



Advanced Value Engineering (VE)
Training Course



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Introduction:

In its broadest sense, value is the benefit a project offers the client. Value Engineering VE is a creative, organized approach that enables providers of a product, service, or project to engage proactively with stakeholders to ensure that project value is optimized, life-cycle costs are reduced, and unnecessary costs are eliminated. The VE value engineering methodology emphasizes the return-on-investment aspect of decision-making regarding benefits management during project planning, procurement, and execution.

Advanced VE value engineering enables design teams and organizations to identify and evaluate alternative ideas and solutions at any project phase. It avoids wasted design and investment effort and delivers the best value solutions that meet client requirements. VE value engineering is not about selecting the cheapest option; instead, it is about realizing the best value for money, improving organizations' productivity, competitiveness, and effectiveness, and stimulating innovation.

This VE value engineering course is designed to provide the participants with expert guidance for securing real benefits and cost savings by implementing VE in their projects. It places a greater emphasis on developing project scope, cost estimates, design solutions, and budgets. The advanced VE value engineering training course significantly enhances creative thinking, problem-solving, objective assessment, and informed decision-making skills within project management.

Targeted Groups:

- Project Managers.
- Operational Excellence Personnel.
- Operations Managers.
- Asset Managers.
- Quality Assurance Personnel.

Course Objectives:

Upon the end of this advanced VE value engineering course, the participants will be able to improve:

- Understand the fundamental concepts of value engineering and how it supports effective project management by providing a continuous thread of good practice throughout the project development process.
- Gather and organize information and costs relevant to critical elements of the project.
- Learn how to capture and incorporate stakeholders' input in developing the project charter and plan.
- Critically assess and evaluate the relationships among critical attributes such as cost, value, and function.
- Report effectively to top management and project stakeholders in the context of proposing alternatives that improve the overall project value.
- Objectively present a convincing case in support of specific project alternatives.

Targeted Competencies:

By the end of this advanced VE value engineering training, the participant's competencies will be able to:

- Value Techniques.
- Budget Analysis.
- Life Cycle Costing.
- Project Management.
- Risk Management.
- Cost estimation.

Course Content:

Unit 1: Framework for Applying Value Engineering in Projects:

- What is Value?
- What is Value Engineering? Why is it important?
- Defining Value Engineering concepts and principles.
- How and when is Value Engineering applied?
- Project stakeholders analysis and management.
- Understanding teamwork and cross-functional Project Teams and team player styles.

Unit 2: The Function Analysis Phase - Expressing Project Functional Needs and Constraints:

- Overview of Different Value Engineering Phases/Job Plans.
- The Information Phase - steps and procedures.
- The need for Function Analysis in projects.
- Develop FAST Diagrams to identify critical project components and perform project value analysis.
- Defining project constraints - relationships and trade-offs
- Aspects of Cost Estimating.

Unit 3: The Creative Phase - Inspiring Creativity in Your Project Team:

- Risk Management.
- Relationships between Value, Cost, and Worth.
- Facilitation skills.
- Creativity and Creative thinking within the project environment.
- Creativity techniques are applied to optimize project value.
- Blocks to creativity within the project team.

Unit 4: The Evaluation Phase - Making Informed Project Decisions:

- Reaching consensus and leveraging the power of project team collaboration.
- Idea selection.
- Evaluation methods and value criteria.
- Development phase.
- Techniques in problem-solving.
- Life-cycle costing analysis.



Unit 5: The Planning and Reporting Phases - Getting Results Through Effective Communication:

- Effective Decision-making in a project environment.
- Develop action plans and assign project roles and responsibilities.
- Reporting VE findings to Senior Management and project stakeholders.
- Integrating VE into the project process and Continuous Improvement and application at project initiation.

Conclusion:

Upon completing this advanced VE value engineering training course, participants will be equipped with the necessary skills to implement value engineering strategies effectively.

Participants in this VE value engineering course will understand what value engineering entails, including value analysis and life-cycle costing, positioning them firmly for obtaining a value engineering certification.

This certification in VE value engineering will attest to their proficiency in the principles and applications of VE and signal prospective employers that they have the enhanced capability to drive value maximization in engineering projects.