MCSD: SharePoint Application Solutions Developer
70-480 Programming in HTML5 with JavaScript and CSS3

About this course

This course provides an introduction to HTML5, CSS3, and JavaScript. This course helps students gain basic HTML5/CSS3/JavaScript programming skills. This course is an entry point into both the Web application and Windows Store apps training paths. The course focuses on using HTML5/CSS3/JavaScript to implement programming logic, define and use variables, perform looping and branching, develop user interfaces, capture and validate user input, store data, and create well-structured application.

The lab scenarios in this course are selected to support and demonstrate the structure of various application scenarios. They are intended to focus on the principles and coding components/structures that are used to establish an HTML5 software application.

This course uses Visual Studio 2012, running on Windows 8.

Audience profile

This course is intended for professional developers who have 6-12 months of programming experience and who are interested in developing applications using HTML5 with JavaScript and CSS3 (either Windows Store apps for Windows 8 or web applications).

This course is intended for students who have the following experience:

- 1 – 3 months experience creating Web applications, including writing simple JavaScript code
- 1 month experience creating Windows client applications
- 1 month of experience using Visual Studio 2010 or 2012

 This course is not intended for developers with three or more months of HTML5 coding experience.

Students choosing to attend this course without a developer background should pay special attention to the training prerequisites. Developers who have more than 5 years programming experience may find that portions of this training are fundamental in nature when presenting the syntax associated with certain programming tasks.

Individuals who are interested in taking exam 70-480: Programming in HTML5 with JavaScript and CSS3, can also attend this course.

At course completion
After completing this course, students will be able to:

- Explain how to use Visual Studio 2012 to create and run a Web application.
- Describe the new features of HTML5, and create and style HTML5 pages.
- Add interactivity to an HTML5 page by using JavaScript.
- Create HTML5 forms by using different input types, and validate user input by using HTML5 attributes and JavaScript code.
- Send and receive data to and from a remote data source by using XMLHTTPRequest objects and jQuery AJAX operations.
- Style HTML5 pages by using CSS3.
- Create well-structured and easily-maintainable JavaScript code.
- Use common HTML5 APIs in interactive Web applications.
- Create Web applications that support offline operations.
- Create HTML5 Web pages that can adapt to different devices and form factors.
- Add advanced graphics to an HTML5 page by using Canvas elements, and by using and Scalable Vector Graphics.
- Enhance the user experience by adding animations to an HTML5 page.
- Use Web Sockets to send and receive data between a Web application and a server.
- Improve the responsiveness of a Web application that performs long-running operations by using Web Worker processes.

70-486 Developing ASP.NET MVC Web Applications

About this course
In this course, students will learn to develop advanced ASP.NET MVC applications using .NET Framework 4.5 tools and technologies. The focus will be on coding activities that enhance the performance and scalability of a web application. ASP.NET MVC will be introduced and compared with Web Forms so that students know when each should/could be used. This course will also prepare the students for the exam 70-486.
Audience profile
This course is intended for professional web developers who use Microsoft Visual Studio in an individual-based or team-based, small-sized to large development environment. Candidates for this course are interested in developing advanced web applications and want to manage the rendered HTML comprehensively. They want to create websites that separate the user interface, data access, and application logic.
At course completion
After completing this course, students will be able to:

- Describe the Microsoft Web Technologies stack and select an appropriate technology to use to develop any given application.

- Design the architecture and implementation of a web application that will meet a set of functional requirements, user interface requirements, and address business models.
- Create MVC Models and write code that implements business logic within Model methods, properties, and events.
- Add Controllers to an MVC Application to manage user interaction, update models, and select and return Views.
- Create Views in an MVC application that display and edit data and interact with Models and Controllers.
- Run unit tests and debugging tools against a web application in Visual Studio 2012 and configure an application for troubleshooting.
- Develop a web application that uses the ASP.NET routing engine to present friendly URLs and a logical navigation hierarchy to users.
- Implement a consistent look and feel, including corporate branding, across an entire MVC web application.
- Use partial page updates and caching to reduce the network bandwidth used by an application and accelerate responses to user requests.
- Write JavaScript code that runs on the client-side and utilizes the jQuery script library to optimize the responsiveness of an MVC web application.
- Implement a complete membership system in an MVC 4 web application.
- Build an MVC application that resists malicious attacks and persists information about users and preferences.
- Describe how to write a Windows Azure web service and call it from and MVC application.
- Describe what a Web API is and why developers might add a Web API to an application.
- Modify the way browser requests are handled by an MVC application.
- Describe how to package and deploy an ASP.NET MVC 4 web application from a development computer to a web server for staging or production.

