

Software Quality Assurance: Delivering Consistent Quality - 4 Days

Course 312 Overview

- You Will Learn How To**
- Implement and effectively lead Software Quality Assurance (SQA) activities
 - Improve customer satisfaction through quality and process initiatives
 - Analyse information through static and dynamic techniques including walk-throughs and inspections
 - Conduct audits by following a defined process
 - Control critical components using Configuration Management (CM)
 - Champion a continuous process improvement programme in your organisation

Course Benefits Systems that fail to provide adequate functionality can reduce profit, productivity and result in increased costs. Implementing and monitoring process improvement and quality initiatives can lead to cost-effective systems. This course provides the necessary skills to define, design, implement and monitor a software quality system using proven techniques that can be tailored for your organisation. You also gain the skills to audit work products throughout the product life cycle.

Who Should Attend Software professionals, project managers, business analysts, quality analysts and others involved with developing, testing or improving the development and production of systems.

Workshop Course You apply proven software quality assurance techniques in a series of workshops, including:

- Discovering software quality problems
- Applying life cycle models
- Determining the appropriate project standards
- Conducting walk-throughs and audits
- Identifying configuration items
- Designing metrics for your project
- Comparing best practices and standards
- Implementing process improvements

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Course 312 Outline

Introduction to Software Quality Assurance

- Contrasting roles: Software Quality Assurance, Testing, Verification and Validation
- Comparing software development life cycles
- Documenting processes
- Defining the goals of Software Quality Assurance

Software Quality Assurance Components

Analysing the components of quality

- Creating processes
- Choosing the best practices and implementing process improvement initiatives

Implementing a road map

- IEEE
- CMMI
- ISO 9001
- COBIT®
- ITIL®
- Selecting and documenting standards
- Conducting training
- Participating in reviews and audits
- Maintaining records

Planning for Software Quality Assurance

Applying verification and validation techniques for error detection

- Evaluating verification and validation techniques
- Analysing life cycle products
- Implementing walk-throughs
- Exploring testing techniques

Detecting defects while applying inspection techniques

- Defining the inspection process
- Planning and conducting an inspection
- Communicating inspection results

Conducting Audits

The types of audits

- Comparing process, product, project, quality-system and configuration audits
- Documenting audit findings in a report

Comparing industry standards

- Complying with industry standards and models: ISO 9001 and CMMI
- Comparing the work products against industry best practices

Verifying product configuration using configuration audits

- Demonstrating the product satisfies the requirements
- Ensuring the as-built product complies with the documentation

Improving productivity using in-process audits

- Assessing internal processes for compliance
- Analysing processes and procedures used during development

Initiating the auditing process

- Planning and preparing for the audit
- Reporting the results
- Monitoring noncompliance

Applying Configuration Management (CM)

Defining the components of a CM system

- Identifying the workflow and work products
- Managing and controlling products for consistency
- Assessing and managing components with release management
- Communicating product status using reports

Ensuring quality by controlling CM components

- Verifying software and hardware components
- Maintaining test data for regression tests
- Tracking change requests

Participating in an SQA and CM audit

- Reviewing documentation against a standard
- Interviewing quality and configuration management personnel
- Documenting and confirming audit findings
- Presenting audit findings

Continuous Process Improvement Fostering learning through process improvement

- Defining and implementing process improvement
- Planning process improvement initiatives

Achieving excellence through metrics

- Selecting and analysing metrics
- Analysing data through root cause analysis

- Communicating organisational progress

Coordinating the next steps

- Implementing corrective actions
- Focusing on prevention techniques