



# Veterans Workforce Development Program

*Identifying, Equipping and Transforming Veterans into Gainfully Employed Citizens in the Civilian Workforce*

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## Course Highlights – Business Analysis and Software Quality Assurance

OBJECTIVE: Upon completion, students will understand the business analysis and software quality assurance processes and their relationship to software development. In addition, they will have hands-on experience with tools used to produce deliverables through workshops and lab exercises.

### Week 1: Software Testing Overview

- Introduction to Software Testing: What is testing, why is it necessary, and what are the goals?
- The fundamentals and basic principles of testing
- Verification & Validation
- Different models of the Software Development Life Cycle
- Testing Techniques and Testing Types

### Week 2-3: Test Planning

- Test Strategy and Plan
- Test Cases: Positive, Negative, Functional, Non-functional, etc.
- Defect Life Cycle: Tracking, Priority, Report
- Various Metrics and Deliverables
- Preparing Traceability Matrix
- Common Test Environments
- Hands On Exercises
  - Test Plan Creation
  - Requirements Review – Static Testing
  - Test Case Design
- Back-end Testing – Basics of SQL

### Week 4: Quality Center

- Modules & Architecture
- Working with different modules:
  - Requirements Module
  - Test Plan Module

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- Test Lab Module
- Defects Module
- Defining Manual Test
- Mapping Test to Requirements
- Automation Test
- Creating Reports & Graphs

## Week 5-6: QTP, Test Manager and LoadRunner

### Quick Test Professional (QTP)

- Introduction to QTP: How it works, Quick Test Window and Layout, Test Process, etc.
- Introduction to Automation Testing: Benefits, various Test Tools, etc.
- Record & Playback
  - Creating and executing a basic test
  - Analyzing the result
  - Checkpoint
- Parameterization of Tests and Data Driven Test

### Microsoft Test Manager

- Testing using Microsoft Test Manager
- Plan manual tests with Microsoft Test Manager
- Run manual tests with Microsoft Test Manager
- Copying and cloning test suites and test cases
- Record and play back manual tests
- Automate system tests

### Load Runner

- Introduction to Non-functional Testing
- Overview of Load Testing and Stress Testing
- Load Runner Architecture
- Components of Load Runner
  - Virtual User Generator: Selecting the protocols and recording the basic script
  - Controller: Creating & designing a scenario, configuring scripts

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- Analysis: Cross results and merged graphs

## Week 7: Business Analysis Training

- Agile Methodology
- Software Development Process Models
- Introduction to Business Analysis
- Business Analyst Skills
- BA Role and Responsibilities
- Types of Requirement: Business, Stakeholder, System
- System Requirements: Functional and Non-functional
- BA Techniques
- Steps to address a Business Need
- Use Cases and User Stories
- Building a Product Backlog
- Creating Card, Conversations, Confirmation
- Tool Usage: Requirements, Modeling, Wireframes
- Team Foundation Server
- Requirements Traceability Matrix
- Challenges of Business Analysis

## Soft Skills Training

Students are encouraged to engage in the class and actively participate in class exercises. Mock sessions and group exercise simulate actual IT testing team scenarios with emphasis on understanding roles and responsibilities across various teams. Students are introduced to the world of IT (most students have an IT background) by attending various sessions conducted by area employers. These sessions focus on the hiring process, the IT organization, expectations from team members and tips/techniques for interviewing.

- ✓ Mock Interviews
- ✓ Resume Preparation Tips
- ✓ Presentations

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