LaSalle College
Montréal

COURSE OUTLINE

Course identification

Name of programs – Codes:	COMPUTER SCIENCE TECHNOLOGY– PROGRAMMING (420.BP) INFORMATION TECHNOLOGY PROGRAMMER-ANALYST (LEA.3Q)
Course title:	**INTRODUCTION TO WEB DEVELOPMENT**
Course number:	420-DW1-AS
Total number of course hours:	45 Hours
Weighting:	1-2-2
Statement of the competency– Code:	Develop non-transactional web applications – 00ST

Contribution of the course in the program

Course position

This course is located in the first semester of the *Computer Science technology - Programming* (420.BP) and *Information Technology Programmer-Analyst (LEA.3Q)*. Its duration is 45 hours divided into 15 hours of theory and 30 hours of exercises plus approximately 30 hours of homework.

In all programs this course shares the development of the 00ST competency with *Web Client Development* (420-DW2-AS) given in the second semester which completes its development. In all programs, there are no prerequisites. In all programs, this course is a prerequisite for *Web Client Development* (420-DW2-AS) given in the second semester.

Scope of the course

During this course, students learn to design and build a web site using a Content Management system (CMS) WordPress. Primarily, students learn the fundamental web concepts and practices installing and configuring the CMS WordPress online as well as locally on their machine. Later, they examine the different options of WordPress more specifically those that allow them to create, maintain and administer the website. They learn to save, restore and deploy a website.

Upon completion of this course, students will be able to identify and understand the elements related to the ongoing hosting and the functioning of the website. They are capable of developing a website, maintaining it as well as managing it. They are equally capable of integrating in their website HTML pages through the use of Cascading Style Sheets (CSS), themes and plug-ins. Students will, as a final project develop, restore and upload a website.

Course components (objective and standard of the competency)

Expected outcomes (achievement context of the competency)

The achievement context of this competency will reflect the conditions as they occur in the following settings: academic, professional, work, or life environment.

- For Web applications associated with information delivery, marketing, etc.
- For new applications and applications to be modified
- Based on design documents
- Using images
- Using issue tracking and version control procedures

Throughout the course, you will engage in various learning situations/activities so that by the end of the course, you will have met the expected outcomes.

Elements and performance criteria

The elements of an objective formulated in terms of the competency specify its essential components. They include only what is necessary in order to understand and master the competency. If the competency is described as a process, the elements are the steps for execution.

The performance criteria are the specific pre-established requirements upon which you and your teacher can objectively judge your development of the targeted competency. They are part of the description of this competency. They are prescriptive.

Sometimes an element appears in more than one course. If this is the case, a number indicates its complexity level: level one (1) being the simplest, level two (2), average, and level three (3), advanced, at the ministerial level.

Below are the elements of the competency and performance criteria for this course that are to be respected:

Competency: Develop non-transactional web applications – 00ST ***General ministerial and institutional performance criteria:*** – Autonomy – Sense of Organization	
Elements of the competency ***420.BP (1-2-3-8 only)***	***Performance criteria specific to each element***
1. Analyze the application development project	1.1 Accurate analysis of design documents 1.2 Proper identification of the tasks to be carried out
2. Prepare the computer development environment	2.1 Proper installation of the Web development platform and the development database management system 2.2 Proper installation of software and libraries

	2.3 Appropriate configuration of the version control system 2.4 Proper importing of the source code
3. Prepare the database	3.1 Suitable creation or adaptation of the database 3.2 Proper insertion of initial or test data 3.3 Compliance with the data model
4. Program the web interface	4.1 Appropriate use of markup language 4.2 Suitable creation and use of style sheets 4.3 Proper integration of images 4.4 Adaptation of the interface based on the display format and resolution
5. Program the server-side application logic.	5.1 Appropriate choice of clauses, operators, commands or parameters in database queries 5.2 Correct handling of database data 5.3 Proper programming of the conversion of data into information 5.4 Proper application of internationalization techniques 5.5 Precise application of secure programming techniques
6. Program the client-side application logic.	6.1 Correct manipulation of DOM objects 6.2 Proper programming of interactions between the Web interface and the user 6.3 Proper programming and integration of animations and widgets
7. Control the quality of the application.	7.1 Precise application of test plans 7.2 Thorough reviews of code and security 7.3 Relevance of the corrective actions 7.4 Compliance with issue tracking and version control procedures 7.5 Compliance with design documents
8. Participate in the deployment of the application on a Web host.	8.1 Accurate identification of the domain name 8.2 Appropriate configuration of the application on the Web host 8.3 Proper application of the procedure for migrating the service onto the Web host 8.4 Precise application of security measures 8.5 Compliance with search engine indexing requirements
9. Produce the documentation.	9.1 Proper identification of the information to be written up 9.2 Clear record of the work carried out

