

MCSA: Web Applications  
Course Factsheet



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Al Moalem Institute offers courses in Microsoft Technology Associate (MTA) and Microsoft Certified Solutions Associate (MCSA).



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With over 100+ internationally recognized certifications and qualifications, Al Moalem Institute has been human resource potential and continually shaping careers of today's workforce and the future generation.

# **MCSA: Web Applications**

This course will build upon your foundational understanding in utilizing HTML5, CSS3, and JavaScript programming to develop modern web applications. This course can prepare you to progress to MCSD App Builder certification.

## **How long does it take to complete the course?**

The duration of this course is 80 guided learning hours to complete.

## **Who is this course for?**

This course is ideal for:

- Those who are preparing for Microsoft certification exams under the MCSA Web Applications certification.
- Those who wish to gain fundamental and technical skills necessary to perform roles in web application administration and development.
- Anyone who aims to pursue a long and successful career in web application administration and development.

## **What topics does the course cover?**

This course will cover the following topics:

- PROGRAMMING IN HTML 5 WITH JAVASCRIPT AND CSS3
  - Overview of HTML and CSS
  - Creating and Styling HTMLS Pages
  - Introduction to JavaScript
  - Creating Forms to Collect Data and Validate User Input
  - Communicating with a Remote Data Source
  - Styling HTMLS by Using CSS3
  - Creating Objects and Methods by Using JavaScript
  - Creating Interactive Pages using HTMLS APIs
  - Adding Offline Support to Web Applications
  - Implementing an Adaptive User Interface
  - Creating Advanced Graphics
  - Animating the User Interface /
  - Implementing Real-Time Communications by Using Web Sockets
  - Creating a Web Worker Process
- DEVELOPING ASP.NET MVC WEB APPLICATIONS
  - Exploring ASP.NET MVC4
  - Designing ASP.NET MVC 4 Web Applications
  - Developing ASP.NET MVC 4 Models
  - Developing ASP.NET MVC 4 Controllers
  - Developing ASP.NET MVC 4 Views
  - Testing and Debugging ASP.NET MVC 4 Web Applications
  - Structuring ASP.NET MVC 4 Web Applications
  - Applying Styles to ASP.NET MVC 4 Web Applications
  - Building Responsive Pages in ASP.NET MVC 4 Web Applications
  - Using JavaScript and jQuery for Responsive MVC 4 Web Applications
  - Controlling Access to ASP.NET MVC 4 Web Applications



- Building a Resilient ASP.NET MVC 4 Web Application
- Using Windows Azure Web Services in ASP.NET MVC 4 Web Applications
- Implementing Web APIs in ASP.NET MVC 4 Web Applications
- Handling Requests in ASP.NET MVC 4 Web Applications
- Deploying ASP.NET MVC 4 Web Applications

## **What will I gain after completing this certification?**

At the end of the course you should be able to:

- PROGRAMMING IN HTML 5 WITH JAVASCRIPT AND CSS3
  - 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.
  
- DEVELOPING ASP.NET MVC WEB APPLICATIONS
  - 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 an 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.

### **How is it assessed?**

You must be able to demonstrate competency in the task-based computer-based assessments taken at Pearson Vue test centers.

### **Do I need any prior qualifications to start this course?**

There are no formal entry requirements for this course. It is recommended that students have at least three months of professional development experience in the field before taking the course.

### **I completed and received my certification, what happens next?**

Upon successfully passing the requirements of each exam, you may choose to progress to Microsoft Certified Solutions Developer (MCSD) App Builder certification.

### **What employment opportunities can I apply for after gaining this qualification?**

Our Microsoft certification programs in website and web applications development will unleash your potentials and prepare you for entry-level positions such as:

- Front-end developer
- Website administrator
- Java developer
- Mobile applications developer

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