

## PHP Programming 420-P75-AB COURSE OUTLINE

A. General	A.E.C.
Course Title :	<b>PHP Programming</b>
Course Number/Section :	<b>420-P75-AB section 00074</b>
Start Date:	<b>May 6, 2021</b> End date: May 26, 2021
Schedule :	Monday-Friday, 8:30am to 2pm with 30 minute lunch break
Classroom :	<b>Online</b>
Ponderation :	<b>2 hour lecture + 3 hours laboratory + 3 hours homework</b>
Hours:	<b>75</b>
Credits :	<b>2.66</b>
Competencies :	<b>DC74 – Use PHP language to create dynamic web pages with an SQL database backend</b>
Pre-requisite(s) :	<b>(420-PZ4-AB) Programming II – Object-Oriented Programming, (420-P14-AB) Database I</b>
Semester :	<b>Winter 2021</b>
Teacher :	<b>Gregory Prokopski, PhD</b>
Email or contact info:	<b>gregory@prokopski.com or LEA (preferred)</b>

### B. Introduction (Program Related Information) :

In this course the student will learn about the syntax and control structures of PHP language, as well as its web-context-specific features that make it a powerful tool for dynamic web pages and web app development. The student will use PHP language and external libraries to implement web pages using the MVC (Model-View-Controller) principles, with a micro-framework, database access library, and templating library. The student will also learn about best industry practices, such as PHP IDEs, visual debugging, and the use of Composer.

### C. Objectives and Course Content :

**Objectives** – Upon successful completion of this course, the student will be able to understand:

- Syntax, control structures and types of PHP language,
- Features of PHP language that help its seamless integration with web environment and web server,
- How to create a modern dynamic web site or web application using MVC design pattern,
- How to use a micro-framework, database access library, templating library and other external PHP libraries to create better web software, faster,
- How to setup an effective web development environment.

OBJECTIVE	STANDARD
<b>Statement of the Competency</b> Use PHP language to create dynamic web pages with an SQL database backend	<b>Achievement Context</b> <ul style="list-style-type: none"> <li>• In a classroom and computer laboratory environments – using:               <ul style="list-style-type: none"> <li>○ Using a workstation and the appropriate software</li> <li>○ Based on situations representative of the workplace and requiring the development of applications involving a limited number of classes</li> <li>○ Using all the documentation available on the applications to be developed</li> </ul> </li> <li>• In written assignment(s) and/or in-class exam(s)</li> <li>• In simulation exercises</li> <li>• Working alone and in groups</li> <li>• Based on industry standards</li> </ul>

Elements of the Competency	Performance Criteria
1. Understand PHP language	<ul style="list-style-type: none"> <li>1.1 Explain PHP language syntax</li> <li>1.2 Explain PHP language control structures</li> <li>1.3 Explain PHP language integration with web server</li> <li>1.4 Explain superglobals and variable scope rules</li> </ul>
2. Setup an effective web development environment	<ul style="list-style-type: none"> <li>2.1 Setup PHP for visual debugging</li> <li>2.2 Setup a local Web Server</li> <li>2.3 Setup and use Composer tool to install external PHP libraries</li> </ul>
3. Create web software using MVC pattern	<ul style="list-style-type: none"> <li>3.1 Explain the MVC pattern</li> <li>3.2 Create web software using a (micro-) framework that supports MVC pattern</li> <li>3.3 Explain how to structure directories and write code in your web software with security in mind</li> </ul>
4. Use external PHP libraries	<ul style="list-style-type: none"> <li>4.1 Install and use a (micro-) framework library</li> <li>4.2 Install and use a templating library</li> <li>4.3 Install and use a database access library</li> <li>4.4 Install and use a logging library</li> </ul>

D. E. Course Content Schedule :

Quiz – 30% Project – total of 50% split into components: <ul style="list-style-type: none"> <li>- Project proposal 10%</li> <li>- Mid-way progress and tools 10%</li> <li>- Project presentation and realization 30%</li> </ul> Communication (LinkedIn and Portfolio) 20%	Competency 1, 2, 3, 4 Competency 1, 2, 3, 4
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Note: To pass the course the quiz result must be 60% or higher (or average of quizzes if there are many).

If the quiz(zes) result (average) is below 60% then that becomes the final grade for the course regardless of other grades for other components.

Tentative schedule:

Day #	Topics	Link to the Competency or element
1	PHP Syntax, variables, control structures, scoping, Integration with Web server, superglobals, receiving values from URL and forms, debugging	Competency 1, 2
2	Connecting to MySQL database, tri-state form	Competency 1, 2, 3, 4
3	Form validation, CRUD, practice	Competency 1, 2, 3, 4
4	<b>Project proposal, project work begins</b>	Competency 1, 2, 3, 4
5	Composer, PHP Slim, Twig, Meekrodb	Competency 1, 2, 3, 4
6	Practical application – blog, monolog	Competency 1, 2, 3, 4
7	More practice – blog continued, project	Competency 1, 2, 3, 4
8	<b>Quiz (date tentative)</b>	Competency 1, 2, 3, 4
9	Choosing projects, beginning work in teams	Competency 1, 2, 3, 4
10	Monolog and WebAPIs, work on projects	Competency 1, 2, 3, 4
11	JavaScript client for APIs, work on projects	Competency 1, 2, 3, 4
12	More on debugging PHP, work on projects	Competency 1, 2, 3, 4
13	Preparation of presentations, work on projects	Competency 1, 2, 3, 4

