



# TFS 2015 Developer Fundamentals

Duration	2 days	Version	2015.1
Skill level	Intermediate		
Audience	Developers using TFVC for version control		
Products and technologies	The following products and technologies will be covered in this course: <ul style="list-style-type: none"><li>• Visual Studio 2015</li><li>• Team Foundation Server 2015 or Visual Studio Team Services</li></ul>		

## Course Description

Team Foundation Server 2015 and Visual Studio Team Services offer many features to help make developers more productive. This two-day course has been designed for developers wanting to work efficiently with Team Foundation Server 2015 or Visual Studio Team Services. All examples are shown using Team Foundation Version Control (TFVC) rather than GIT for version control.

This course starts by getting developers familiar with the product suite before they create a new team project to organize their work. We then move on to Work Item Tracking, which is where requirements, tasks, bugs, and more are defined and tracked throughout the project.

The central part of the course provides a deep dive into version control topics that are central to a developer's day-to-day work. This includes how to branch and merge following best practices before moving into unit testing and code quality features. The course examines the new build automation system introduced in the 2015 product release and finishes with a look at features designed to improve team collaboration such as team rooms and code review.

## Team Foundation Server or Visual Studio Team Services

This course is applicable for teams using Visual Studio Team Services or an on-premises Team Foundation Server.

## Course Objectives

At the completion of this course, attendees will be able to:

- Create, configure and manage team projects
- Use Team Explorer to navigate project content
- Manage work using work items including configuring links correctly
- Use work items such as Task and Bug to provide traceability
- Create and customize work item queries to find and organize work
- Set up and manage their own custom alerts (notifications)
- Understand core version concepts and how they apply to TFS or VSTS
- Use the Source Control Explorer
- Configure source control folder structures
- Use the version control system effectively including branching and workspaces
- Use the MSSCCI provider to enable backward compatibility for maintaining legacy code
- Work with unit tests and the Test Explorer window
- Use code metrics and static code analysis
- Use the new build system introduced in TFS 2015 and Visual Studio Team Services
- Work with legacy XAML build definitions
- Improve team collaboration using team rooms and code review

## Audience

This course is designed for all Visual Studio 2015 developers who are starting work in a team with **either** Visual Studio Team Services or Team Foundation Server. The course focuses on features common to both the professional and enterprise editions of Visual Studio 2015.

## Prerequisites

Attendees should have some familiarity with Visual Studio and either Visual Basic or C#.

## Modules

### Module 1: Introducing the Visual Studio 2015 Family

- What's new in Visual Studio 2015
- Overview of the Visual Studio 2015 family
- Overview of product features
- A lap around Visual Studio Team Services
- Project workflow across the Visual Studio 2015 suite of products

### Module 2: Creating and Configuring Team Projects

- Understanding team projects and team project collections
- Selecting a process template
- Creating team projects
- Configuring permissions
- Renaming or deleting team projects

### Module 3: Understanding and Using Work Items

- Overview of work items
- Traceability between work items
- Creating custom queries
- Work item charting and pinning charts
- Work item tagging
- Configuring project alerts and notifications

### Module 4: TFS Version Control Concepts

- Version control in Visual Studio
- Version control terminology
- A closer look at workspaces
- Changesets and shelvesets

### Module 5: Using Team Foundation Version Control

- The Source Control Explorer
- Getting code into TFVC
- Understanding the Pending Changes experience
- Linking changesets to work items
- Locking files in TFVC

### Module 6: Configuring an Effective Version Control Environment

- Working with workspaces
- Setting team project-wide source control settings
- Check-in policies
- Backward compatibility using the MSSCCI provider
- Using TFS shell integration (PowerTools)

### Module 7: Branching and Merging

- Defining a branching strategy
- How to branch
- Branch visualization and tracking changes
- Merging and resolving conflicts
- Custom differencing tools

### Module 8: Unit Testing and Code Quality Tools

- Unit testing in Visual Studio
- Visual Studio Test Explorer
- Code metrics
- Static code analysis

### Module 9: Build Automation

- Understanding the new 2015 build infrastructure
- Creating new build definition
- Running tests as part of your build
- Extending builds using scripts
- Working with legacy XAML builds

### Module 10: Team Collaboration

- Enhanced communication using team rooms
- Improving quality using code review