Course Outline

Internet Programming and Development (LEA.BN)

A. General Information

Course name	**.NET Programming Fundamentals**
Course number	420-PM3-AB sect. 00073
Start date	March 15, 2021
End date	March 26, 2021
Day(s) and times	Mon-Fri, 8:30am to 2:00pm, includes 30 min. lunch break
Classroom number	Online
Ponderation *Ratio of lecture, practical and homework hours*	1 hour lecture + 2 hours laboratory + 3 hours homework
Hours	45
Credits	2.00
Competency statement(s) and code(s)	DC61 – Create .NET technology applications that leverage the object-oriented features of the .NET languages such as encapsulation, inheritance and polymorphism.
Prerequisite (if any)	(420-PZ4-AB) Object-Oriented Programming Methodology
Semester	Winter 2021
Teacher's name	Gregory Prokopski, PhD
Teacher's contact info	gregory@prokopski.com

B. Introduction

This course introduces the student to concepts already known from previous Object-Oriented Programming courses but this time applied to DotNet C# environment. These include: control structures, methods, arrays, encapsulation, inheritance, polymorphism.

C. Course Objectives

This course introduces software engineering and covers all introductory aspects of the .Net programming languages, including control structures, functions, arrays, and GUIs. Using .Net programming languages such as Visual Basic and C#, the students will define classes and apply the principles of encapsulation, inheritance and polymorphism. The emphasis throughout the course is on problem modeling using sound software engineering principles and concepts. Students will be introduced to a set of fundamental skills in constructing system components and to a point of view regarding system design that will be as useful in the construction of large systems as it is in the building of small components.

COMPETENCY

DC61: Create .NET technology applications that leverage the object-oriented features of the .NET languages such as encapsulation, inheritance and polymorphism.

Elements	Performance criteria
1. Basic Elements of C# and VB.NET	1.1 Distinguish between the different types of applications that can be created with C# and VB.NET 1.2 Examine the basic elements of a C# and VB.NET program 1.3 Learn about installing the .NET Framework 1.4 Compile, run, and build an application
2. Describe the objects and input/output	2.1 Learn about objects and reference variables 2.2 Explore how to use predefined methods in a program 2.3 Explore how to format output using
3. Understand control structures	3.1 Learn about control structures 3.2 Examine relational and logical operators 3.3 Explore how to form and evaluate logical expressions 3.4 Learn how to use the selection control structures
4. Explain the graphical user interface (GUI)	4.1 Learn about basic GUI components 4.2 Explore how the GUI components work 4.3 Become familiar with the concept of event-driven programming 4.4 Discover event and event handlers 4.5 Learn how to identify objects, classes, ad members of a class
5. Understand the user-defined method	5.1 Explore predefined methods and how to use them in a program 5.2 Examine value-returning methods 5.3 Explore how to construct and use a value-returned, user-defined method in a program

D. Evaluation Plan

Evaluation	%	Session / Date	Link to competency / element					
Midterm	40	4 or 5	1	2	3	4	5	
Final exam	60	9	1	2	3	4	5	

E. TENTATIVE Course Content and Schedule

Session / Day	Hours	Content
1	5	From Java to DotNet/C# - similarities and differences – comparison
2	5	Basic constructs of DotNet/C# - types, reserved words, control structures
3	5	Solving problems – programming practice
4	5	**Midterm (tentative)**
5	5	More practice of basic programming in DotNet
6	5	File I/O, Exceptions handling, creating own methods, classes
7	5	Programming GUI – basics of WPF, use of XAML, code behind
8	5	Integrating it all together – programming practice
9	5	**Final exam**

Note: The above schedule is tentative. Teacher reserves the right to adjust the order of content and time spent on a subject when it serves the students in better understanding and applying concepts and practices taught in the course.

F. Required Textbooks / Materials

Title / Item Name	Cost
None required	-

G. Bibliography (if applicable)

Resources will be provided, mostly on-line, by the teacher during the course.

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
- Do homework

I. 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.

J. 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.