# Course Outline

# Internet Programming and Development (LEA.BN)

## A. General Information

| **Course name** | **Developing ASP .NET Applications** |
|---|---|
| Course number | **420-P55-AB** |
| Start date | May 27, 2021 |
| End date | June 15, 2021 |
| Day(s) and times | Monday to Friday, 8:30a p.m. to 2:00 p.m with lunch break |
| Classroom number | Online |
| Ponderation<br>*Ratio of lecture, practical and homework hours* | 30 hours lecture + 45 hours lab + 45 hours homework |
| 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 |
| Teacher's name | Gregory Prokopski, PhD |
| Teacher's contact info | MIO |

## B. Introduction

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 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 gives you 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 understood and applied to develop several ASP.NET MVC Web applications.

This course is part of the Internet Programming and Development program leading to the AEC. It is taken in the last semester of the program.

## C. Course Objectives

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

- Understand and apply ASP .NET components and MVC
- Succeed in creating an ASP .NET website on their own
- Contribute professionally to an ASP .NET web development project

| **COMPETENCY**<br>**Elements** | **Performance criteria** |
|---|---|
| 1. Describe the key features of the Microsoft .NET Framework and ASP.NET | 1.1 Explain the advantages of using the .NET Framework.<br>1.2 Describe the key functionality and purpose of ASP.NET in developing Web applications.<br>1.3 List resources for Web application development with Visual Studio. |
| 2. Explain how to create a Web application by using Visual Studio | 2.1 Describe how to create a component by using Visual Basic or C#<br>2.2 Overview of the Microsoft .NET-Based Languages |
| 3. Describe how to create a Microsoft ASP.NET Web Form that contains server controls and uses a master page | 3.1 Learn how to create Web Forms<br>3.2 Explain how to add server controls to a Web Form by using the Microsoft Visual Studio toolbox |
| 4. Describe how to create ASP.NET Model-View-Controllers (MVC) Web applications with common layout. | 4.1 Understand the MVC framework<br>4.2 Learn how to create Controllers, Views and Models. |
| 5. Explain how to add functionality to server controls that are on an ASP.NET Web form and MVC. | 5.1 Explain how to implement code-behind pages in a Web application.<br>5.2 Understand how to create event procedures for Web server controls.<br>5.3 Learn how to handle Page events in a Web application. |
| 6. Explain how to access data by using Microsoft ADO.NET and the built-in data access tools available in Visual Studio. | 6.1 Describe the key features of ADO.NET.<br>6.2 Explain how to create a connection to a database by using ADO.NET.<br>6.3 Understand how to access data from a SQL Server database |

Evaluation Plan

| Evaluation | % | Session / Date | Link to competency / element | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 | 5 | 6 |
| Quiz 1 | 30 | June 8 | x | x | x | x | x | x |
| Project (components below) | 50 | | x | x | x | x | x | x |
| *Proposal*<br>*Midway review and use of tools (Git, Trello, Scrum)*<br>*Final project and presentation* | *7*<br>*8*<br>*35* | TBD<br>TBD<br>June 15 | | | | | | |
| LinkedIn networking actions | 20 | June 15 | Communication skills | | | | | |

## D. Course Content and Schedule

| Session / Date | Content |
|---|---|
| 1 | C# and DotNet platform review, how to create ASP project |
| 2 | ASP form submission |
| 3 | Styles and JavaScript in ASP |
| 4 | Form data verification, connecting to database |
| 5 | Practice |
| 6 | Project proposals and setup (tentative date, may change) |
| 7 | **Quiz 1** |
| 8 | Work on projects |
| 9 | Work on projects |
| 10 | Work on projects |
| 11 | Work on projects |
| 12 | Work on projects |
| 13 | Work on projects |
| 14 | Work on projects |
| 15 | **Final project delivery and presentations** |

## E. Required Textbooks / Materials

| | |
|---|---|
| No required textbook. All materials will be provided by the teacher online. | |

## F. Bibliography (if applicable)

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

## G. 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

## H. Departmental and Classroom Policies

### Centre for Continuing Education Classroom Behaviour Policy

Class time is limited, and each student at John Abbott College is entitled to the very best educational experience in every course. You are expected to behave in a way that is civil and courteous to others. It is important that the atmosphere of each classroom or computer lab be as conducive to the learning process as possible. The following guidelines have been established in order to create and maintain such an atmosphere.

