



# **50478: SHAREPOINT 2010 ADVANCED FOUNDATION DEVELOPMENT TRAINING**

**Duration: 5 Days** 



## **Course Description**

This five-day, instructor-led, group-paced, classroom-delivery learning format includes pre-planned, practical exercises.

The core building elements of SharePoint Foundation 2010 are the course's primary subject matter, including features, site pages, application pages, custom list types, Web Parts, site columns, custom workflows, content kinds, and site definitions.

Developing bespoke Service Applications and extending the Ribbon are further advanced topics.

## **Training Exclusives**

- Live instructor-led interactive sessions with Microsoft Certified Trainers (MCT).
- Access to Microsoft Official Courseware (MOC).
- Real-time Virtual Lab Environment.
- Experience 24\*7 Learner Support.
- Self-paced learning and flexible schedules.

#### Who should attend this course?

Anyone wishing to create fundamental changes for SharePoint. Event handlers, site definitions, features, web components, timer jobs, and workflows are all included in this.

## What you will learn

- Consider extending several of the fundamental functions that SharePoint Foundation offers.
- These include web components, features, event handlers, and site specifications!

## **Prerequisites**

Participants should be familiar with ASP.NET 2.0, Visual Studio 2010, and the.NET 3.0 Framework from a professional development perspective. Participants must be acquainted with Microsoft Office applications like Word, Excel, and InfoPath.

## **Curriculum**

## **Module 1: Overview**

A simple introduction module.

Lab 1: Foundation Site Definitions

Create one of each SharePoint Foundation site

After completing this module, students will be able to:

• Understand your course, classroom, classmates, facility, and instructor.

## **Module 2: Collaboration Experience**

In this module, we take a look at the new features introduced in SharePoint 2010 from a collaboration and UI perspective.



#### Lessons

New SharePoint Features

#### Lab 1: User interface

- Understand UI Improvements
- Use the Create Page
- Explore the Ribbon

After completing this module, students will be able to:

- Describe the new UI features of SharePoint 2010
- Understand how the Ribbon works

## **Module 3: Object Model**

In this model, we explore the SharePoint Server programming model. We will explore several basic SharePoint assemblies and classes.

#### Lessons

- Debugging SharePoint
- Server Object Model

## Lab 1: Object Model

- Create applications using the Server Object Model
- Create in-context ASP.NET Web Application
- Create out-of-context Windows Application

## Lab 2: Debugging SharePoint

- Learn to Debug SharePoint via Log Files
- Learn to Debug Via Visual Studio
- Log to the SharePoint log file

## Lab 3: Developer Dashboard

• Enable Developer Dashboard

## Lab 4: SharePoint Web Development

- Adding Application Pages (Bin and Gac deployment) [\_layouts]
- Adding Site Pages [content database]

After completing this module, students will be able to:

- How to create applications using the Server Object Model
- Understand the basic SharePoint assemblies
- Be able to search and find SharePoint classes and methods
- Be able to debug code with custom ULS Logging
- Understand how to test web page performance with Developer Dashboard

## **Module 4: Client Object Model**

In this module, we will explore the various Client Object Models. This includes the Client (.NET), ECMAScript and Silverlight Object Models.

#### Lessons

- Silverlight Object Model
- Client Object Model



• ECMA Object Model

Lab 1: Client Object Model

- Explore Client Object Model
- Utilize Client Object Model (.NET)

Lab 2: ECMA Script

• JavaScript Object Model

Lab 3: Silverlight

• Utilize Silverlight Object Model

After completing this module, students will be able to:

- Describe and use the Client Object Model
- Describe and use the JavaScript Object Model
- Describe and use the Silverlight Object Model

#### **Module 5: SharePoint Permissions**

In this module, we take a look at SharePoint permissions. We will explore the default groups, how SharePoint gets usernames and groups from an authentication system, as well has what type of permissions we can assign to those users and groups. We will explore setting up custom permission levels and how permissions are inherited. We will follow that up with SharePoint Security Trimming!

#### Lessons

SharePoint Security

## Lab 1: SharePoint Permissions

- Add Users Programmatically
- Add Groups Programmatically
- Create Permissions Levels programmatically
- Set inheritance programmatically

## Lab 2: Security Trimmed Interface

Use the SharePoint SPSecurityTrimmedControl to hide content and controls

## Lab 3: SPSecurity

Write code to elevate privileges

After completing this module, students will be able to:

- Describe where usernames and domain groups come from
- What a permission level is
- How to assign permissions to a user or group
- What it means to say permissions are cumulative
- Why SharePoint has no deny
- How to use the SPSecurityTrimmed control
- How to programmatically set permission on SharePoint objects

## **Module 6: Authentication with Custom and Claims**

In this module, we will explore how to setup Forms based authentication, how claims-based authentication works and how to use the Secure Store Service in our own applications.

