

Advanced SharePoint Development

Course Code: MS50064 Five days; Instructor-Led

Prerequisites

Before attending this course, students must have:

- MS-4995: Programming with Microsoft .NET Framework Using Microsoft Visual Studio 2005
- MS-2542: Advanced Data Access with Visual Studio 2005
- MS-2543: Core Web Application Technologies with Microsoft Visual Studio 2005
- MS-5060: Implementing Windows SharePoint Services 3.0 2007
- MS-5061: Implementing Microsoft Office SharePoint Server 2007

Course Outline

Module 1: Course Overview

This module explains how the class will be structured and introduces course materials and additional administrative information.

Lessons

- Introduction
- Course Materials
- Facilities
- Prerequisites
- What We'll Be Discussing

Lab : Setup

- Set Up Web Applications for Lab Use

Module 2: Custom Authentication

This module explains ASP.NET providers, how to create a single sign-on, and how to configure a SharePoint Web Application.

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Lessons

- Overview
- SharePoint = ASP.NET Application
- ASP.NET Providers
- Microsoft Single Sign-On
- Demonstration: Custom Authentication

Lab : Custom Authentication

- Create a Username/Password Database
- Create a User
- Configure .NET Config File
- Configure a SharePoint Web Application to Use Forms Authentication with Custom Provider

Lab : Single Sign-On

- Configure a Single Sign-On
- Program a Single Sign-On

After completing this module, students will be able to:

- Configure a Microsoft Single Sign-On
- Configure a SharePoint Web Application

Module 3: SharePoint Permissions

This module explains the permissions in Microsoft Windows Server Systems (WSS) and how they have been enhanced, explains how to set permissions at an item level, and describes naming conventions.

Lessons

- Overview
- IIS Application Pools
- SharePoint Windows Groups
- SharePoint Default Groups
- ASP.NET Membership/Role Provider

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- Assignable Entities
- Custom Permission Levels
- Permissions
- Site/List/Item Permission Inheritance
- Security Trimmed Interface
- Web Application Policy
- SPSecurity Class
- Single Sign-On
- Demonstration: SharePoint Permissions

Lab : SharePoint Permissions

- SharePoint Default Groups
- Membership Users
- Custom Permission Sets
- Site/List/Item Permission Inheritance
- Web Application Policy

After completing this module, students will be able to:

- Set permissions at an item level
- Use the Membership/Role provider feature of ASP.NET 2.0.

Module 4: In-Browser Customization

This module explains how to add and edit new pages using web parts, master pages, and themes.

Lessons

- Overview
- SharePoint UI Overview
- Default.aspx
- Everything Is a List
- Using Web Parts
- Customization Web Parts

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- Adding New Pages
- Editing New Pages
- Master Pages
- Themes
- Navigation
- Demonstration: In-Browser Customizations
- Page Layouts
- Content Types
- Content Management Server (CMS)

Lab : In-Browser Customizations

- Default.aspx page
- Adding web parts
- Add/edit a new page
- Apply a master page
- Apply a theme
- Versioning and content approval

After completing this module, students will be able to:

- Personalize site pages using web parts
- Create and use master pages and themes to make it easy for end users to change the site to their preferences

Module 5: Basic SharePoint Designer

This module explains the SharePoint designer basics, how to create and modify existing sites, and how to create CSS style sheets.

Lessons

- Overview
- SharePoint Designer Basics
- Creating/Modifying Existing Sites
- Exploring Team Sites

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- Exploring Portal Sites
- Demonstration: SharePoint Designer
- ASP.NET Pages
- SharePoint Designer Editing Features
- Demonstration: SharePoint Designer
- Creating Master Pages
- Demonstration: SharePoint Designer
- Using SharePoint Controls
- Demonstration: SharePoint Designer
- Creating CSS Style Sheets
- Demonstration: SharePoint Designer

Lab : Basic SharePoint Designer Tasks

- Create a Site
- Add an ASPX Page
- Create a Master Page
- Override CSS

Lab : Basic SharePoint Designer Tasks

- Check In/Check Out
- Add Web Parts
- Add Web Part Zones
- Adding Images
- Reset to Site Definition

After completing this module, students will be able to:

- Make simple changes to your SharePoint site.
- Update master pages.
- Create and override CSS.

Module 6: Advanced SharePoint Designer

This module explains reports, data views, data sources, and how to back up and restore a Web site.

Lessons

- Overview
- Built-In Reports
- Data Views
- Data Sources
- Backup Web Site
- Restore Web Site
- Demonstration: Advanced SharePoint Designer

Lab : Advanced SharePoint Designer

- Reports
- Data Views
- Data Sources
- Backup a Site
- Restore a Site

After completing this module, students will be able to:

- Run reports for quick data mining of the sites
- Backup and restore a site

Module 7: Content Types

This module explains different content types, document information panes, and how to create custom content types.

