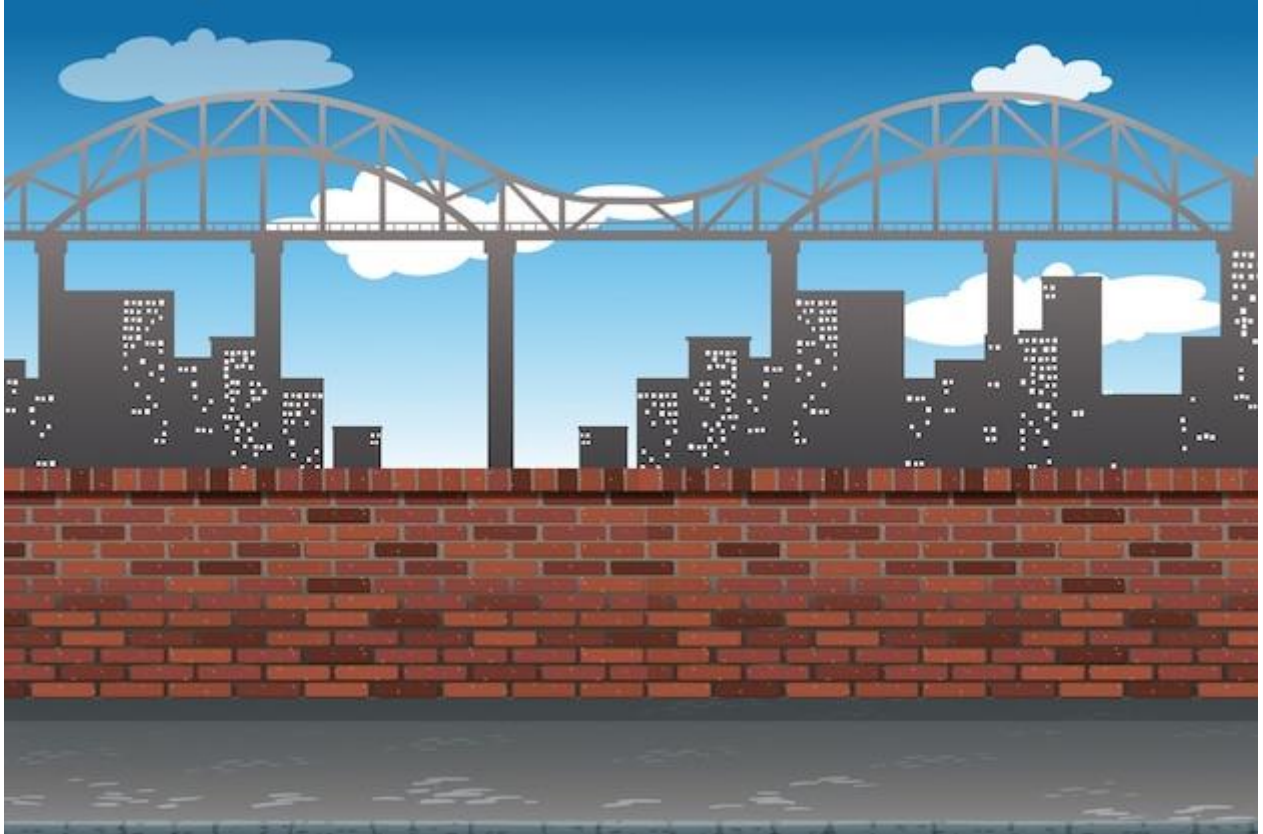




Sloping, Benching, Embankments, and Bund Wall

Course Introduction:

The construction and maintenance of slopes, benching, embankments, and bund walls are critical for ensuring the safety and stability of infrastructure projects in various industries, including civil engineering, mining, and environmental protection. Proper design and implementation of these earth structures are essential for preventing erosion, landslides, and structural failures while promoting sustainability and regulatory compliance.

Course Objectives:

By the end of the training, participants will be able to:

- Understand the principles and techniques of slope design and stability analysis
 - Learn effective methods for constructing and maintaining benching and embankments
 - Gain insights into erosion control and drainage management systems
 - Develop skills for designing and maintaining bund walls for containment
 - Understand safety protocols and risk management strategies for earthworks
 - Explore best practices for monitoring and maintenance of earth structures
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Who Should Attend?

This course is designed for all:

- Civil engineers and site supervisors
- Geotechnical engineers
- Construction project managers
- Environmental engineers and specialists
- Health and safety professionals in construction and earthworks
- Professionals involved in mining and infrastructure development

Course Outline:

Fundamentals of Sloping and Benching

- Introduction to Sloping and Benching
 - Definitions and applications in construction and mining
 - Importance of slope stability and erosion control
- Slope Design Principles

- Factors affecting slope stability (soil properties, load conditions)
- Slope geometry and gradient considerations

Embankment Construction and Maintenance

- Types and Applications of Embankments
 - Roadways, railways, and flood protection embankments
 - Selection of materials for embankment construction
- Construction Techniques and Stability Measures
 - Layering, compaction, and reinforcement
 - Monitoring and addressing settlement issues

Bund Wall Design and Implementation

- Purpose and Types of Bund walls
 - Environmental containment, flood barriers, and storage bunds
 - Material selection and construction techniques
- Design Considerations and Regulatory Compliance
 - Height, slope, and drainage design
 - Compliance with industry standards and environmental regulations

Safety, Risk Management, and Erosion Control

- Safety Protocols and Risk Mitigation Strategies
 - Identifying hazards and implementing control measures
 - Personal protective equipment (PPE) requirements
- Erosion Control Techniques
 - Vegetative covers, geotextiles, and retaining structures
 - Drainage management systems

Monitoring, Maintenance, and Best Practices

- Monitoring and Maintenance of Earth Structures
 - Inspection techniques and condition assessment

- Preventive and corrective maintenance strategies
- Emerging trends and innovations

Course Methodology:

A variety of methodologies will be used during the course that including:

- (30%) Based on Case Studies
- (30%) Techniques
- (30%) Role Play
- (10%) Concepts
- Pre-test and Post-test
- Variety of Learning Methods
- Lectures
- Case Studies and Self Questionnaires
- Group Work
- Discussion
- Presentation

Course Certificate:

International Center for Training & Development (ICTD) will award an internationally recognized certificate(s) for each delegate on completion of training.

Course Fees:

To be advised as per course location. This rate includes the participant's manual, Hand-Outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Course Timings:

Daily Course Timings:

08:00 - 08:20	Morning Coffee / Tea
08:20 - 10:00	First Session
10:00 - 10:20	Coffee / Tea / Snacks
10:20 - 12:20	Second Session
12:20 - 13:30	Lunch Break & Prayer Break
13:30 - 15:00	Last Session