



MERCER
COUNTY COMMUNITY COLLEGE

COURSE OUTLINE

Course Number IST 244	Course Title Web Application Development	Credits 4
Hours: Lecture/Lab/Other	Co- or Pre-requisite	Implementation Semester & Year
3 lecture / 2 lab	IST 108, IST 109, IST 144, COS 101, COS 102 or DMA 145 or equivalent	Spring 2022

Catalog description:

Introduction to server-side programming and database integration contributes to the creation of dynamic and interactive Web applications. Primary programming languages and technologies covered include ASP.NET, C#, SQL Server, and MVC (Models, Views and Controllers) programming model.

General Education Category:
Not GenEd

Course coordinator:

Meimei Gao, 609-570-3483, gaom@mccc.edu

Required texts & Other materials:

Online materials:

<https://docs.microsoft.com/en-us/dotnet/csharp/>

<https://www.w3schools.com/cs/>

<https://code.visualstudio.com/docs/languages/dotnet>

<https://docs.microsoft.com/en-us/aspnet>

Course Student Learning Outcomes (SLO):

Upon successful completion of this course the student will be able to:

1. Develop software solutions using programming skills including user input, variables, control structures, methods, arrays, classes and objects. [Supports ILG # 4, 11; PLO #1, 2]
2. Design and create front-end web user interfaces. [Supports ILG # 4, 11; PLO #1, 2]
3. Build web applications with back-end processing and database integration. [Supports ILG # 4, 11; PLO #1, 2]

Course-specific Institutional Learning Goals (ILG):

Institutional Learning Goal 4. Technology. Students will use computer systems or other appropriate forms of technology to achieve educational and personal goals.

Institutional Learning Goal 11. Critical Thinking: Students will use critical thinking skills understand, analyze, or apply information or solve problems.

Program Learning Outcomes for Mobile and Web Computing Certificate (PLO)

1. Analyze computer application requirements;
2. Design, write, test, and debug mobile and web applications.

Units of study in detail – Unit Student Learning Outcomes:

Unit I **C# Basics [Supports Course SLO #1]**

Learning Objectives

The student will be able to:

- Define and use variables, methods, control structures, arrays, classes and objects.
- Write programs using C#

Unit II **ASP.NET Basics [Supports Course SLO #1, 2]**

Learning Objectives

The student will be able to:

- Describe ASP.NET programming languages and development tools.
- Explain ASP.NET Razor and ASP.NET Server Technologies.
- Create and run a simple ASP.NET C# web application in VS.

Unit III **ASP.NET Razor Pages [Supports Course SLO #1, 2, 3]**

Learning Objectives

The student will be able to:

- Create and run Razor Pages web apps.
- Connect and work with databases.

Unit IV **ASP.NET MVC [Supports Course SLO #1, 2, 3]**

Learning Objectives

The student will be able to:

- Describe MVC Programming Model – Models, Views and Controllers.
- Create a MVC app.
- Add a controller, a view and a model.
- Connect and work with databases.

Evaluation of student learning:

Specific methods for evaluating student progress through the course is up to the discretion of the instructor. Below is an example:

Projects/Assignments = 50% of the grade
Midterm = 20% of the grade
Final Exam = 30% of the grade