Lessons

- Overview
- Content Types Introduction
- Built-In Content Types/ Inheritance

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- Content Type Settings
- Site/Content Type Columns
- Document Information Panel
- Workflows
- Custom Content Types
- Demonstration: Content Types

Lab : Content Types

- Built-in Types
- Document Information Panel
- Workflows

After completing this module, students will be able to:

- Define metadata layers around content
- Build columns
- Assign items to common content

Module 8: Site Definitions

This module explains WSS built-in definitions, Microsoft Office SharePoint Server 2007 built-in definitions, and CAML and describes the different SharePoint templates and themes.

Lessons

- WSS Built-In Site Definitions
- MOSS Built-In Site Definitions
- CAML
- Custom Site Definitions
- Site Definition Elements
- Site Definition Configuration Element
- SharePoint Solution Generator
- SharePoint Templates
- SharePoint Themes
- Demonstration: Site Definitions

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Lab : Site Definitions

- Create Site Definition (manually)
- Create Site Definition (Visual Studio)

Lab : SharePoint Solution Generator

- SharePoint Solution Generator

Lab : SharePoint Templates

- SharePoint Templates

Lab : SharePoint Themes

- Create a SharePoint Theme

After completing this module, students will be able to:

- Add branding to the default site definitions
- Use the Solution Generator

Module 9: Features

This module explains types of features and how to create, activate, and deactivate them.

Lessons

- Features Overview
- Types of Features
- Feature Scopes
- Feature Dependencies
- Feature Localization
- Feature Event Receivers
- Creating Features
- Deploying Features
- Activating/Deactivating Features
- Solutions
- Demonstration: Features

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Lab : Features

- Creating a Feature
- Deploying a Feature

Lab : Features

- Create a Feature using Visual Studio

Lab : Solutions

- Package features into a solution

After completing this module, students will be able to:

- Scope a feature such as a web part
- Create, deploy, activate, and deactivate features

Module 10: Web Services API

This module explains web services API and some common SharePoint Web Services that are available.`

Lessons

- Overview
- Web Service APIs
- Why Use Web Services
- Common SharePoint Web Services
- Demonstration: Finding and Using SharePoint Web Services

Lab : Web Service API

- Find Web Service
- Add Web Service Reference
- Use the Web Service

After completing this module, students will be able to:

- Use web services to integrate your applications with SharePoint

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Module 11: Web Part Development

This module explains web part connections, upgrading web parts, and code access security.

Lessons

- Overview
- Web Parts
- WSS 2.0 vs. WSS 3.0 Web Parts
- ASP.NET Web Part Class
- Web Part Connections
- Web Part Connections (Interfaces)
- Upgrading your Web Parts to WSS 3.0
- When to use SharePoint Web Part Class
- Web Part Permissions
- Code Access Security (CAS)
- Web Part Performance Hints
- Demonstration: WebParts

Lab : WebParts

- Creating WebParts
- Deploying WebParts
- Build WebParts that Interface with Data Sources

Lab : WebParts

- Implement Web Part Connections

Lab : WebParts

- Implement Synchronous Web Part
- Implement Asynchronous Web Part

After completing this module, students will be able to:

- Use web parts to customize and personalize
- Connect web parts to each other to implement more advanced functionality

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Module 12: Client Side Scripts / AJAX

This module explains how to emit client side scripts and describes common AJAX uses.

Lessons

- Overview
- Client Side Scripts
- Emitting Client Side Scripts
- AJAX Introduction
- Common AJAX Uses
- SharePoint AJAX Support
- Demonstration: Client Side Scripts

Lab : Client Side Scripts / AJAX

- Client Side Scripts
- AJAX

After completing this module, students will be able to:

- Move functionality from Server to Client
- Enhance user experience by using AJAX

Module 13: Object Model

This module explains object model DLLs and how to use the object model.

Lessons

- Object Model Overview
- Object Model DLLs
- Using the Object Model
- SPSite vs. SPWeb
- Namespace Changes (2.0 to 3.0)
- Demonstration: Object Model

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Lab : Object Model

- Object Model DLLs
- Using the Object Model

After completing this module, students will be able to:

- Build applications that extend functionality
- Create tools to automate common administrative functions
- Allow other .NET applications to integrate with SharePoint

Module 14: Custom Field Types

This module explains how to create built-in types and custom field types.

Lessons

- Overview
- Field Types Introduction
- Built-In Field Types
- Custom Field Types
- Demonstration: Custom Field Types

Lab : Custom Field Types

- Building Custom Field Types

After completing this module, students will be able to:

- Create custom field types to enhance the functionality of lists in SharePoint

Module 15: SharePoint Events / Timer Jobs

This module explains how to create new events in SharePoint.

