

## TFS 2017 Developer Fundamentals Course Outline

1. Introducing the Microsoft Visual Studio 2017 Family
  - a. What's new in Visual Studio 2017
  - b. Overview of the Visual Studio 2017 family
  - c. Overview of product features
  - d. A lap around Visual Studio Team Services
  - e. Project workflow across the Visual Studio 2017 suite of products
2. Organizing Work in Team Projects
  - . Understanding team projects and team project collections
    - a. Selecting a process template
    - b. Creating team projects
    - c. Using Teams to manage work
3. Understanding and Using Work Items
  - . Overview of work items
    - a. Traceability between work items
    - b. Creating custom queries
    - c. Work item tagging
    - d. Configuring project alerts and notifications
4. TFS Version Control Concepts
  - . Version Control in Visual Studio
    - a. Version Control terminology
    - b. A closer look at workspaces
    - c. Changesets and shelvesets
5. Using Team Foundation Version Control
  - . The Source Control Explorer
    - a. Getting code into TFVC
    - b. Understanding the Pending Changes experience
    - c. Linking changesets to work items
    - d. Locking files in TFVC
6. Configuring an Effective Version Control Environment
  - . Working with workspaces
    - a. Setting team project-wide source control settings
    - b. Check-in policies
    - c. Backward compatibility using the MSSCCI provider
7. Effective Branching and Merging
  - . Defining a branching strategy
    - a. How to branch
    - b. Branch visualization and tracking changes

- c. Merging and resolving conflicts
  - d. Custom differencing tools
- 8. Unit Testing and Code Quality Tools
  - . Unit testing in Visual Studio
    - a. Visual Studio Test Explorer
    - b. Code Metrics
    - c. Static Code Analysis
- 9. Build and Continuous Integration
  - . Understanding build infrastructure
    - a. Creating new build definition
    - b. Running tests as part of your build
    - c. Extending builds using scripts
- 10. Package Management
  - . Overview of Package Management in TFS/VSTS
    - a. Consuming packages in Visual Studio
    - b. Publishing packages to Package Management
    - c. Creating a CI/CD pipeline for your packages