Implementing Quality Approaches into Testing

This is a 3 day, practical hands-on course that covers the critical path of testing and numerous techniques to implement quality into the process. Students will learn the terminology, process, and challenges of testing in the real world. You will also learn how to find software defects early in the development lifecycle before they become more costly and risky to fix. You will gain a good working knowledge of testing and what it takes to design and conduct an effective test of software, regardless of the technology.

Course Objectives:

- Learn how to develop test cases and test plans.
- Identify the appropriate metrics to measure progress, performance & quality.
- Learn techniques to ensure that an information system protects data and maintains functionality.

Audience: Quality assurance specialists, quality control analysts, system testers, programmers, business analysts, systems analysts, project managers, support analysts, engineers, and acceptance testers.

Prerequisites: None.

Number of Days: 3 days

1 Introduction to Testing & QA

- Objectives / observations
- Impediments, opportunities, and managing
- Responsibilities during testing
- Testing definitions
- Starting testing early vs. late start testing
- Quality assurance
- Quality tools / steps / suggestions
- Opportunities to improve the testing process
- Defining the development life cycles
- Measuring performance / reliability metrics
- Product development and testing phases and objectives

2 Major Software Development & Testing Issues

- Functional specifications and design documents
- Preparing and validating the specifications
- Quality assurance
- Specification problems / defect classification
- Detailing the scripts and cases
- Unit vs. System or acceptance testing
- Positive and negative testing
- Blind testing
- Use case analysis
- Regulating the change control process

3 Test Methodologies & Checklists

- Setting test objectives and identifying tests
- Test planning
- Using test methodologies
- Computing the test coverage
- Black box vs white box testing
- Boundary value testing
- Path analysis or Cyclomatic complexity
- Decision tables
- State machines
- State transition
- Factor analysis
- OATS– orthogonal array testing strategy
- Pairs and magic squares