

# Exploring Visual Studio® 2010 ALM Tools (formerly Visual Studio Team System)

**Instructor:** **Chris Menegay** is the VP of Consulting for Notion Solutions, Inc. He has written white papers and magazine articles and spoken at many industry conferences. Chris' process tool knowledge is broad, but primarily focuses on the Microsoft ALM tools. Chris is a Microsoft MVP, and a Microsoft Regional Director.

**Total Learning Time:** 10 hours

Media run time is 10+ hours. This course can also be used as quick reference material, with the ability to access just the information you need in a matter of minutes.

**Target Audience/Prerequisites:** This course assumes that students have a programming background and experience working in Visual Studio. The user should also have a basic understanding of software development practices.

**Course Description:** Tracking and maintaining a software development project requires a team effort. With big improvements in the Application Lifecycle Management (ALM) tools in Visual Studio 2010, project tracking can now be part of the development process. Anybody from team members, to project managers can now update tasks, check-in code, run a testing matrix, report bugs and so much more. In this course you'll start with an introduction to the ALM tools found in the Visual Studio 2010 Product Line. These tools cover user roles, management, reporting and work tracking. Then the course will move onto version control with side by side code comparison. Then you'll be shown how Team Build can streamline your build process and how working with Microsoft Test Manager can improve your testing practices. As with any software development project, regression testing is a very important part and the course covers using Automated Testing with Visual Studio for both Windows and Web application testing. You'll then move on to Modeling Tools that cover the diagramming features of Visual Studio. Then last to Database Tools overview with subjects such as development, versioning, schemas, data generation plans and more.

## Course Outline:

### Introducing VS 2010 ALM Tools

- Overview of Application Lifecycle Management
- Overview of targeted roles and capabilities
- Visual Studio ALM features by product

### Management Reporting

- Team Foundation Data Warehouse
- Team System Reports (Reporting Services)
- Reporting with Excel Reports
- Ad-hoc reporting

### Work Tracking Overview

- Work Item review
- Hierarchical Work Item Management
- Work Item Queries
- Work Item Query folders
- Link queries
- Managing Work Items with Excel and Project

### Version Control Overview

- Team Foundation Server version control concepts
- Architecture overview and changes in Team System 2010
- Changesets and Pending Changes
- Workspaces
- Creating and managing branches
- Branch visualization
- Check-in Policy

### Version Control Features

- Folder comparison
- Annotate
- Labels
- Working with shelvesets
- \* Merging between branches

### Team Build

- Team Build Architecture
- Creating Build Definitions
- Executing Builds
- Scheduling Builds/Continuous Integration
- Gated Check-ins

### Working with Microsoft Test and Lab Manager

- Managing test plans and test suites
- New manual testing functionality
- Working with test settings
- Running tests and reporting results
- Recording tests and automated playback
- Managing test runs

### Creating and Managing Bugs with Microsoft Test Manager

- No more "No Repro"
- Creating and managing Bugs
- Bug context and reporting
- Recording video and capture data during testing

### Overview of Lab Manager

- Virtualization overview
- Working with Lab Manager
- Creating a test lab
- Working with snapshots
- Test Labs and Application Lifecycle Management

### Automated Testing with Visual Studio

- Test Project overview
- Test configuration and features overview
- Test View
- Test List Editor
- Test Results

### Coded UI Testing

- Creating Coded UI tests for Windows applications
- Creating Coded UI Tests for web applications
- Using Manual Test Recording to create Coded UI Tests
- Validating Coded UI Tests
- Using the UI Control locator

### Data-Driven Coded UI Testing

- Creating Data-Driven coded UI Tests

### Web Testing

- Overview of Web Test tools
- Creating and executing Web Tests
- Using extraction and validation rules
- Data-Driven Web Tests

### Load Testing

- Creating Load Tests
- Understanding and sharing Load Test results
- Working with Load Profiles
- Monitoring performance counters
- Implementing threshold rules

### Visual Studio 2010 Modeling Tools

- Overview of Modeling Projects
- Activity Diagrams
- Use Case Diagrams
- Logical Class Diagrams
- Component Diagrams
- Sequence Diagrams
- Architecture Explorer
- Architecture validation
- Layer Diagrams
- Directed Graph Diagrams
- Linking model elements to Work items

### Developer Tools - Improving Code Quality with Unit Testing

- Unit Test philosophy and understanding
- Working with Visual Studio unit test tools
- Enabling and using Code Coverage to influence software quality
- Using Test Impact
- Data-Driven unit testing

### Developer Tools - Improving Code Quality with Analysis and Performance Tools

- Understanding and using IntelliTrace
- Understanding and using Code Metrics
- Enabling and using Code Analysis
- Using the code Profile

### Developer Tools - Using the Code Profiler

- Using the Code Profiler
- Profiling Unit Tests
- Profiling Window Applications

### VS 2010 Database Tools Overview

- Overview of database development and versioning
- Database development with sandboxes and automated deployment
- Overview of Database Project structure
- Importing options and configuration
- Understanding the properties and components of a Database Project
- Navigating a database project using object view and schema view
- Understanding the build process
- Modifying database schema
- Deploying database to non-local environments
- Using Static Code Analysis on database projects
- Database unit testing
- Creating and modifying a data generation plan

Number of Modules	Media Run Time	Total Learning Time	Printable PDF Courseware	Hands-on Labs	Sample Code	Pre/Post Exams	Supports Microsoft Exam Number
8 Modules	10+ hours	10+ hours	N/A	N/A	Yes	Yes	N/A