



London TDM

# Civil and Construction Engineering Training Courses

**Course Venue:** United Arab Emirates - Dubai

**Course Date:** From 12 April 2026 To 16 April 2026

**Course Place:** Downtown Dubai

**Course Fees:** 5,000 USD

## Introduction

The "Surveying Techniques and Equipment Handling" course is designed for professionals seeking to enhance their skills in modern surveying methodologies and the effective handling of related equipment. Over five days, participants will explore a blend of theoretical knowledge and practical applications, aiming to improve accuracy and efficiency in surveying tasks. This course is ideal for both beginners and experienced surveyors looking to update their toolkit in line with current industry standards.

## Objectives:

- Understand the fundamentals of surveying concepts and technologies.
- Become proficient with various surveying instruments and their applications.
- Develop skills in data collection, processing, and analysis.
- Implement advanced surveying techniques in practical scenarios.
- Ensure safety and accuracy in equipment handling and project execution.

## Course Outlines

### Day 1: Introduction to Surveying

- Overview of surveying history and importance.
- Basic surveying terminology and definitions.
- Types of surveys and their applications.
- Introduction to surveying equipment and tools.
- Safety measures in surveying practices.

### Day 2: Surveying Instruments and Their Use

- Detailed study of traditional surveying instruments like theodolites and levels.
- Modern surveying equipment: total stations and GNSS receivers.
- Equipment calibration and maintenance.
- Practical session: Hands-on experience with basic instruments.
- Troubleshooting common equipment problems.

### Day 3: Data Collection and Analysis

- Principles of data collection in surveying.
- Introduction to data processing software.
- Methods of data analysis and interpretation.
- Fieldwork: Data gathering techniques.
- Ensuring data accuracy and verification.

### Day 4: Advanced Surveying Techniques

- Overview of geodetic and cadastral surveys.
- Topographic and hydrographic surveying methods.
- Application of remote sensing and GIS technology.
- Laser scanning and photogrammetry techniques.

- Case studies of complex surveying projects.

### **Day 5: Practical Implementation and Fieldwork**

- Putting theory into practice: Comprehensive field exercises.
- Project planning and execution strategies.
- Collaborative surveying tasks and teamwork.
- Discussion on challenges and problem-solving strategies.
- Course review and assessment of skills acquired.