

Course Outline

Internet Programming and Development – LEA.BN

A. General Information

Course name	Developing ASP .NET Web Applications with ADO .NET
Program Name	Internet Programming and Development
Course number	420-P55-AB
Start date	2/25/2021
End date	3/17/2021
Day(s) and times	Monday to Friday, 9:00 a. to 12:00 & 12:30 -2:30 p.m.
Classroom/lab number	On-line
Ponderation <i>Ratio of lecture, practical and homework hours</i>	2-3-3
Hours	75
Credits	2.66
Competency statement(s) and code(s)	DC66: Create an ASP .NET Web application that delivers dynamic content to a Web site
Prerequisite (if any)	(420-PM3-AB) .NET Programming Fundamentals
Semester	Winter 2021 – IPD=23
Teacher	Ricardo Artola
Teacher's contact info	MIO

B. Introduction

This course is part of the Internet Programming and Development program leading to the *Attestation d'études collégiales* (A.E.C). It should be taken in the 3rd semester of the program.

This course will teach the fundamentals of Web application site implementation by using Microsoft ASP.NET and Microsoft C# .NET. Using the Microsoft Visual Studio® .NET environment and the Microsoft .NET platform, the goal is to create an ASP.NET Web application that delivers dynamic content to a Web site.

This course introduces students to ASP.NET Web forms and to the ASP.NET Model-View-Controller (MVC) web development framework. MVC is a powerful, patterns-based way to build dynamic websites that enables a clean separation of concerns and that provides full control over markup for enjoyable, agile development. ASP.NET MVC includes many features that enable fast, Test Driven Development-friendly development for creating sophisticated applications that use the latest web standards. This course will cover many web development related concepts such as databases, servers, configuration files, LINQ, ADO.NET Entity Framework, page validation and hosting. These concepts will be applied to the development of several ASP.NET MVC Web applications.

C. Course Objectives

By the end of this course, students should be able to perform the following:

Competency code(s) and statements	Element(s) of the competency One per row	Performance criteria (if applicable)
DC66: Create an ASP .NET Web application that delivers dynamic content to a Web site	E1. Describe the key features of the Microsoft .NET Framework and ASP.NET	P1.1 Explain the advantages of using the .NET Framework. P1.2 Describe the key functionality and purpose of ASP.NET in developing Web applications. P1.3 List resources for Web application development with Visual Studio.
	E2. Explain how to create a Web application by using Visual Studio	P2.1 Describe how to create a component by using Visual Basic or C#. P2.2 Overview of the Microsoft .NET-Based Languages.
	E3. Describe how to create a Microsoft ASP.NET Web Form that contains server controls and uses a master page	P3.1 Learn how to create Web Forms. P3.2 Explain how to add server controls to a Web Form by using the Microsoft Visual Studio toolbox.
	E4. Describe how to create ASP.NET Model-View-Controllers (MVC) Web applications with common layout.	P4.1 Understand the MVC framework. P4.2 Learn how to create Controllers, Views and Models.
	E5. Explain how to add functionality to server controls that are on an ASP.NET Web form and MVC	P5.1 Explain how to implement code-behind pages in a Web application. P5.2 Understand how to create event procedures for Web server controls. P5.3 Learn how to handle Page events in a Web application.

Competency code(s) and statements	Element(s) of the competency One per row	Performance criteria (if applicable)
	E6. Explain how to access data by using Microsoft ADO.NET and the built-in data access tools available in Visual Studio	<p>P6.1 Describe the key features of ADO.NET.</p> <p>P6.2 Explain how to create a connection to a database by using ADO.NET.</p> <p>P6.3 Understand how to access data from a SQL Server database.</p>

D. Evaluation Plan

Evaluation	%	Approximate date	Link to competenc(ies) and element(s)
Assignment (up to 1 at 20% each)	20	8/March 8	1 to 5
Mid—course exam	20	9/March 9	1 to 5
Final evaluation Minimum of 40% of final grade			
Final Test	20	12/March 12	1 to 5
Final Term Project	40	15/March 17	1 to 5

E. Course Content and Schedule

Date	Objective/Element	Specific content	In class	Location	Online
Session 1		Class introduction Overview and advantages of .NET ASP.NET Overview	<input type="checkbox"/>		<input checked="" type="checkbox"/>
2		Review the previous session knowledge ASP.NET Web Forms Model ASP.NET Life Cycle: Application Life Cycle, Page Life Cycle + Events ASP.NET Page <i>Laboratory:</i> Review the access to Visual Studio IDE and check the first .NET Project Templates.	<input type="checkbox"/>		<input checked="" type="checkbox"/>
3		Review the previous session knowledge ASP.NET Event Handling Application and Session Events Page and Control Events Default Events <i>Laboratory:</i> ASP.NET Web Application exercise	<input type="checkbox"/>		<input checked="" type="checkbox"/>
4		MVC Overview MVC Architecture MVC Folder Structure Routing in MVC <i>Laboratory:</i> Create sample VisualStudio projects using the MVC Templates	<input type="checkbox"/>		<input checked="" type="checkbox"/>
5		Review the previous session knowledge MVC - Razor Syntax MVC – HTML Helpers MVC – Data Validation	<input type="checkbox"/>		<input checked="" type="checkbox"/>
6		MVC – Working with Data MVC – ASP.NET Identity Assignment 1 posted	<input type="checkbox"/>		<input checked="" type="checkbox"/>