70-488 Developing Microsoft SharePoint Server 2013 Core Solutions

About this course
In this course, students learn core skills that are common to almost all SharePoint development activities. These include working with the server-side and client-side object models, developing and deploying features, solutions, and apps, managing identity and permissions, querying and updating list data, managing taxonomy, using workflow to manage business processes, and customizing the user interface.
Audience profile
The course is intended for professional developers who develop solutions for SharePoint products and technologies in a team-based, medium-sized to large development environment. While some familiarity with SharePoint solution development is required,

candidates are not expected to have prior experience with the new features in SharePoint Server 2013.

The ideal candidate is a technical lead with at least four years of SharePoint and web development experience. The candidate is responsible for designing custom code for projects that are deployed to or interact with SharePoint environments. This includes:

- Selecting an appropriate approach and building customizations in SharePoint.
- Creating and implementing a strategy for solution packaging, deployment, and upgrading.
- Identifying SharePoint data and content structures for customizations.
- Performing diagnostics and debugging.
- Planning and designing applications for scalability and performance.
- Identifying and mitigating performance issues of customizations.
- Understanding authentication and authorization.
- Experience with Windows PowerShell.
- Broad familiarity with SharePoint capabilities.
- Familiarity with Online Services such as Azure and SharePoint Online.

At course completion
After completing this course, students will be able to:

- Design and manage features and solutions.
- Develop code for custom server-side components.
- Manage and customize authentication and authorization.
- Create custom sites and lists and manage the site lifecycle.
- Explain the capabilities and design choices for SharePoint apps.
- Use the client-side object model and the REST API.
- Develop provider-hosted and auto-hosted SharePoint apps.
- Distribute and deploy SharePoint apps.
- Create custom workflows to automate business processes.
- Use fields and content types to manage taxonomy.
- Customize the appearance and behavior of user interface elements.
- Customize navigation and site branding.

70-489 Developing Microsoft SharePoint Server 2013 Advanced Solutions

About this course
This course provides SharePoint developers the information needed to implement SharePoint solutions using Enterprise Search, Managed Metadata Service (MMS), Business Connectivity Services (BCS), Enterprise Content Management (ECM), Web Content Management (WCM), Social Computing features and SharePoint Apps.
Audience profile
The course is intended for professional developers who develop solutions for SharePoint products and technologies in a team-based, medium-sized to large development environment. The course is ideally suited to SharePoint developers who have gained some experience with SharePoint 2013 and who are looking to build on their existing skills.
At course completion
After completing this course, students will be able to:

- Describe the apps for SharePoint development platform.
- Use the client-side object models and the REST API to communicate with SharePoint.
- Configure security for apps for SharePoint.
- Optimize the performance of apps for SharePoint.
- Explain the capabilities and applications of managed metadata in SharePoint 2013.
- Automate the creation and configuration of managed metadata term sets.
- Interact with managed metadata term sets and fields from client-side and server-side code.
- Describe the SharePoint 2013 Search Architecture.
- Build simple and advanced KQL Queries.
- Describe the SharePoint Search Index.
- Describe and work with crawled and managed properties.
- Describe the levels and security of the SharePoint Search Schema.
- Create various types of result sources
- Create basic and complex query transforms
- Configure query rule conditions and actions to target query intent
- Create and modify result types
- Create and modify display templates
- Utilize display templates with various search web parts
- Add managed properties as refiners with counts
- Utilize entity extraction in your crawls
- Extend content processing with Content Enrichment
- Describe how to utilize the Publishing API to access publishing settings and content.
- Describe how to use and customize page content controls in publishing sites.
- Configure website structure and navigation.
- Describe the difference between structured and metadata navigation.
- Utilize basic publishing features of SharePoint.

- Use the new cross-site publishing features of SharePoint 2013.
- Configure and implement variations for multilingual sites.
- Configure search engine optimization settings.
- Add SEO Properties to publishing pages and Managed Navigation terms.
- Configure caching to improve site rendering performance.
- Optimize site assets and resources to maximize performance.
- Describe the key components of Business Connectivity Services in SharePoint Server 2013.
- Create and configure BDC models by using SharePoint Designer.
- Create and configure BDC models by using Visual Studio 2012.
- Describe BCS Connector Framework scenarios.
- Design and Develop BCS Connector stereotyped operations.
- Design and Configure BDC model security.
- Optimize Search Connector crawl performance.
- Use Visual Studio to build BDC Models for Search.
- Deploy BDC Search connectors.
- Debug and troubleshoot your search connectors.
- Design and deploy BDC event subscriber methods.
- Describe how to format event notification messages.
- Configure alerts and event receivers on external lists.
- Explain how user profile data is used in SharePoint.
- Describe the options and restrictions for accessing user profile data.
- Use client-side code to access and server-side code to access and update user profile data.
- Configure and manage user profile properties.
- Describe how to identify, diagnose, and remove bugs in SharePoint apps during development.
- Describe how to record information about issues that arise in deployed SharePoint apps.
- Describe how developers optimize the performance of SharePoint apps by implementing best practices, measuring performance, and load testing.