

Quality Assurance (QA) Online Training Course Content

Course Content:

1. 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

2. Software Quality Assurance Components
 - Analyzing the components of Quality
 - Creating processes
 - Choosing the best practices and implementing process improvement initiatives

 - Implementing a road map
 - IEEE
 - CMMI
 - ISO 9001
 - Selecting and documenting standards
 - Conducting training
 - Participating in reviews and audits
 - Maintaining records

3. Planning for Software Quality Assurance
 - Applying verification and validation techniques for error detection
 - Evaluating verification and validation techniques
 - Analyzing life cycle products
 - Implementing walkthroughs
 - Exploring testing techniques

 - Detecting defects while applying inspection techniques
 - Defining the inspection process
 - Planning and conducting an inspection
 - Communicating inspection results

4. 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
 - Analyzing processes and procedures used during development

- Initiating the auditing process
 - Planning and preparing for the audit
 - Reporting the results
 - Monitoring noncompliance

5. 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

6. Continuous Process Improvement

- Fostering learning through process improvement
 - Defining and implementing process improvement
 - Planning process improvement initiatives

- Achieving excellence through metrics
 - Selecting and analyzing metrics
 - Analyzing data through root cause analysis
 - Communicating organizational progress

- Coordinating the next steps
 - Implementing corrective actions
 - Focusing on prevention techniques