Agenda

Click here for additional training and schedules.

Systems Project Management:
Techniques for Managing Complex Projects

Instructor(s): Dennis Van Gemert, PMP
Prework: None

Length: 2 days
CEUs: 1.4/see below for PDU breakdown

Level: Intermediate
Training Topic: Business Skill Enhancement
Subtopics: Scheduling, Complexity

Training Description:

Effective project management and the implementation of a systems approach are key elements in a strategy designed to ensure successful achievement of a project's objectives, while remaining within the project's cost and schedule constraints. Whether you are a project or program manager, planning and managing the development of complex systems and interfaces, desiring a greater degree of knowledge on how systems engineering best practices can be capitalized to enhance project and program success, or are simply interested in gaining a systems perspective into managing complexity, you will find this training invaluable.

This training discusses the benefits of combining traditional project management with a systems methodology in order to improve the project's product development cycle with a focus on customer needs analysis and reducing total life cycle costs. In an effective system, all components must integrate seamlessly, without the excessive cost of rework and scrap. Managing a project within these limitations requires a systematic process for planning, design, and production activities. Specific topics include understanding the systems engineering process; planning from a systems perspective; carrying out the requirements definition, analysis, and allocation process; incorporating design processes into the project planning process; and performing trade studies involving scheduling, costs, and performance that incorporate technical performance measurements.

Learning Objectives:

Upon completion of this training, learners will be able to:
- Identify the impacts and relationships between technical and project risks.
- Understand the value of systems engineering to product development.
- Demonstrate a structured analytical decision-making methodology.
- Convert customer needs into a producible product.
- Explain a brief overview of the systems engineering concepts and fundamentals.
- Describe systems integration methodology.
- Recognize life cycle costing.
- Compare synergies between systems engineering and project management.

AGENDA, DAY 1

- Introduction
  - The Systems Life Cycle
  - Life Cycle Costing
  - The Front End of the Project
  - Integrated Product and Process Development
  - Affordability Analysis
- Requirements Management
  - Specification Trees
  - Product Development Life Cycle
  - Key Requirements Concerns
  - Customer Needs Analysis
  - What Is a Good Requirement?
  - Requirements Traceability Versus Project Cost
  - Controlling Scope Creep Through Effective Requirements Management
- Trade Studies
  - Trade Table
  - Sensitivity Analysis
  - Cost-Performance Trades
  - Design Trades
  - Utility Curves
- Decision Analysis Trees

AGENDA, DAY 2

- Integrating Systems Engineering and Project Management
  - The Product to Project Interface
  - The Systems Thinker
  - Understanding Interfaces and Interface Diagramming
  - Failure Modes and Effects Analysis
  - Program and Technical Risk Considerations
  - Cost Drivers and Design to Cost
  - Technical Performance Measures
  - Product Reviews
  - Collaboration and Complexity Management
- Systems Integration
  - Key Tenets of Systems Integration
  - Process Giver-Receiver Relationships
  - Schedule Integration
  - Interface Design
  - Systems Architecting Introduction
  - Human Factors Considerations
- Systems Planning
  - Planning Drivers
  - Requirements Planning
  - Team Organization and Coordination
  - Verification and Validation Planning
  - Stakeholder and Peer Participation
  - Risk Management Integration
  - Contracting Considerations

Professional development units (PDUs) are 1-hour blocks of time spent learning, teaching others, or volunteering. By attending this training, you will be able to achieve the following PDUs as learning hours to apply for PMI certification or to maintain your certification status with PMI. View how your PDUs align with the PMI Talent Triangle®.

	Technical	Leadership	Strategic	Total
CAPM® / PMP® / PgMP®	14	0	0	14.00
PMI-ACP® / Agile*	0	0	0	0.00
PMI-SP®	0	0	0	0.00
PMI-RMP®	2	0	0	2.00
PfMP®	0	0	0	0.00
PMI-PBA®	4	0	0	4.00

Please note that the asterisked row above applies to the PMI® Agile Certification Journey and includes DASM™, DASSM™, DAC™, and DAVSC™ certifications.