Date	Objective/Element	Specific content	In class	Location	Online
		<i>Laboratory:</i> Create sample VisualStudio projects using the MVC Templates			
7		Review the previous session knowledge Ajax and ASP.NET MVC	<input type="checkbox"/>		<input checked="" type="checkbox"/>
8		Ajax and ASP.NET MVC (continued) SignalR Assignment 1 due Final Project posted	<input type="checkbox"/>		<input checked="" type="checkbox"/>
9		Review the previous session knowledge Exam 1	<input type="checkbox"/>		<input checked="" type="checkbox"/>
10		Caching Data	<input type="checkbox"/>		<input checked="" type="checkbox"/>
11		ASP.NET Core – Overview Project Structure ASP.NET Core – wwwroot folder ASP.NET Core – Program.cs ASP.NET Core – Startup Class <i>Laboratory:</i> Create sample VisualStudio projects using the .NET Core Templates	<input type="checkbox"/>		<input checked="" type="checkbox"/>
12		Review the whole course material Final Exam	<input type="checkbox"/>		<input checked="" type="checkbox"/>
13		Review the whole course material Assistance on the Final Project	<input type="checkbox"/>		<input checked="" type="checkbox"/>
14		Review the whole course material Assistance on the Final Project	<input type="checkbox"/>		<input checked="" type="checkbox"/>
15		Final Project class presentation	<input type="checkbox"/>		<input checked="" type="checkbox"/>

F. Required Textbooks / Materials / Course Costs

Title / Item Name	Cost
No required text	

G. Bibliography (if applicable)

Add resources here (e-books, articles, videos, websites, etc.)

Texts and Other Materials: Course syllabus; text and workbook, reference handouts; assignment handouts; printed course manual; access to the Internet and World Wide Web.

H. Teaching Methods

The course is a combination of theory and practical work. Students will be required to:

- Listen to lectures
- Watch demonstrations
- Accomplish regular work in the laboratory
- Work in groups of 1 to 3 students for a project

This course requires your individual presence and your active, consistent and sustained participation in your individual work. Your individual responsibilities are to complete the work assigned and ready to work at the start of each class.

1. Lectures/Demonstrations: Important material from the text and outside sources will be covered in class. You should plan to take careful notes as not all material can be found in the texts or readings. Discussion is encouraged as is student-procured, outside material relevant to topics being covered.
2. Assignments: Concepts Reviews, Skills Reviews, Independent Challenges and other projects and readings will be periodically assigned to help support and supplement material found in the lessons. These assignments may require the application of various software applications.
3. Tests: Occasional scheduled or unscheduled tests will be given to help ensure you stay up with assigned material.
4. Exams: The exams will be closed book/note and will test assigned readings and material discussed in class.
5. Team Term Project: The term project focuses on methodologies and tools for this course related technologies using frameworks. This project is structured to be as realistic as possible given the time available in the term.
6. Classroom Activity: Participation and Discussion

I. Departmental Policies

Please refer to the following documents concerning policies in place at the Centre for Continuing Education:

[Summary of Continuing Education Departmental Policies and Guidelines \(June 2020\)](#)

[Online Civility and Student Code of Conduct \(Continuing Education version\) \(June 2020\)](#)

J. Classroom Policies

Policy to ensure that issues relating to late submission, or resubmission, of work to be dealt with in an equitable manner

A teacher may deduct up to 10% per calendar day for late assignments that are submitted without a valid excuse.

Policy dealing with the expectations of classroom behaviour, including use of cell phones, laptops and other technology
Other

K. College Policies

Please refer to the following document which summarizes some of the key policies in place at the College. See the specific policies for more information.

[Summary of College Policies and Guidelines \(June 2020\)](#)

Cheating and Plagiarism

Please refer to the following documents concerning cheating and plagiarism at John Abbott College:

[Policy 7: Institutional Policy on the Evaluation of Student Achievement \(IPESA\)](#)

See articles **9.1** and **9.2**.

[Academic Integrity: Cheating and Plagiarism Procedure](#)

Religious Holidays

Please refer to the following document concerning absences:

[Policy 7: Institutional Policy on the Evaluation of Student Achievement \(IPESA\)](#)

See articles **3.2.13** and **4.1.6**.

Student Rights and Responsibilities

Please refer to the following document concerning student rights and responsibilities:

[Policy 7: Institutional Policy on the Evaluation of Student Achievement \(IPESA\)](#)

See articles **3.2** and **3.3**.

Changes to Course Evaluation Plan in the Course Outline

Please refer to the following document concerning absences:

[Policy 7: Institutional Policy on the Evaluation of Student Achievement \(IPESA\)](#)

See article **5.3**.

Student Code of Conduct

Please refer to the following document concerning the College's student code of conduct and discipline procedures:

[Policy 13: Policy on Student Conduct and Discipline Procedures \(September 15, 2009\)](#)