#### Lessons



- Secure Store Service
- Custom Authentication
- Claims Based Authentication

#### Lab 1: Custom Authentication

• Change the default Authentication Method of SharePoint to use a custom MembershipProvider

#### Lab 2: Claims-Based Auth

- Programming with Claims
- Creating custom claims provider

## Lab 3: Secure Store Programming

- Learn how to Configure the Secure Store
- Program web parts to use Secure Store

After completing this module, students will be able to:

- Setup Forms-based authentication in SharePoint 2010
- How to create a Claims based authentication system
- Program Secure Store applications

## **Module 7: Features & Solutions**

In this module, we explore Features and Solutions.

#### Lessons

Features

## Lab 1: Creating Features

- Learn to create a Feature.xml file
- Learn to create an Elements.xml file
- Install features with STSADM and PowerShell
- Create a custom action feature

## Lab 2: Feature Dependencies

• Implement Feature Dependencies

## Lab 3: Feature Sequences

Implement Feature Sequences

## Lab 4: Features with Visual Studio

- Various Feature Types (List, Module, Content-Type)
- Implement Feature Event Receivers
- Implement Feature Stapling

## **Lab 5:** Solutions

• Advanced Solution concepts

## Lab 6: Custom Deployment Steps

• Create a Custom Deployment Step

After completing this module, students will be able to:

What can be deployed as features



- How to create several types of features
- How to package your features into Solutions
- Advanced Solution packaging techniques

## **Module 8: Sandboxed Solutions**

In this module, we are going to take a look at SandBoxed Solutions, Solution validators, and Full Trust Proxies.

#### Lessons

• Sandboxed Solutions

#### Lab 1: Sandboxed Solutions

- Explore Sandboxed Solutions
- Create and Test Sandboxed Solutions
- Explore Limitations of Sandbox Solutions
- Configure Sandbox Points

## Lab 2: Solution Validators

• Create and Deploy a Solution Validator

## Lab 3: Full Trust Proxy

• Create and Deploy a Full Trust Proxy

After completing this module, students will be able to:

- How to create a Sandboxed Solution
- What the limitations are of SandBoxed Solutions
- What Resource Measures and how to modify them
- How to create Solution Validators
- How to create Full Trust Proxies

## **Module 9: Web Services**

In this module, we explore the web services that come out of the box with SharePoint.

## Lessons

Web Services

## Lab 1: Foundation Web Services 2007

- Learn to find SharePoint Web Service
- Add a reference to SharePoint Web Service
- Program to several of the Web Service Interfaces

After completing this module, students will be able to:

- Find and describe the various SharePoint Web Services
- Be able to consume SharePoint Web Services in custom applications

## **Module 10: LINQ and REST**

In this module, we are going to take a look at the new REST and LINQ features of SharePoint 2010.

#### Lessons

- REST
- LINQ



#### Lab 1: REST

- Utilize REST Services
- REST Service Reference
- REST List Service Calls (PUT, GET)
- REST Excel Service

#### Lab 2: LINQ

- LINQ Introduction
- Utilize LINQ For SharePoint
- Use SPMetal.exe

After completing this module, students will be able to:

- How to use REST Services
- How to generate and use LINQ

#### **Module 11: Web Parts**

In this module, we explore Web Parts. We will take a look at basic web parts and then transition to more complex topics like Tool Parts and Web Part Connections.

#### Lessons

Web Parts

#### Lab 1: Manual Web Part

- Learn how to create a basic web part
- Learn how to deploy a web part manually in the development environment

## Lab 2: Visual Studio Web Part

- Use Visual Studio to Create Web Parts
- Learn how to create web parts that interface with SharePoint Object Models, Databases, and Web Services
- Implementing Web Part Tool Parts

## Lab 3: Web Parts Connections

• Create ASP.NET Web Part connections

## Lab 4: Asynchronous Web Parts

• Synchronous Vs. Asynchronous Web Parts

After completing this module, students will be able to:

- Describe how web parts work
- Create web parts with connections
- Create web parts with Tool Parts
- Design and develop asynchronous web parts

## **Module 12: Custom Site Definitions**

In this module, we explore Site Definitions and Collaborative Markup Language (CAML).

