**MAWA EVENTS**

**Address:** No. 857, Block A2. Leisure Commerce Square - No 9., 46150 Petaling Jaya, Selangor, Malaysia

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# CONSTRUCTION OF BUILDINGS AND FACILITIES ON DIFFICULT SOILS اقامة المباني والمنشآت علي انواع التربة الصعبة

*"Engineering Confidence on the Weakest Foundations"*

## Schedule

| Venue (InHouse) | Fees |
|---|---|
| At Your Organization Premises | Ask For The Quotation |

► **Available delivery methods:** In-House Training

## Introduction

This course provides a practical and engineering-based approach to constructing buildings and infrastructure on challenging soil types such as soft clay, expansive soils, collapsible soils, and reclaimed land. Participants will explore soil behavior, ground improvement techniques, deep foundations, and risk mitigation measures essential for building safety and longevity.

## Objectives

Participants will be able to:

- Identify and classify difficult soil conditions
- Evaluate ground investigation and geotechnical testing methods
- Select appropriate ground improvement and foundation solutions
- Design safe and cost-effective construction plans for problematic soils

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## Why Attend

- Gain in-depth understanding of construction challenges on weak and problematic soils
- Learn cutting-edge geotechnical and structural solutions
- Improve your ability to design and manage risk-sensitive projects

## Target Audience

- Civil engineers and geotechnical engineers
- Site managers and construction supervisors
- Structural engineers and consultants
- Government agencies and infrastructure planners

## Individual Benefits

- Enhanced expertise in foundation and soil engineering
- Ability to assess soil risk and propose practical solutions
- Increased value as a project manager or technical advisor

## Organizational Benefits

- Safer construction practices for high-risk soil environments
- Reduction in project delays and structural failures
- Long-term cost savings through optimized ground solutions

## Instructional Methodology

- Instructor-led technical sessions
- Case studies from real-world projects
- Interactive soil testing and simulation exercises
- Group problem-solving workshops

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## Course Outline

DETAILED 5-DAY COURSE OUTLINE (Customizable) Training Hours: 07:30 AM – 03:30 PM Daily Format: 3–4 Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

**Day 1 – Introduction to Difficult Soils**

- Types of difficult soils: soft clay, expansive, collapsible, peat
- Case histories of failures and successes
- Basics of soil behavior and geotechnical risks

**Day 2 – Site Investigation & Soil Characterization**

- Planning geotechnical investigations
- In-situ testing (SPT, CPT, pressuremeter)
- Lab analysis and soil classification

**Day 3 – Ground Improvement Techniques**

- Soil stabilization methods (lime, cement, etc.)
- Preloading and wick drains
- Geosynthetics and vibro-compaction

**Day 4 – Foundations for Difficult Soils**

- Deep foundation design (piles, caissons)
- Mat foundations and raft slabs
- Soil-structure interaction principles

**Day 5 – Risk Mitigation and Practical Applications**

- Slope stability and retaining systems
- Monitoring and instrumentation
- Design workshop and project review

## Certification

Participants will receive a Certificate of Completion at the end of the course.

## Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
- **Industry-Leading Faculty:** Courses delivered by seasoned professionals with hands-on experience.
- **Practical Insights:** Learn to turn theory into actionable strategies for real-world business impact.
- **Client-Focused Solutions:** Customized programs designed to achieve your organisation’s unique goals.

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|---|---|---|
| **In-House / Customized Training**<br>Interested in running this course for your team?<br>Please contact us: | TEL:<br>**+601116373203** | EMAIL:<br>**info@mawaevents.net** |