BLACKBIRD FOR TRAINING

# Value Engineering & Cost Estimating

7 – 11 February 2027
Washington (USA)



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## Introduction

Value Engineering VE is a methodical and structured way to get the most value out of a project by cutting costs without losing important 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. Employing multi-disciplinary teams enhances value and cost-efficiency by exploring 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 equips professionals to effectively implement value engineering in their organizations, resulting in 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.
- This section introduces the project scope and explains 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 and types of value in the context of project management.
- Identifying when to apply value engineering for optimal cost-benefit.

## Day 3: Function Evaluation

- Differentiating between basic and secondary functions in projects.
- Introduction to the 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 is essential.
- 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 expenses, 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.

