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# Middlesex County College

**Edison, NJ 08818**

**COURSE ID:** Computer Science and Information Technology Department - CSC 268

# COURSE NAME: ASP.NET Programming

### NUMBER OF CREDITS AWARDED FOR COURSE: 4 credits

**PREREQUISITE OR COREQUISITE COURSES OR ACADEMIC STANDING:**

Prerequisite(s): CSC 267- Advanced C#.NET Programming

### NEW OR MODIFIED COURSE: New

# SEMESTER AND YEAR COURSE WILL FIRST BE OFFERED: Fall 2013

#### NAME AND TELEPHONE NUMBER OR EMAIL ADDRESS OF DEPARTMENT CHAIR:

Chairperson or Course Coordinator: Dr. Peter Farrett

Office Location: JLC201

E-mail Address: PFarrett@Middlesexcc.edu

Telephone: 732-906-2526

**DETAILED COURSE DESCRIPTION:**

This course provides students with all the information required to build web applications using ASP.NET and the .NET Framework. This course includes learning how to use ASP.NET and Web Forms, Server Controls, Classes, Modules, and many other new features of the .NET Framework that apply to ASP.NET. This course will also cover Web application architecture, leveraging User controls, and managing session and application states. This course is not designed for transfer.

# OUTLINE OF COURSE OBJECTIVES:

1. Explore ASP.NET Web applications in Microsoft Visual Studio.
2. Create Web applications by using Microsoft Visual Studio and Microsoft .NET–based languages.
3. Create a Microsoft ASP.NET Web Form.
4. Add functionality to a Microsoft ASP.NET Web Form.
5. Implement master pages and user controls.
6. Validate user input.
7. Debug Microsoft ASP.NET Web applications.
8. Manage data in an ASP.NET 3.5 Web application.
9. Manage data access tasks by using LINQ.
10. Manage data by using ASP.NET Dynamic Data.
11. Create a Microsoft ASP.NET AJAX application.
12. Use Windows Communication Foundation (WCF) services.
13. Manage states in Web applications.
14. Configure and deploy a Microsoft ASP.NET Web application.
15. Secure a Microsoft ASP.NET Web application.
16. Implement new technologies supported by Visual Studio for Web

development.

**TEXTS, JOURNALS, AND OTHER MATERIALS USED IN COURSE:**

Walther, Stephen, Kevin Hoffman, and Nate Dudek. ASP.NET 4 Unleashed. Sams Publishing, 2011. ISBN: 978-0-672-33112-1

## SUGGESTED GRADING CRITERIA:

3 Examinations 30%

Final Examination 20%

Lab Assignments 25%

Quizzes 10%

Homework 15%

100%

**SCHEDULE OF TOPICS TO BE COVERED:**

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| **1.** Exploring Microsoft ASP.NET Web Applications in Microsoft Visual Studio |
| Introduction to the .NET Framework  Overview of ASP.NET |
| **2.** Creating Web Applications by Using Microsoft Visual Studio and Microsoft  .NET–Based Languages |
| Creating a Web Application |
| **3.** Creating a Microsoft ASP.NET Web Form |
| Creating Web Forms  Adding and Configuring Server Controls in a Web Form |
| **4.** Adding Functionality to a Microsoft ASP.NET Web Form |
| Working with Code-Behind Files  Handling Server Control Events  Creating Classes and Components using Visual Studio 2010  Handling Page Events |
| **5.** Implementing Master Pages and User Controls |
| Creating Master Pages  Adding User Controls to an ASP.NET Web Form |
| **6.** Validating User Input |
| Overview of User Input Validation  ASP.NET Validation Controls  Validating Web Forms |
| **7.** Troubleshooting Microsoft ASP.NET Web Applications |
| Debugging in ASP.NET  Tracing in ASP.NET |
| **8.** Managing Data in an Microsoft ASP.NET 4.0 Web Application |
| Overview of ADO.NET  Connecting to a Database  Managing Data |
| **9:** Managing Data Access Tasks using LINQ |
| Overview of LINQ  Managing XML Data using LINQ to XML  Managing SQL Data using LINQ to SQL and LINQ to Entities |
| **10.** Managing Data using Microsoft ASP.NET Dynamic Data |
| Overview of ASP.NET Dynamic Data  Applying ASP.NET Dynamic Data  Customizing ASP.NET Dynamic Data Applications |
| **11.** Creating a Microsoft ASP.NET Ajax-enabled Web Form Application |
| Introduction to Ajax  Creating an ASP.NET Ajax Application using Ajax Features for ASP.NET  Extending an ASP.NET Web Forms Application using the Ajax Control Toolkit |
| **12. Using** Microsoft Windows Communication Foundation Services |
| Overview of Windows Communication Foundation Services  Calling Windows Communication Foundation Services  Working with WCF Data Services |
| **13.** Managing States in Web Applications |
| State Management  ASP.NET Profiles  ASP.NET Caching |
| **14.** Configuring and Deploying a Microsoft ASP.NET Web Application |
| Configuring an ASP.NET Web Application  Deploying an ASP.NET Web Application |
| **15.** Securing a Microsoft ASP.NET Web Application |
| Overview of Web Application Security  Declaratively Configuring Authentication and Authorization  Working Programmatically with Authentication and Authorization |
| **16.** Implementing Advanced Technologies Supported by Microsoft Visual Studio  For Web Development |
| Working with the ASP.NET MVC 2 Framework  Working with Silverlight 4 |

**Course Abstract**

**Course ID and Name:** CSC 268 – ASP.NET Programming

**Department:** Computer Science and Information Technology

Chairperson or Course Coordinator: Dr. Peter Farrett

Office Location: JLC201

E-mail Address: PFarrett@Middlesexcc.edu

Telephone: 732-906-2526

**Prerequisites:** CSC 267, Advanced C#.NET Programming **Co-requisites:** None

**Course Description:** This course provides students with all the information required to build web applications using ASP.NET and the .NET Framework. This course includes learning how to use ASP.NET and Web Forms, Server Controls, Classes, modules, and many other new features of the .NET Framework that apply to ASP.NET. This course will also cover in detail Web application architecture, leveraging User controls, and managing session and application state.This course is not designed for transfer.

**General Education Status:** No

**Credits:** 4 **Lecture Hours:** 2  **Lab Hours:** 4

**Learning Outcomes:**

1. Create and add functionality to a Microsoft ASP.NET Web Form.
2. Implement master pages and user controls.
3. Validate user input and debug Microsoft ASP.NET Web applications.
4. Manage data access tasks by using LINQ.
5. Manage states in Web applications.
6. Configure, deploy and secure a Microsoft ASP.NET Web application.

**Course Content Areas:**

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| **1.** Exploring Microsoft ASP.NET Web Applications in Microsoft Visual Studio |
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| Working with Code-Behind Files  Handling Server Control Events  Creating Classes and Components using Visual Studio 2010  Handling Page Events |
| **5.** Implementing Master Pages and User Controls |
| Creating Master Pages  Adding User Controls to an ASP.NET Web Form |
| **6.** Validating User Input |
| Overview of User Input Validation  ASP.NET Validation Controls  Validating Web Forms |
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| Debugging in ASP.NET  Tracing in ASP.NET |
| **8.** Managing Data in an Microsoft ASP.NET 4.0 Web Application |
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| **16.** Implementing Advanced Technologies Supported by Microsoft Visual Studio  for Web Development |
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