Course content/main themes

*Listed below is the **essential** content to be covered in this course:*

1) Fundamental Principles of knowledge
    - Web domain, web hosting, type of website, web server, web client
    - Communication protocols between the client and the server
    - The nature of HTTP web requests and responses
    - Http codes
2) Content Management Systems (CMS): WordPress
    - What is WordPress and why choose it
    - WordPress.com vs. WordPress.org
3) Installation and configuration of WordPress
    - Install and configure WordPress on the server end
    - Download, install and configure WordPress on the local client
4) Managing the dashboard and its settings
    - Create and maintain pages and menu options
    - Create and maintain contents (images, text, files, etc.)
    - Create and maintain links (in site hyperlinks and out of sight links)
    - Create and maintain blogs and posts
5) Using HTML and CSS in WordPress
    - HTML tags
    - CSS files
    - Integration of HTML and CSS in WordPress
6) Themes
    - How to install and setup a theme
    - Display, edit, upgrade and delete themes
7) Plugins
    - How to install, update and uninstall plugins
    - How to use plugins
8) Saving and restoring websites
9) Deploying websites
    - Setting up the domain name and webhosting
    - Preparing the website content (uploading material)
    - Maintaining a website

Learning activities

Provided below are examples of learning activities that correspond to the competency for this course. The learning activities are found in the course calendar that complements this course outline.

- Hands-on application following teacher's demonstration
- Case studies
- Project
- Problem solving
- Group discussions

Terms for Evaluating Learning

The evaluation of your learning is based on two inseparable methods: formative evaluation and summative evaluation. These two evaluation types are formal. Detailed information on the evaluation schedule is found in the course calendar, under the "Formative and summative evaluation schedule" column.

Formative evaluation

Following a learning activity or learning period, time is set aside for introspection. You will determine what has been understood and achieved and seek to identify the nature and origin of weak areas. These designated periods consist of simple means: short tests, association games, logbooks, a portfolio, questions, creating of samples, etc.

Formative evaluation is frequent and covers as many aspects as possible. It takes place in class, individually or in groups, and leads to immediate decisions. ***You are the one who assumes the bulk of the work during individual or group corrections, adjustments and other self-evaluation tasks. The purpose is not to determine grades.***

If you take the results of the formative evaluations seriously throughout the course, you will ensure preparedness for the summative evaluations. You will be able to make the necessary progress to acquire the targeted competency at the required level, according to the achievement context and pre-established performance criteria.

Below are some examples of formative evaluation methods that correspond to the targeted competency for this course:

- Contextual scenarios
- Case studies
- Teacher feedback after students hands-on practice

Summative evaluation

Summative evaluations are less frequent. They take place later on, towards the middle and end of the semester. This gives you the time to integrate your learning and to learn how to apply it to situations related to the targeted competency. The summative evaluation material is prepared by your teacher according to the description of the course's targeted competency: its elements, achievement context and performance criteria.

The work completed in summative evaluations is graded. The purpose is to determine what you have learned.