Lessons

- Overview
- SharePoint Event Handler History
- New Events

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- More Event Details
- SharePoint Timer Service
- SP JobDefinition Class

Lab : SharePoint Events

- Create an Event
- Assign an Event to a List
- Assign an Event to a Site

Lab : SharePoint Timer Jobs

- Create a Timer Job

After completing this module, students will be able to:

- Add event receivers to objects (lists and sites)
- Understand the object model
- Include event receivers on SharePoint sites

Module 16: Shared Services

This module explains the features of the shared services.

Lessons

- Overview
- Shared Services Features
- Life without Shared Services Features
- Life with Shared Services Features

Lab : Setup Shared Services

- Setup Shared Services

After completing this module, students will be able to:

- Add extra functionality with Shared Services

Module 17: Workflows (SP Designer)

This module explains the differences between SharePoint Designer workflows, conditions, and actions.

Lessons

- Overview
- Built-In WSS/MOSS Workflows
- SharePoint Designer Conditions
- SharePoint Designer Actions
- Extending SharePoint Designer Workflows
- Demonstration: SharePoint Designer Workflows

Lab : MOSS Workflows

- Create and Use Each of the MOSS Workflows

Lab : Workflows (SP Designer)

- SharePoint Designer Workflows
- Extending SharePoint Designer

After completing this module, students will be able to:

- Use SharePoint workflows, conditions, and actions
- Add conditions and actions to further the functionality

Module 18: Workflows (Visual Studio)

This module explains the types of workflows and how to use them with Visual Studio and SharePoint.

Lessons

- Overview
- Windows Workflow Foundation
- Workflow Persistence
- Workflow Types

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- Workflows with Visual Studio
- SharePoint Workflows
- SharePoint Workflows Forms
- Debugging a Workflow
- Comparison of Visual Studio vs. SharePoint Designer
- Demonstration: Workflows (Visual Studio)

Lab : Workflow (Visual Studio)

- Create a Custom Workflow

After completing this module, students will be able to:

- Create and use workflows
- Design workflows with Visual Studios

Module 19: ASP.NET Localization

This module explains how to use RESX files, SharePoint resource files, and SharePoint language Packs.

Lessons

- Overview
- ASP.NET Localization
- Culture and UICulture
- RESX Files
- Implicit vs. Explicit
- SharePoint Resource Files
- Browser Language
- SharePoint Language Packs
- Demonstration: ASP.NET Localization

Lab : ASP.NET Localization

- RESX Files
- Browser Language

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After completing this module, students will be able to:

- Localize a SharePoint site for other languages and cultures
- Override the default SharePoint RESX Files

Module 20: SharePoint/Microsoft FrontPage RPC

This module explains how to use FrontPage RPC and SharePoint RPC.

Lessons

- Overview
- FrontPage RPC
- SharePoint RPC

Lab : SharePoint RPC

- Call a Simple SharePoint RPC Method

After completing this module, students will be able to:

- Use RPC methods do the work

Module 21: Excel Services

This module explains how to use Excel Services.

Lessons

- Overview
- Excel Services Trusted Locations
- Excel Services Web Parts
- Excel Services Object Model/Web Services

Lab : Excel Services

- Create and Upload an Excel File
- Add a Trusted Location
- Configure Excel Web Parts

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After completing this module, students will be able to:

- Use Excel Services to centralize Excel files
- Prevent “bad” Excel files from being uploaded by using trusted locations

Module 22: Business Data Catalog

This module explains Business Data Catalogs.

Lessons

- Overview
- Application Definition Files
- Business Data Catalog Web Parts
- Business Data Catalog Indexing
- Business Data Catalog with Single Sign-On

Lab : Business Data Catalog

- Install a BDC Application
- Setup BDC Web Parts
- Create a List that Uses BDC Data

After completing this module, students will be able to:

- Using BDC to gain access to important data in a backend system
- Use BDC data to populate list data

Module 23: Business Intelligence

This module explains how to use the report center, KPIs, dashboards, and Reporting Services Integration.

Lessons

- Overview
- Report Center
- Key Performance Indicator (KPI)
- Dashboards
- Reporting Services Integration

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Lab : Business Intelligence

- Integrate SQL Server Reporting Services
- Create a Report
- Use the Reporting Services Web Part

After completing this module, students will be able to:

- Use the Report Center as the main portal to reports and business data
- Utilize KPIs for quick and easy decision making
- Integrate Reporting Services seamlessly with SharePoint sites

Module 24: Upgrading WSS 2.0 to 3.0

This module explains how to use Prescan.exe and database migration and explains some migration issues.

Lessons

- Overview
- Prescan.exe
- In-Place Upgrade
- Side-By-Side/ Gradual Upgrade
- Side-By-Side/Gradual Upgrade Steps
- Database Migration Upgrade
- Upgrading Site Definitions
- Migration Issues

Lab : Lab 1-4: Migrating SharePoint

- In-Place Upgrade
- Gradual Upgrade
- Database Migration
- Migration Issues

After completing this module, students will be able to:

- Use the prescan.exe tool to find common issues
- Test the migration in a staging environment.

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