Inappropriate behaviour in the classroom includes the following:

- Using mobile devices (phone, texting and internet) or other electronic devices unrelated to the course.
- Searching the internet or reading electronic materials unrelated to the course.
- Speaking while another person (teacher or student) has the floor (that is, he/she is addressing the class as a whole).

- Asking questions or making comments that are unrelated to the discussion at hand.
- Working on homework for other courses or other personal activities during class.
- Threatening, harassing, or offensive behaviour towards any person in the class, other students, teachers or College staff.
- Using derogatory language or referring directly or indirectly to someone else in the class in a rude manner or using offensive language.
- Misusing or abusing College computers, telephone systems or other equipment.
- Arriving late, leaving early, and leaving the room for any non-emergency without having teacher approval and the courtesy to make this known.
- Eating or drinking in the computer labs is discouraged.

A teacher is responsible for determining the appropriateness of student behaviour in the classroom. A teacher may remove a student who misbehaves in class for the duration of that period.

### Centre for Continuing Education Attendance Policy

The College expects students to attend all class sessions. It is an essential requisite for their academic success and attainment of competencies. Excessive absences (over 20% of total course hours) may have consequences affecting the final course grade, including possible failure.

1. A student's attendance in class shall be excused if they provide written proof of a valid reason for missing a class, test or an evaluation due date.
2. Teachers are not required to re-teach course material missed by absent students. Students with excused absences cannot lose grades for missing a minor evaluation.
3. Teachers must provide alternate major evaluations if students miss a major evaluation due to an excused absence.
4. If a minor evaluation cannot be made up, the evaluation can be redistributed as long as all elements of the competency are assessed.
5. Absences of **less than 20% of total course hours** are addressed by the teacher and the student on a case-by-case basis.
6. Students who wish to observe religious holidays must inform their teachers, in writing, at the beginning of the semester so that alternative arrangements can be made between the teacher and student.
7. In cases of anticipated or planned absences for health or other reasons, students must request advance written approval for an excused absence from each teacher of their respective courses.

### Centre for Continuing Education Late Submission of Work Policy

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

## I. College Policies

### Policy No. 7 – IPESA, Institutional Policy on the Evaluation of Student Achievement (May 2017)

### Cheating and Plagiarism (Article 9.1 & 9.2)

Cheating and plagiarism are unacceptable at John Abbott College. They represent infractions against academic integrity.

Students are expected to conduct themselves accordingly and must be responsible for all of their actions. The Academic Administration and teachers have the responsibility to:

• inform students of cheating and plagiarism as outlined below;

• teach all students what cheating and plagiarism are and inform them of the resulting consequences;

• determine whether cheating and/or plagiarism has occurred and take action according to the ACADEMIC PROCEDURE: Academic Integrity – Cheating & Plagiarism.

Cheating means any dishonest or deceptive practice relative to examinations, tests, quizzes, lab assignments, research papers or other forms of evaluation tasks. Cheating includes, but is not restricted to, making use of or being in possession of unauthorized material or devices and/or obtaining or providing unauthorized assistance in writing examinations, papers or any other evaluation task and submitting the same work in more than one course without the teacher's permission. It is incumbent upon the department through the teacher to ensure students are forewarned about unauthorized material, devices or practices that are not permitted.

Plagiarism is a form of cheating. It includes copying or paraphrasing (expressing the ideas of someone else in one's own words), of another person's work or the use of another person's work or ideas without acknowledgement of its source. Plagiarism can be from any source including books, magazines, electronic or photographic media or another student's paper or work.

### Religious Holidays (IPESA Art 3.2.13 and 4.1.6)

Students who wish to miss class to observe a religious holiday, must inform the teacher in writing by the second day of class.

### Student Rights & Responsibilities (IPESA Art 3.2.18)

It is the fundamental responsibility of each student to be a full and active participant in his or her education. Students have the responsibility to keep a copy of all assessed material returned to them and/or all digital work submitted to the teacher for at least four (4) weeks past the grade submission deadline of each individual course, in the event that they request a Final Grade Review (Refer to Article 8).

### Changes to Course Evaluation Plan (Art.5.3)

Major changes (i.e. weighting, type and number of assessments) can be made to the course evaluation plan (on the course outline) due to exceptional circumstances. To do so, the teacher must ensure that any major changes to the evaluation plan made during the semester be forwarded (on paper or electronically) the AEC program coordinator for approval. All changes must have documented unanimous consent from the regularly attending students affected by the change(s) before submission. The approved major change will then be communicated to students on paper or electronically.