Below is the information on the summative evaluation schedule and details for this course, as well as the weighting of marks:

Evaluations	***Weighting***
Midterm Exam	30 %
Project	30 %
Final Exam	40 %
Total	100%

Institutional requirements

Student's commitment

By registering for this course, you commit to:

- *obtain the necessary course materials at the start of the semester;*
- *respect the copyright;*
- *participate in the learning activities, formative and summative evaluation activities outlined in the course calendar;*
- *complete the work assigned to you;*
- *submit the work on time.*

Teacher's commitment

Your teacher commits to:

- *create varied learning situations that enable you to put into practice the knowledge, actions and professional behaviour of the targeted competency;*
- *plan sufficient and appropriate formative evaluation activities, involving correction and improvement, that provide frequent feedback, allowing you to be well informed of your progress;*
- *provide summative evaluations that correspond to the course's targeted competency;*
- *evaluate work according to the applicable criteria, in a fair and equitable manner within a reasonable time.*

The Institutional Policy on Evaluating Learning (IPEL) is applied to all institutional programs. Listed below are a few of its clauses:

Written language *(article 5.7)*

The teacher is responsible for identifying spelling and grammar errors and for allocating the corresponding number of marks for any given summative evaluation.

Below is the % – based on language requirements – that can be attributed to each summative evaluation:

- up to 5%

Class attendance *(article 5.12)*

Attendance and participation in classes and evaluations are mandatory for all students.

The teacher has the responsibility of monitoring attendance and of evaluating the reasons justifying student absences from classes.

A student whose absences exceed the allowable number for the course could be denied access to the final exam for that course.

Plagiarism and fraud *(article 5.16)*

Plagiarism, attempted plagiarism or complicity in plagiarism during an assignment or any evaluated task contravenes the rules. This includes (but is not limited to):

- *the whole or partial presentation (reference, paraphrase, summary, translation, insertion) of the work of another (text, illustration, film, music, etc. on paper or online) as one's own, or failing to cite a source;*
- *the use of another student's exam during an exam;*
- *the use of an assignment done for another course or a project already submitted in the past, which is passed off as an original work.*

Fraud, attempted fraud or complicity in fraud constitutes an infraction.
This includes (but is not limited to):

- *the possession or use of any unauthorized document, material or equipment during an exam, including the use of technological tools;*
- *the execution of an evaluated task by another person;*
- *the substitution for another person during an exam, assignment or any evaluated task;*
- *the possession of the questions or answers of the exam;*
- *the obtainment of any aid not authorized in advance by the teacher.*

Plagiarism, attempts at plagiarism or fraud, or collaboration in plagiarism or fraud are prohibited and considered serious offences. Thus, any instances of plagiarism or fraud will lead to a grade of '0' for the assignment in question. In addition, a note will be made in the student's file and the student will receive a written notice from his or her Program Directorate to that effect.

In the case of recidivism, in the same course or in another course, the student will be given a grade of '0' for the course in question. A second note is made in the student's file and the student will receive a summons from his or her Program Directorate. For a third offence, he or she may be expelled from the College.

Submission of work and tests *(article 5.8)*

All assignments must be submitted in class at the time designated by the teacher. Any late submissions result in a grade of zero (0).

Upon presentation of an official supporting document or valid reason for the absence, the student may request an extension from the teacher, who may accept or refuse the student's work and apply a penalty for the lateness.

Program Directorates do not accept student work. Assignments must be submitted directly to the teacher.

Rules and regulations to follow

Late arrivals

The teacher may refuse to admit to the classroom any student arriving late. A late arrival is considered an absence for that period.

Note: Students arriving late must recognize that the information they missed will not be repeated. Late students are therefore responsible for asking their peers about the material they missed. Arriving after the break, as well as leaving before the end of the class, may result in one or more hours of absence.

Eating and drinking in class

Eating and drinking are prohibited in the classrooms, locker rooms and Documentation Centre. Food may only be eaten in the cafeteria, vending machine areas and student lounges.

Mandatory course material

- Laptop with specifications mentioned on the college's website.

LaSalle College. Bring Your Own Device. 2017. < http://www.lasallecollege.com/futur-students/bring-your-own-device > for the use of MS Excel

- Notebook for taking notes.

Bibliography for this course

Introduction to WordPress Web Development - https://knowthecode.io/labs/introduction-wordpress-web-development. An online site for beginners.

Leary, S. *Word Press for Web Developers: An Introduction for Web Professionals*. Apress, 2013. ISBN 978-1-4302-5867-4

Academic Studies Directorate approval: *Signature and date of approval*

Daniel Dubreuil

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