
- Reliability Engineering
- SRS and SIS Design
- Start-up and Operation

**Price** \$2,300

Call to discuss pricing at your location

**Location**            **Start Dates**  
Call to Schedule    512-834-7689

**eLearning: Safety Engineering Overview**

**Course BSE101 CEUs:1.6**



**Audience**

Project managers, supervisors, and team members who provide supporting roles on a SIS project.

**Overview**

This is a 16 hour on-line course which covers SIS terminology and the Safety Lifecycle, Risk and Probability, Process Hazard Analysis, Risk Analysis, SIL Determination, Reliability Engineering, SRS and SIS Design, and Start-up and Operation.

**Note:**

Students will have email access to our Subject Matter Experts for the duration of their course subscription. Upon registration you will be sent the email address of these individuals. Any questions you have about the course material can be sent directly to them.

**Price** \$450

[www.emersonprocess.com/education](http://www.emersonprocess.com/education)

Quick Links - Click to eStore: Blending Learning

**eLearning: Safety Engineering**

**Course BSE201 CEUs:3.2**



**Audience**

Professionals responsible for specifying and implementing SIS.

**Overview**

This is a 32 hour on-line course which provides an in-depth look at the same materials and includes exercises to assist students with learning the course materials.

**Note:** Students will have email access to our Subject Matter Experts for the duration of their course subscription. Upon registration you will be sent the email address of these individuals. Any questions you have about the course material can be sent directly to them.

**Price** \$750

[www.emersonprocess.com/education](http://www.emersonprocess.com/education)

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