# SA01 - Software Requirements Management

## OVERVIEW

Software Requirements Management (RM) seeks to reduce the risk of cost and schedule overruns by establishing a way to control the continuing definition of requirements.

Requirements management initiated as a result of accepting several key assumptions as reality and planning for them:

- Most software efforts are increasing in size and complexity and thus require an iterative (or evolutionary) development approach.
- Requirements will, in fact, change over the life of the project due to changes in technology, user needs and the environment
- Requirements emerge as knowledge is obtained during development
- Requirements drive the verification and test process

The successful implementation of RM depends on having flexible contract scenarios that require the establishment of a process to manage requirements that addresses specification, change control and traceability, and identifies what stakeholders must be involved in the various activities of the process throughout the life cycle.

## AUDIENCE

- Systems Analysts
- IT Professionals
- Project Managers
- Project Team Leaders

## DURATION

- The duration of this course is**: 2 days (14 hours)**

## COURSE OBJECTIVES

- Understand the relationships among key stakeholders and involve them in the requirements engineering process
- Identify requirements change – Recognizing the need for a requirements change is one of the most challenging aspects of project development, and can significantly impact the project.
- Manage the changes to requirements – Establish and use formal procedures of requirements engineering to ensure that issues are addressed and the appropriate specification and communication occurs.
- Identify and track requirements attributes – This provides objective data for better decision-making.
- Trace requirements – Maintain an information path from source to implementation.

- Understand and perform risk planning and mitigation activities

## COURSE OUTLINE

### Module 1: Requirements Management Principles and Practices

- The Requirements Baseline
- Requirements Management Procedures
- Requirements Version Control
- Requirement Attributes
- Tracking Requirements Status
- Measuring Requirements Management Effort

### Module 2: Requirements Change, Tracing, and Management Tools

- Managing Scope Creep
- The Change Control Process
- The Change Control Board
- Measuring Change Activity
- Impact Analysis
- Tracing Requirements
- Motivations for Tracing Requirements
- The Requirements Traceability Matrix
- Tools for Requirements Traceability
- Requirements Traceability Procedure
- Benefits of Using a Requirements Management Tool
- Requirements Management Tool Capabilities
- Implementing Requirements Management Automation

### Module 3: Special Requirements Challenges and Process Improvement

- Requirements for Maintenance Projects
- Requirements for Package Solutions
- Requirements for Outsourced Projects
- Requirements for Emergent Projects
- How Requirements Relate To Other Project Processes
- Fundamentals of Software Process Improvement

- The Process Improvement Cycle
- Requirements Engineering Process Assets
- The Requirements Process Improvement Roadmap

## Module 4: Software Requirements Risk Management

- Fundamentals of Software Risk Management
  - ✓ Requirements-Related Risks
  - ✓ Requirements Elicitation
  - ✓ Requirements Analysis
  - ✓ Requirements Specification
  - ✓ Requirements Validation
  - ✓ Requirements Management
- Risk Management is Your Friend