London TDM

Civil and Construction Engineering Training Courses

Course Venue: Malaysia - Kuala Lumpur

Course Date: From 18 January 2026 To 22 January 2026

Course Place: Royale Chullan Hotel

Course Fees: 6,000 USD

Introduction

Value Engineering (VE) in civil projects is a systematic method to improve the value of a project by either improving its function or reducing its cost. This 5-day professional course is designed to equip civil engineering professionals with the knowledge and skills required to implement value engineering practices effectively in their projects to optimize resources and enhance project performance.

Objectives

- Understand the principles and concepts of value engineering.
- Learn the VE process and how to apply it in civil projects.
- Identify opportunities for improving project value.
- Develop skills to facilitate VE workshops and studies.
- Enhance decision-making skills for greater project efficiency.

Course Outlines

Day 1: Introduction to Value Engineering

- Definition and importance of value engineering in civil projects.
- History and evolution of VE.
- Core concepts and principles of VE.
- Difference between value engineering and cost-cutting.
- Case studies highlighting successful VE in civil projects.

Day 2: VE Methodology and Functional Analysis

- Overview of the VE methodology: information phase, creative phase, evaluation phase, development phase, and presentation phase.
- Understanding functional analysis and its importance in VE.
- Techniques for identifying and analyzing functions.
- Tools for function analysis: FAST diagrams and function-cost matrices.
- Practical exercise: Conducting a functional analysis on a sample project.

Day 3: Identifying Opportunities and Creativity Techniques

- Identifying VE opportunities within a project lifecycle.
- Brainstorming techniques for generating creative solutions.
- Using TRIZ methodology for innovative problem-solving.
- Role play and team dynamics in VE workshops.
- Practical exercise: Applying creativity techniques to civil project challenges.

Day 4: Evaluation and Development of Alternatives

- Criteria for evaluating and selecting the best value alternatives.
- Quantitative and qualitative analysis of VE proposals.
- Risk analysis and management in VE decisions.
- Documenting and presenting value engineering proposals.
- Group activity: Evaluating alternatives for a case study project.

Day 5: Implementing VE Proposals and Closing

- Steps for successfully implementing VE solutions in projects.
- Change management and stakeholder engagement strategies.
- Monitoring and measuring the impact of VE interventions.
- Feedback and improvement cycles in the VE process.
- Course closing session: Review, feedback, and takeaways.