Course Outline

Full-Stack Developer – LEA.BN

A. General Information

Course title	**Foundations of Web Development**
Course number	420-WA5-AB
Hours	75
Ponderation *Ratio of lecture, practical and homework hours*	2-3-3
Credits	2.67
Competency statement(s) and code(s)	DC79 - Use productivity tools for web design and software development
Prerequisite (s)	None
Cohort	FSD-10
Start date	2023/05/16
End date	2023/06/06
Day(s) and times	May 16-June 6 M-F 9:00-12:00 & 12:30-2:30
Classroom/lab number	Online
Semester	Summer 2023
Teacher	Cathy Dutton
Teachers' contact info	Omnivox - MIO
Course format (F2F, online, hybrid)	Online

B. Introduction

This course is part of the Full-Stack Developer program leading to an Attestation of Collegial Studies (A.E.C.). It should be taken in the first semester of the program.

This course is an introduction to computer concepts, tools for managing software development and documentation, and the foundation of web development. The course is organized into three sections. The first section introduces students to computer concepts and explains the major parts of a computer and how computers work. The second section provides basic information on file management and the applications for creating, organizing, and sharing design documents and business proposals. Online version control and collaborative tools, such as GitHub, will be used to assist in file sharing and managing conflicts between versions. The third section covers fundamental HTML and CSS commands to produce a basic website.

C. Course Objectives

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

DC79	
Statement of the Competency	**Achievement Context**
Use productivity tools for web design and software development.	• For design documents, proposals, and project management • Based on user requirements • Using word processing software, spreadsheet software, design software, presentation software, and collaborative software • Using images, sounds and videos • Using presentation standards
Elements of the Competency	**Performance Criteria**
1. Describe a project management approach to web development.	• Accurate description of the software development lifecycle • Identification of a project management approach and tools • Use of project management tools
2. Identify clients' needs.	• Accurate analysis of the request • Suitability of recommendations • Translation of requirements into a plan
3. Produce reports.	• Proper customizing of the word processing interface • Accurate data entry • Proper integration of images • Appropriate use and modification of styles and templates • Proper insertion of an automatic table of contents • Efficient use of the spelling and grammar check • Compliance with presentation standards
4. Produce tables and graphs.	• Proper customizing of the spreadsheet interface • Appropriate choice of the type of table and graph to be produced • Appropriate choice and use of mathematical formulas • Compliance with presentation standards

5. Produce diagrams or plans.	• Proper customizing of the drawing software interface • Choice of scale and format based on representation requirements • Accurate representation of geometric elements • Use of a symbol collection in accordance with representation requirements • Proper and clear drafting of the annotations and title block • Compliance with presentation standards
6. Produce presentation documents.	• Proper customizing of the presentation software interface • Appropriate choice of the display resolution and format • Appropriate integration of images, sounds and videos • Presentation readability • Compliance with spelling and grammar rules • Compliance with presentation standards
7. Share and synchronize documents.	• Proper customizing of the collaborative software interface • Appropriate conversion of file formats • Appropriate classification of documents • Correct assignment of access to shared documents • Efficient management of conflicts between versions

D. Evaluation Plan

Evaluation task	%	Approximate date	Link to competency(ies) and element(s)	Select if part of the final evaluation!
In-class Exercises 4 @ 5% each	20		1-7	☐
Lab Assignment 1	10	Class 8	1-6	☐
Lab Assignment 2	10	Class 10	1-6	☐
Final Exam	30	Class 12	1-6	☒
Group Project	20	Class 15	1-7	☒
Presentation	10	Class 15	1-7	☒
				☐
				☐
				☐
				☐

E. Course Content and Schedule

Course Content

Foundations of Computing
- Evolution of computer hardware and software
- Understanding the parts: input, process, output, storage
- Bits, Bytes, Number Systems, Text, Sound, Graphics

Operating Systems User Interface
- Terminology, Client, Server, Cloud computing, Virtualization
- File Management, Cloud storage

Understanding the Internet
- Protocols, DNS

Website fundamentals
- HTML, CSS

Understanding the Software Development Lifecycle
- User Requirements
- Agile Methodology

