Principles of Requirements Management

Whether you’re looking at becoming a Project Manager or simply learning techniques to make sure your projects or designs meet customer’s expectations, knowing how to develop, track, and manage requirements are valuable skills. In this course, students will learn the fundamentals of developing and managing requirements over product and service development life cycle processes. Students will practice applying key tools and techniques for collecting, analyzing, documenting and tracking requirements successfully over a product or service life cycle. In addition, students will learn about the interaction between requirements management and project management processes (Initiation, Planning, Execution, Monitoring and Controlling, and Closing).

Who should take this course?

This course is for emerging project managers, as well as individuals who are involved in, or affected by, requirements management. Potential students include project managers, project coordinators, team leaders, functional managers, product managers, program managers, project team members, subject matter experts, stakeholders, analysts, and senior managers in any industry who want to make sure that the product or service they are developing meets or exceeds customer expectations.

Course Objectives

- Describe Product Development Life Cycle (PDLC) and Service Development Life Cycle (SDLC) requirements management and the role it plays in the Project Management Institute (PMI) Process Groups (Initiating, Planning, Executing, Monitoring and Controlling, and Closing).
- Generate requirements using key concepts for PDLC and SDLC requirements management.
- Apply different requirements management tools and techniques for various phases of a product or service life cycle.
- Generate test specifications by mapping planning and analysis requirements into testable elements.
- Apply appropriate techniques to manage PDLC and SDLC requirements. Use key tools and techniques to develop, prioritize, and track PDLC and SDLC requirements throughout the entire life cycle.

Course Details

- Length: 18 hours
- Classroom Type: Lecture
- Prerequisites: None

The above prerequisites are considered to be the basic skills and knowledge needed prior to taking this class. Instructors will assume your readiness for the class materials and will NOT use class time to discuss prerequisite materials.
Course Contents

Describe Product Development Life Cycle (PDLC) and Service Development Life Cycle (SDLC) requirements management and the role it plays in the Project Management Institute (PMI) Process Groups (Initiating, Planning, Executing, Monitoring and Controlling, and Closing).

- Recognize the difference between the project life cycle and the product life cycle.
- Describe the similarities and differences between the phases of a project and a product life cycle.
- Explain the role of requirements management in both the project and product life cycles.

Generate requirements using key concepts for PDLC and SDLC requirements management.

- Recognize the importance of requirements throughout the development of a product or service.
- Recognize the relationship between scope and requirements and the constraints imposed by the scope statement.
- Explain the impact of organizational influences, resourcing, management support, and corporate culture on requirements management.
- Compare well-defined requirements with mis-defined or under-defined requirements.
- Identify the critical phase(s) of a PDLC and SDLC where requirements are most important.
- Apply elicitation techniques to gather requirements.

Apply different requirements management tools and techniques for various phases of a product or service life cycle.

- Articulate requirements gathering techniques for the early stage of a project.
- Articulate requirements analysis techniques e.g. how to determine what is in and out of scope.
- Articulate key requirements screening techniques (SMART, SWOT, and TUSCANY).
- Articulate requirements prioritization techniques (High – Med – Low, MoSCoW, and Triage).
- Articulate approaches to writing and modeling requirements (Business Case, Use Case, Scenarios, Process Models, and Activity Diagrams).
- Articulate requirements management tracking tools and techniques.
Generate test specifications by mapping planning and analysis requirements into testable elements.

- Describe requirements planning, analysis, and management.
- Explain how design requirements are transformed into system specifications.
- Explain how implementation requirements are transformed from system specifications into design specifications.
- Explain how test requirements are transformed from design and systems specifications into test specifications.
- Explain how release requirements are transformed into user acceptance tests and customer acceptance requirements.

Apply appropriate techniques to manage PDLC and SDLC requirements. Use key tools and techniques to develop, prioritize, and track PDLC and SDLC requirements throughout the entire life cycle.

- Describe the techniques and alternatives for managing PDLC and SDLC requirements and the effect they have on a project.
- Select the traceability method that best fits a project.
- Articulate the change management system that best fits a project.