14	Work on projects	Competency 1, 2, 3, 4
15	<b>Project presentations</b> , other submissions due	Competency 1, 2, 3, 4

*Note: the above schedule is tentative. In order to improve students' learning results and experience teacher reserves the right to modify the order and amount of time spent on topics listed and/or substitute one topic for another as long as it fulfills the requirements of competencies in this course.*

#### F. Required Text & Course Materials

Title	Author	Publisher	Cost
<i>All material is available for free online and will be provided by the teacher during the class.</i>			<i>Included in the tuition</i>

#### G. Teaching Methods:

#### H. Departmental

##### Attendance

The Centre for Continuing Education expects all students to attend class regularly. It is an essential requisite for the academic success and the mastery of the competencies required. The level of mastery of these competencies can be greatly increased with regular attendance as it allows the student time to demonstrate the complete understanding and perform certain elements of the competencies. Attendance and participation in class, lab, and fieldwork is **mandatory**. Attendance will be taken at the beginning of every class.

Without a valid reason or prior approval, students cannot miss more than 20% of the total hours of a course, i.e. 9 hours for a 45 hour course, 12 hours for a 60 hour course etc. or risks failing the course.

Since marks recognize the extent to which the competencies are met, no marks can be given for attendance alone or deducted for absence. Although attendance cannot be used as a component of the final grade, excessive absences may have consequences affecting the final grades.

##### Absences are subject to the following procedures:

Students who miss class without a valid reason or prior approval will receive a mark of zero on any in-class assignment or quiz given in the period without the opportunity for make-up work.

Exceptions apply in cases of authorized absences.

##### Authorized Absences

Students must be excused if they provide written proof of a valid medical or other special reason for missing a class or an evaluation within a 24 hour period. Teachers must require proof. (IPESA Art.7.1) Teachers are not required to re-teach course material missed by these students. Students with authorized absences cannot lose marks for missing an evaluation. The marks for the evaluation may be assigned to another evaluation even if the guidelines in IPESA Article 5 are exceeded. Teacher must provide alternative major evaluations if students miss a major evaluation due to an excused absence.

According to article 7.1 IPESA, special arrangements may be made in cases where chronic illness prevents the student from attending on a regular basis. Proof may be required. Special arrangements should also be made for religious holidays, however, students must inform the teacher *at the beginning* of the course, in writing.

##### Absences fewer than 5 days

Students who miss less than 20% of the course for justified reasons must provide a written note to the teacher or the

program coordinator.

### Five days or more

Students who will be absent for 5 days or more for justified reasons should provide a medical note to the Registrar's Office. The Registrar's Office will then advise the teacher of the date of return or if it is undetermined. Arrangements for submission of missed work, test, exams etc. are made between the teacher and the student.

Extended Absences after the Course withdrawal deadline (according to the Registrar policy)

<http://www.johnabbott.qc.ca/academics/registrar/authorized-absences/>

### Classroom Policies

Students who miss a class will receive a mark of zero on any in-class assignments or quizzes given in the period without the opportunity for any make-up work. Exceptions to this policy apply only in the event of absence due to medical or special reasons or religious holidays.

**All electronic communication and music devices (e.g., I pads, tablets, cell phones, pagers, CD-players, mp3-players, etc.) must be turned off while in class, unless authorized otherwise by the teacher.**

Class time is limited, and each student at John Abbott is entitled to the very best educational experience in every class. It is important that the atmosphere of each classroom or lab be as conducive to the learning process as possible. The following guidelines have been established so as to create and maintain such an atmosphere.

Inappropriate behaviour in the classroom includes the following:

- Speaking while another person (teacher or student) has the floor (that is, he/she is addressing the class as a whole).
- Using MP3, cellular phones or other electronic devices not related to the course.
- Threatening, harassing, or offensive behaviour towards any person in the class, other students, teachers or College staff.
- Use of derogatory language or referring directly or indirectly to someone else in the class in a rude manner or using offensive language.
- Misuse or abuse of the College's computers, telephone systems or other equipment.
- Speaking, reading or writing about subjects which are not part of the current class discussion.
- 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 laboratories is forbidden.

## I. College

**Cheating & Plagiarism:** Cheating & Plagiarism is unacceptable to John Abbott College (IPESA policy 7)

**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 the intentional 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.

To ensure that a consistent and acceptable manner of conduct and level of safety conducive to a learning environment is maintained within the college, the following disruptive behaviours will not be tolerated in any degree on campus: unauthorised use of alcohol or illegal drugs, violence against persons or property, possession of weapons, verbal abuse or intimidation, theft, and gambling.

Copyright law must be respected at all times. Please be aware that any illegal copy of textbook material will be confiscated.

**Religious Holidays**

Students who wish to observe religious holidays must inform their teacher in writing within the first two weeks of the semester of their intent.

**Student Rights and Responsibilities**

It is the responsibility of students to keep all assessed material returned to them for at least one semester in the event of a grade review.

Students with Disabilities: Students with disabilities, who have registered with The Access Centre, may be entitled to special accommodations for evaluations. Please notify the instructor as soon as possible.

**Changes to the Evaluation Plan in Course Outline (Article 4.3)**

Changes to the evaluation plan, during the course, requires unanimous consent.