



Excavations/Trenching and Shoring Course Outline



Prerequisites: This course shall have no formal pre-requisite.

Course Length: 4 hours – Course length shall vary depending on the number of delegates. Total course time includes breaks.

Class Size: The maximum number of delegates that may be trained and tested per instructor shall be thirty-five (35) in the classroom session.

Course Objective

- To provide delegates with the key elements of the worker protections standards in 29 CFR 1926, Subpart P.
- To inform delegates about the dangers associated with excavations including cave-ins and other hazards.
- To prepare delegates to prevent injury or incident using protective systems, personal protection equipment, and safe work procedures.
- Delegates should be able to demonstrate knowledge of excavation safety during written examination.

Course Design

- Power Point© / Lecture / Audio Video / Visual Aids

Successful Course Completion

- Requires a minimum score of 75% or better.
- Grades shall be calculated by dividing the number of questions answered correctly by the total number of exam questions.
- Delegates will have no more than thirty (30) minutes to complete the exam.

Course Content Summary

- Classroom

Breaks: 10 minutes (approximately every hour)

Lunch: 1 hour (if applicable)

Course Outline

Trenching and Excavation Safety

- What is Excavation Work?
- Definitions
 - Benching
 - Cave-In

- Competent Person
 - Excavation
 - Hazardous Atmosphere
 - Protective System
 - Shield
 - Shoring
 - Sloping
 - Surcharge Loads
 - Trench
 - Undermining
 - Vibration
- Introduction
- The Difference Between an Excavation and a Trench
- Dangers of Trenching and Excavation Operations
- OSHA Standards
- Soil Classification
 - Stable Rock
 - Type A
 - Type B
 - Type C
 - Soil Test and Identification
- Competent Person
- Pre-Planning
 - Safety Checklist
 - Underground Utility Lines and Pipes
- Protection
 - Protective Systems
 - Sloping
 - Trench Box or Shield
 - Cave-Ins
 - Additional Considerations
 - Installing and Removing Protective Systems
 - Materials and Equipment
 - Additional Hazards and Protections
- Site Inspections
- General PPE
- Access and Egress
 - Ladder Use
- Struck-By Hazards
- Power and Hand Tool Use



Excavations/Trenching and Shoring Course Outline



- Water Accumulation
- Welding, Cutting, and Burning
- Hazardous Atmospheres
- Chemical Storage and Use
- Generator Use
- Airborne Contaminants
- Slips, Trips, and Falls
- Heat and Cold Stress

Training Center Provided Material

- Course Materials

Delegate Requirements

- None

Reference Material / Documents

29 CFR 1926, Subpart P