#### Lessons

• Site Definitions

## Lab 1: Custom Site Definitions



- Create a new Site Definition (Manually)
- Create a new Site Definition (Visual Studio)

After completing this module, students will be able to:

- Know CAML when you see it!
- Understand what a site definition is and how to modify it
- How to create custom site definitions manually and with Visual Studio
- · How to add branding via site definitions

#### **Module 13: Content Types**

In this module, we explore content types, content type lineage and content type hubs.

#### Lessons

Content Types

## Lab 1: Content Types

- Explore Content Types
- Create A New Content Type
- Document Information Panels
- Default Workflows
- Adding Content Types To Lists (Document Library)

## Lab 2: Content Types Lineage

Content Type Inheritance/Lineage

## Lab 3: Content Type Hub

- Configure Content Type Hub
- Configure Content Type Publishing

After completing this module, students will be able to:

- Understand and describe content types and their properties
- Be able to create content types
- Understand Content Type Lineage
- Understand how to setup Content Type Hubs

## **Module 14: Custom Field Types**

In this module, we explore how to create your own column types for your lists. SharePoint calls these Custom Field Types.

## Lessons

Field Types

## Lab 1: Custom Field Types

- Create A Custom Field Type (Regular Expression)
- Create A Custom Field Type (User Control)

After completing this module, students will be able to:

- Understand and describe Custom Field Types
- Be able to create custom field types with and without a UI

## **Module 15: Events and TimerJobs**

In this module, we will explore SharePoint Events and how to create and assign them to lists and sites.



We will also explore how to create custom Timer Jobs to implement your own monitoring applications.

#### Lessons

- SharePoint Timer Jobs
- SharePoint Events

#### Lab 1: SharePoint Events

- Create an Event Handler feature
- Programmatically assign an Event Handler

#### Lab 2: Custom Timer Job

• Create a custom Timer Job

## Lab 3: SharePoint Events Encrypt

Create an Event Handler feature that encrypts documents

After completing this module, students will be able to:

- Understand and describe SharePoint Events
- Understand and describe SharePoint Timer Jobs
- Be able to create and deploy SharePoint Events
- Be able to create and deploy SharePoint Timer Jobs

## **Module 16: Service Applications**

In this module, we are going to take a look at Service Applications that come out of the box with SharePoint and how to build your own service applications.

#### Lessons

Service Applications

## Lab 1: Custom Service Applications

Create & Deploy a Custom Service Application

After completing this module, students will be able to:

- Describe Service Applications
- Understand how the Service Application architecture works
- Create and install custom Service Applications

## Module 17: Workflows With SharePoint Designer

In this module, we are going to take a look at implementing workflows with SharePoint Designer 2010.

#### Lessons

Workflows

## **Lab 1:** Custom Activities

• Create a custom workflow activity for SharePoint Designer

## Lab 2: Custom Conditions

• Create a custom condition for SharePoint Designer

After completing this module, students will be able to:

• Describe SharePoint Designer workflows



- Understand what a looping workflow is
- · Understand common workflow patterns
- Build custom actions for SharePoint Designer
- Build custom conditions for SharePoint Designer
- Implement logging in your workflows

#### **Module 18: Workflows With VisualStudio**

In this module, we will explore how to use Windows Workflow Foundation to create highly customized and reusable workflows.

#### Lessons

Visual Studio Workflows

### Lab 1: Custom Visual Studio Workflow

• Create a custom workflow using Visual Studio

After completing this module, students will be able to:

• How to create custom workflows with Visual Studio

## **Module 19: Business Connectivity Services**

In this module, we are going to take a look at the new Business Connectivity Services.

#### Lessons

Business Connectivity Services

#### Lab 1: BCS

- Explore External Content Types
- Create a new External Content Type
- Create an External List

## Lab 2: BCS Connectors

• Create a custom BCS .NET Connector

After completing this module, students will be able to:

- Understand how BCS works
- How to build new BCS applications
- How to Upgrade your older BDC applications
- How to create BCS Connectors

## Module 20: Extending the User Interface

In this module, we are going to take a look at extending the new Ribbon and how to work with the new Dialog platform.

## Lessons

- Extending the Ribbon
- Dialogs

## Lab 1: Extending the Ribbon

• Extend the SharePoint Ribbon

Lab 2: Creating Dialogs



• Utilize the UI Dialog Platform

After completing this module, students will be able to:

- Understand how to extend the SharePoint UI
- Customize and extend the Ribbon
- Create custom Dialogs

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