

Value Engineering & Cost Estimating

Kigali (Rwanda)

2 - 6 February 2026

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Value Engineering & Cost Estimating

Code: PM28 From: 2 - 6 February 2026 City: Kigali (Rwanda) Fees: 3300 Pound

Introduction

Value Engineering VE is a systematic and disciplined approach aimed at maximizing the value of a project through cost optimization without compromising essential functions. Originally introduced over 70 years ago in the manufacturing sector, value engineering has since evolved and been widely adopted across various industries to improve both initial and long-term investment outcomes. Unlike typical design reviews or cost-cutting initiatives, value engineering focuses on a creative, organized effort that evaluates the essential functions of a project to achieve the desired results at the lowest possible total costs, covering aspects like capital, staffing, energy, and maintenance. The value engineering process is ideally applied early in a project, although it can be integrated at any stage, including construction. By employing multi-disciplinary teams, value and cost-efficiency are enhanced through the exploration of alternative designs, materials, and methods. The result is the removal of unnecessary expenditures, improving both engineering cost analysis and overall project efficiency.

Course Objectives

The Value Engineering & Cost Control course is designed to enable professionals to implement value engineering effectively in their organizations, leading to significant benefits such as:

- Implementing value engineering techniques in the workplace.
- Increasing asset reliability and availability to world-class standards.
- Reducing unscheduled downtime and production interruptions.
- Achieving cost optimization techniques to reduce maintenance costs by 50-70%.
- Learning global benchmarking standards for cost estimating and project cost management.

Course Outlines

Day 1: Introduction to Value Engineering VE

- Overview of Value Engineering and its definition.
- Understanding when to apply value engineering for maximum impact.
- The impact and benefits of value engineering in project management.
- Introduction to project scope and how it influences the value engineering process.
- Comprehensive budget analysis: Key elements of the project budget and the role of cost estimating.

Day 2: Application in Value Engineering

- Key value engineering techniques for effective cost optimization.
- Understanding the Total Value Management Concept.
- Exploring the relationship between VE phases and value management in design.
- Classes of Value and types of value in the context of project management.

A graphic of a chessboard with several chess pieces (king, queen, rook, knight, and pawns) in gold and silver. The text 'UK Training PARTNER' is overlaid on the right side of the board.

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- Identifying when to apply value engineering for optimal cost-benefit.

Day 3: Function Evaluation

- Differentiating between basic and secondary functions in projects.
- Introduction to Function Analysis Systems Technique FAST.
- Applying the FAST procedure through hands-on examples.
- The Six-Step VE Job Plan:
 - Information gathering.
 - Speculation phase.
 - Planning.
 - Execution.
 - Reporting.
 - Implementation.

Day 4: Speculative Phase Creativity

- Techniques for fostering creativity in the speculative phase, including brainstorming and the nominal group technique.
- Conducting cause and effect analysis and utilizing Pareto charts.
- Understanding the Total Cost concept and its application in Life Cycle Costing LCC.

Day 5: Building on Speculation

- Analyzing the nature of information and its role in cost analysis.
- Identifying the elements of manufacturing cost in value engineering.
- VE Workshop Team Projects: Practical application of the VE plan of attack and solutions for project cost management.

Why Attend This Course? Wins & Losses!

- Benefits of value engineering: Learn how to implement value engineering techniques to drive cost reductions, improve asset reliability, and enhance overall project value.
- Cost optimization techniques: Discover how to apply cost estimating techniques to reduce maintenance costs, prevent unnecessary expenditures, and increase operational efficiency.
- Global benchmarking standards: Gain valuable insights into global standards for project cost management and how to apply them to your projects for superior results.
- Hands-on learning: With practical workshops and real-world examples, you'll gain the tools to make informed decisions and optimize costs at every stage of your projects.

Conclusion

This Value Engineering & Cost Control course provides comprehensive training in value engineering, offering the tools, techniques, and strategies needed to enhance your projects' performance while reducing costs. By focusing on cost estimating, engineering cost analysis, and project cost management, the course prepares you to optimize your organization's resources and achieve world-class results. Whether you're looking to improve your team's ability to manage value engineering processes or want to achieve better financial outcomes, this course is essential for anyone involved in project management and cost control.

A graphic of a chessboard with several chess pieces. A large gold king piece is in the foreground, with a silver pawn and a gold pawn behind it. The text 'UK Training PARTNER' is overlaid on the right side of the board.

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