Value Engineering and Project Cost Optimization Training Course



20 - 24 Dec 2026

Dubai

4800 € (Per Person)

Ref: #PMP6517_232257

Course Introduction / Overview:

This intensive training course provides a comprehensive framework for implementing Value Engineering (VE) and cost optimization strategies to maximize project value and return on investment. Value Engineering is not merely about cost-cutting; it is a systematic, function-oriented methodology aimed at enhancing value by improving the relationship between function and cost. This course delves into the foundational principles established by pioneers like Lawrence D. Miles, exploring how to analyze and improve project outcomes without sacrificing quality, reliability, or performance. Participants will gain a deep understanding of the VE job plan, from the information phase to the final presentation, learning to identify unnecessary costs and foster innovation. Drawing on concepts from seminal works such as "Value Engineering: A Practical Approach for Owners, Designers and Contractors" by Steven J. Kirk, this program equips professionals with the tools to challenge conventional designs and processes. At BIG BEN Training Center, we have designed this course to be highly practical, ensuring that attendees can immediately apply learned techniques like Function Analysis System Technique (FAST) and Life Cycle Costing (LCC) to their own projects, driving efficiency and achieving significant financial and operational benefits.

Target Audience / This training course is suitable for:

- Project Managers and Project Directors.
- Engineers from all disciplines (Civil, Mechanical, Electrical, etc.).
- Architects and Designers.
- Cost Estimators and Quantity Surveyors.
- Procurement and Supply Chain Managers.
- Construction Managers.
- Operations and Facility Managers.
- Finance and Commercial Managers.
- Product Development Specialists.
- Team Leaders and Department Heads.

Target Sectors and Industries:

- Construction and Real Estate Development.
- Manufacturing and Industrial Production.
- Oil, Gas, and Petrochemical sectors.
- Engineering, Procurement, and Construction (EPC).
- Information Technology and Telecommunications.
- Healthcare and Pharmaceutical.
- Aerospace and Defense.
- Transportation and Logistics.
- Public Utilities and Infrastructure.
- Governmental agencies and public sector organizations.

Target Organizations Departments:

- Project Management Office (PMO).
- Engineering and Design.
- Procurement and Contracts.
- Finance and Cost Control.
- Operations and Maintenance.
- Capital Projects.
- Research and Development (R&D).
- Quality Assurance and Control.
- Strategic Planning.
- Asset Management.

Course Offerings:

By the end of this course, the participants will have able to:

- Master the core principles and methodology of Value Engineering.
- Apply the systematic Value Engineering job plan to diverse projects.
- Conduct comprehensive Function Analysis using FAST diagramming techniques.
- Develop and evaluate creative, high-value alternatives to existing designs.
- Perform Life Cycle Costing (LCC) to support long-term decision-making.
- Integrate VE principles into every stage of the project lifecycle.
- Lead and facilitate effective Value Engineering workshops and team sessions.
- Identify and eliminate unnecessary costs without compromising quality or performance.
- Develop compelling proposals and reports to justify VE recommendations.
- Measure the financial and non-financial benefits of VE initiatives.

Course Methodology:

The training methodology at BIG BEN Training Center is designed to be immersive, interactive, and highly effective, moving beyond traditional lecture-based formats. This course utilizes a blended learning approach that combines expert-led instruction with hands-on application. Participants will engage in detailed case study analyses of real-world projects, dissecting both successful and unsuccessful applications of Value Engineering to draw critical lessons. A significant portion of the course is dedicated to practical workshops where attendees will work in teams to apply the VE job plan to a simulated project, fostering collaboration and creative problem-solving skills. Interactive sessions, group discussions, and brainstorming exercises are used throughout the five days to encourage the exchange of ideas and experiences. Our expert facilitators provide continuous guidance and personalized feedback, ensuring that each participant can connect the theoretical concepts to their specific professional challenges. This practical, results-oriented approach guarantees that attendees leave with not only knowledge but also the confidence and skills to implement cost optimization strategies effectively within their organizations.

Course Agenda (Course Units):

Unit One: Foundations of Value Engineering and Project Economics

- Introduction to Value Engineering (VE) and Value Analysis (VA).
- The history and evolution of the value methodology.
- Defining value, function, cost, and worth in a project context.
- Understanding the relationship between cost and performance.
- Key principles of engineering economics and project finance.
- Identifying and classifying different types of project costs.
- The strategic importance of VE in modern project management.

Unit Two: The Value Engineering Job Plan

- A detailed overview of the multi-phase VE job plan.
- Phase 1: Information gathering and project scoping.
- Phase 2: Function Analysis and the role of FAST diagramming.
- Phase 3: The Creative phase for generating innovative ideas.
- Phase 4: The Evaluation phase for assessing and shortlisting alternatives.
- Phase 5: The Development phase for refining viable proposals.
- Phase 6: The Presentation phase for communicating recommendations to stakeholders.

Unit Three: Core Techniques for Function and Cost Analysis

- Mastering Function Analysis System Technique (FAST).
- Developing classic and technical FAST diagrams.
- Techniques for effective brainstorming and creative thinking (e.g., TRIZ).
- Introduction to Life Cycle Costing (LCC) principles and calculations.
- Conducting a comprehensive cost-benefit analysis.
- Pareto analysis for identifying high-impact cost drivers.
- Risk assessment and its integration into the value study.

Unit Four: Implementing VE Across the Project Lifecycle

- Applying VE during the conceptual and design stages.
- Value Engineering in procurement, construction, and commissioning.
- Managing VE workshops and facilitating multi-disciplinary teams.
- Overcoming organizational resistance to change and VE proposals.
- Stakeholder management and communication strategies for VE.
- Integrating VE with other project management methodologies like Lean and Agile.
- Legal and contractual considerations for VE implementation.

Unit Five: Advanced Applications, Reporting, and Continuous Improvement

- Advanced case studies from various industries (construction, manufacturing, IT).
- Developing a compelling VE proposal and business case.
- Techniques for measuring and reporting VE savings and value improvements.
- Establishing a continuous improvement culture through VE.
- The role of software and digital tools in supporting VE studies.
- Final project workshop: Applying the full VE job plan to a complex case.
- Developing a personal action plan for implementing VE in the workplace.

FAQ:

Qualifications required for registering to this course?

There are no requirements.

How long is each daily session, and what is the total number of training hours for the course?

This training course spans five days, with daily sessions ranging between 4 to 5 hours, including breaks and interactive activities, bringing the total duration to 20 - 25 training hours.

Something to think about:

Beyond tangible cost savings, how can the systematic discipline of Value Engineering fundamentally reshape an organization's culture towards innovation and efficiency?

What unique qualities does this course offer compared to other courses?

This course distinguishes itself by adopting a holistic and strategic perspective on Value Engineering, positioning it not as a mere cost-reduction tool but as a powerful driver of innovation and competitive advantage. While other programs may focus narrowly on the technical application of VE tools, this curriculum emphasizes the integration of the value methodology within the broader context of project and organizational strategy. We move beyond theory by immersing participants in complex, real-world case studies that demand critical thinking and creative problem-solving. The course structure is uniquely designed to build skills progressively, starting with foundational economic principles and culminating in the leadership of a full VE workshop. A key differentiator is our focus on the human element of Value Engineering facilitating multi-disciplinary teams, managing stakeholder expectations, and championing a culture of value. Participants will not just learn how to perform a function analysis; they will learn how to persuade decision-makers, overcome resistance, and embed a value-conscious mindset across their departments, ensuring that the benefits of the training extend far beyond a single project.