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# Course Syllabus:

## A-SAF-045 Control of Hazardous Energy



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### Overview

This training program is intended to familiarize employers and employees with the requirements of the U.S. Occupational Safety & Health Administration's requirements for controlling hazardous energy during service and maintenance of equipment or machinery.

This course is not intended to replace or to supplement OSHA's standards for the control of hazardous energy.

### Goals

This course contains nine short training modules that include:

- Regulatory Requirements
- Forms of Energy
- Energy Control Program (ECP)
- Training & Communication
- Controlling Hazardous Energy
- Lock-out/Tag-out (LOTO) Devices
- Release from Lock-out/Tag-out
- Periodic Inspections
- Contractors, Groups & Shifts

### Lesson Topics

#### Module 1 Introduction

- Welcome
- Course Objectives
- WBT Library
- Glossary
- Learning Assessment & Final Exam
- Additional Information

#### Module 2 – Regulatory Requirements

- Objectives
- Regulatory Requirements
- OSHA Standards
- Purpose
- Definitions
- Summary

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### Materials

Computer (PC, laptop)  
Internet Connection: High Speed

### Requirements

You should print and maintain a copy of this course syllabus and overview on file at your facility. It is recommended that you provide a copy of this document in the event of a regulatory agency inspection.

### Evaluation

Upon completion of the course of instruction, a comprehensive examination will be offered. In order to earn a Certificate of Completion, you must receive at least 80% on the exam.

The exam is comprised of at least 20 questions, randomly selected from a database of questions and address each of the lesson topics covered in the course.

## Lesson Topics – cont'd

### Module 3– Forms of Energy

- Objectives
- Forms of Energy
- Potential Energy
- Kinetic Energy
- Chemical Energy
- Thermal Energy
- Electrical Energy
- Pneumatic & Hydraulic
- Radiant & Magnetic
- Summary

### Module 4 – Energy Control Program

- Objectives
- Energy Control Program (ECP)
- Requirements
- Documenting Specific Elements
- Lock-Out/Tag-out Procedures
- Lock-Out Procedures
- Tag-Out Procedures
- Full Employee Protection
- New Equipment
- Recordkeeping
- Summary

### Module 5 – Training & Communication

- Objectives
- Training & Communication
- Training Requirements
- Authorized Employees
- Affected Employees
- Other Employees
- Contractors
- Additional Training
- Retraining
- Certification
- Summary

### Module 6– Controlling Hazardous Energy

- Objectives
- Controlling Hazardous Energy- Basic Steps
- Preparing for Shutdown
- Shutting Down Machinery or Equipment
- Energy Isolating Devices
- De-energizing Equipment
- Applying Control Devices
- Dissipate Stored Energy
- Verifying Isolation & Control
- Summary

### Module 7– Lock-out/Tag-out Devices

- Objectives
- Lock-out/Tag-out (LOTO) Devices
- Requirements
- Lock-Out Device Criteria
- Tag-Out Device Criteria
- Summary

## Lesson Topics – cont'd

### Module 8– Release from Lock-Out/Tag-Out

- Objectives
- Release from Lock-out/Tag-Out
- Inspecting Machinery & Equipment
- Position & Notify Workers
- Remove LOTO Devices
- Alternative Steps for LOTO Release
- Testing Machinery & Equipment
- Release after Long-Term Shutdown
- Summary

### Module 9– Periodic Inspections

- Objectives
- Periodic Inspections
- Purpose
- Frequency
- Recordkeeping
- Summary

### Conclusion

- Certification Test Code
- Final Exam Prep