Collaboration Tools
- Version Control software

The Productivity Toolkit
- Word processing software
- Spreadsheet software
- Diagramming software
- Graphics software
- Presentation software

Schedule

Date or class	Topic(s)	Additional info	F2F	Online
1	Foundations of Computing	Evolution of computer hardware and software Understanding the parts: input, process, output, storage Bits, Bytes, Number Systems, Text, Sound, Graphics	☐	☐
2	Foundations of Computing	Bits, Bytes, Number Systems, Text, Sound, Graphics	☐	☐
3	Operating Systems User Interface	Terminology, Client, Server, Cloud computing, Virtualization File Management, Cloud storage	☐	☐
4	Understanding the Internet Website Fundamentals	Protocols, DNS HTML, CSS	☐	☐
5	Website Fundamentals	HTML, CSS	☐	☐
6	Understanding the Software Development Lifecycle Collaboration Tools	User Requirements Agile Methodology Version Control software, GitHub	☐	☐
7	The Productivity Toolkit	Word processing software	☐	☐
8	The Productivity Toolkit	Word processing software Spreadsheet software	☐	☐

9	The Productivity Toolkit	Spreadsheet software Diagramming software	☐	☐
10	The Productivity Toolkit	Diagramming software	☐	☐
11	The Productivity Toolkit	Graphics software Presentation software	☐	☐
12	Final Exam		☐	☐
13	Project		☐	☐
14	Project		☐	☐
15	Presentation		☐	☐

F. Required Textbooks / Materials / Costs

Title / Item	Cost $
Technical requirements for this course (hardware, software, High speed Internet connection, etc.)	

G. Bibliography (books, articles, videos, websites, podcasts, etc.)

Optional Readings:
1. Enhanced Discovering Computers ©2017, 1st Edition | Misty E. Vermaat, Susan L. Sebok | ISBN: 978-1305657458 | © 2017 Cengage Learning
2. Discovering the Internet: Complete, 5th Edition | Jennifer Campbell | ISBN: 978-1285845401 | © 2015 Cengage Learning
3. Technology In Action: Complete 14th Edition | Alan Evans, Kendall Martin, Mary Anne Poatsy ISBN: 978-0134608228 | ©2018 Pearson Education
4. Fundamentals of Information Systems, 9th Edition | Ralph M. Stair | ISBN: 978-1337097536 |© 2018 Cengage Learning
5. New Perspectives on Blended HTML and CSS Fundamentals: Introductory, 3rd Edition | Henry Bojack, Sharon Scollard | ISBN: 978-1-1335-2610-0 | Cengage Learning – Course Technology © 2013
6. The Essential Guide to HTML5 and CSS3 Web Design | Craig Grannell, Victor Sumner, Dionysios Synodinos | ISBN: 978-1430237860 2012 | Published by Apress Publishers

H. Teaching Methods

The course is a combination of theory and practical work. Students will be required to:
- Work alone
- Work in groups

It 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 be ready to work at the start of each class.
Léa, the course management system within Omnivox, will be used in this course.

Learning Activities:

- Lectures/Demonstrations: Discussion is encouraged as is student-procured, outside material relevant to topics being covered.
- Hands-On Exercises/Assignments/Project: Case problems, concepts reviews, and skills practice, will help support and reinforce material in the course. These will be structured to be as realistic as possible given the time available.
- Tests
- Group Term Project
- Classroom Activity: Participation and Discussion

I. Departmental Policies and Classroom Policies

Classroom Policies

Late submission of work Work submitted late will result in a 10% deduction from the grade, per calendar day.
Classroom behaviour
Online etiquette

Departmental Policies

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

Continuing Education Policies and Guidelines

J. 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

Please refer to the following document concerning the provisos related to course outlines as a response to Covid-19.

Provisos for Course Outlines (Covid-19)

Topic	Policy or Guideline (click link)	Article (if applicable)
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		See article 3.1 and 5.3.
Religious Holidays		See articles 3.2 and 4.1.
Cheating and plagiarism		See articles 9.1 and 9.2.
	Academic Integrity: Cheating and Plagiarism Procedure (version: October 22, 2021)	
Student Code of Conduct	Policy 13: Policy on Student Conduct and Discipline Procedures (September 15, 2009)	