

Communication and Information Technologies 2

412-206-VA

OST: Micropublishing and Hypermedia • Winter 2018
Faculty of Arts, Business, and Social Sciences • Vanier College

Sec. 01 • Mon 16h00–18h00 + Wed 15h30–17h30
Sec. 02 • Mon 10h00–12h00 + Wed 10h00–12h00

This course is a continuation of Communication and Information Technologies 1. This second part focuses on databases. Through projects and hands-on assignments, students will develop a basic understanding of back-end web development. Students will learn to organize information in categories and records, create data tables and establish relationships between tables using keys. They will design interfaces for the presentation and entry of data. Students will learn to plan and document the infrastructure of websites and apps using data models, wireframes and other methods. Students will also have the opportunity to combine the front-end web development skills acquired in other courses in several app creation projects.

COURSE INFORMATION

2.33 credits 1-3-2
60 hours 4 hours/week

Teaching Methods

All classes are held in a computer lab and combine short lectures and exercises with projects.

An *Exercise* is an in-class activity directed by the teacher, it is usually completed in one period, sometimes can be finished at home.

A *Project* is a more substantial activity, most of it is done outside of class over several days, some in-class time will be reserved for project work and critique.

Teacher

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Contact me via email or Facebook Messenger to schedule appointments outside class time; or see me in the labs.

PROJECTS OVERVIEW

More detailed assignment sheets will be distributed in class.

- Petition App.** You will create a simple online petition system with information stored in a simple database. The system shows the petition text and a list of people who signed.
- Messenger App.** You will design and produce an app that provides simple text communication (similar to Messenger) between users. This system will be fully documented and implemented following design specifications.
- Image Sharing App.** You will develop a simple Instagram clone where people can share pictures and comment on each other's posts. The front-end of this system will be produced in your web design class therefore bridging the two classes.

TENTATIVE SCHEDULE

Week 1

Databases: Concepts & Terminology

Exercise 1 • Your First Database (5%)

Weeks 2–3

DB Design & Documentation: Models & Interfaces

Exercise 2 • Documentation: Data Model (5%)

Exercise 3 • Documentation: Forms and Reports (5%)

Exercise 4 • Documentation: System Design (5%)

Weeks 4–7

Petition App

Project 1.1 • Petition System Documentation (10%)

Project 1.2 • Petition App Deployment (10%)

Weeks 8–11

Messenger App

Project 2.1 • Messenger System Documentation (10%)

Project 2.2 • Messenger Front-end Documentation (10%)

Project 2.3 • Messenger App Deployment (10%)

Weeks 12–15

Image Sharing App

Project 3.1 • Image Sharing Documentation (15%)

Project 3.2 • Image Sharing App Deployment (15%)

COMPETENCIES

00UW • To perform word processing operations

Element 1. **To use the user interface.** – 1.1 Efficient navigation within the user interface. • 1.2 Appropriate disk and diskette formatting. • 1.3 Efficient file management. • 1.4 Creation and deletion of directories (folders) and files. • 1.5 On-going virus prevention.

Element 2. **To set the basic parameters for a text.** – 2.1 Correct setting of paper size and orientation. • 2.2 Correct setting of text placement parameters. • 2.3 Correct setting of basic font style and size. • 2.4 Optimum use of the page numbering functions. • 2.5 Correct creation of headers and footers. • 2.6 Appropriate selection of printer driver.

Element 3. **To perform basic word processing functions.** – 3.1 Strict application of a keyboarding method. • 3.2 Efficient use of techniques for moving cursor. • 3.3 Efficient modification of text placement and character formatting. • 3.4 Appropriate insertion of data, objects and files. • 3.5 Optimum application of techniques for deleting, moving and copying content elements. • 3.6 Effective use of tools to assist in text production. • 3.7 Efficient use of saving and printing options. • 3.8 Regular execution of back-up copies.

Element 4. **To create the complementary parts of a text.** – 4.1 Appropriate creation of footnotes and endnotes. • 4.2 Appropriate insertion of codes for table of contents and index. • 4.3 Appropriate production of table of contents and index.

Element 5. **To improve text presentation.** – 5.1 Optimum use of

possibilities for modifying and manipulating fonts/characters. • 5.2 Use of appropriate emphasis for titles. • 5.3 Use of appropriate emphasis for illustrations and graphics. • 5.4 Addition of relevant graphic elements. • 5.5 Appropriate creation and adaptation of models and styles. • 5.6 Efficient application of styles to a text. • 5.7 Strict application of typographical standards. • 5.8 Constant emphasis on quality of text presentation.

Element 6. **To sort data.** • 6.1 Appropriate placement of data. • 6.2 Correct application of sorting operations.

Element 7. **To create and use a database.** – 7.1 Correct selection of fields. • 7.2 Application of appropriate data entry methods. • 7.3 Correct importation of databases from other applications. • 7.4 Efficient interrogation of a database. • 7.5 Appropriate extraction of data. • 7.6 Efficient merging of a database with a form letter. • 7.7 Efficient production of lists, labels and envelopes.

Element 8. **To create tables.** – 8.1 Appropriate determination of the table format. • 8.2 Appropriate entry of data. • 8.3 Selection of relevant styles. • 8.4 Correct performance of simple calculations.

Element 9. **To automate operations.** – 9.1 Efficient automation of a simple operation. • 9.2 Efficient modification of a previously automated operation. • 9.3 Appropriate selection of shortcut buttons. • 9.4 Appropriate modification of toolbars. • 9.5 Efficient and appropriate creation of personalized buttons.

00UX • To process and present data.

Element 1. **To create a spreadsheet.** – 1.1 Efficient data entry. • 1.2 Efficient use of automatic data entry options. • 1.3 Efficient use of align, copy, move and delete functions. • 1.4 Efficient data sorting. • 1.5 Appropriate formula creation. • 1.6 Use of relevant integrated functions. • 1.7 Regular execution of back-up copies.

Element 2. **To modify a spreadsheet.** – 2.1 Appropriate modification of row and column dimensions. • 2.2 Efficient insertion and deletion of rows and columns. • 2.3 Appropriate changes of cell format and display. • 2.4 Efficient insertion of elements from the same application or different applications. • 2.5 Correct importation of spreadsheets from the same application or different applications.

Element 3. **To improve the presentation of a spreadsheet.** – 3.1 Relevant use of styles and page setup possibilities.

Element 4. **To perform multi-sheet processing.** – 4.1 Appropriate naming of spreadsheets. • 4.2 Simultaneous data entry in several spreadsheets. • 4.3 Efficient data copying in a multi-sheet file. • 4.4 Efficient linking of data between spreadsheets in the same file and spreadsheets in different files. • 4.5 Appropriate use of multi-sheet printing possibilities.

Element 5. **To produce a graph.** – 5.1 Correct choice of graph according to the type of information to be represented. • 5.2 Appropriate creation of the spreadsheet. • 5.3 Correct data placement by axis.

Correct data modification. • 5.4 Efficient addition and modification of

relevant information. • 5.5 Use of various methods to improve or modify the visual impact of the graph. • 5.6 Optimum use of printing options for graphs.

Element 6. **To automate operations.** – 6.1 Efficient automation of a simple operation. • 6.2 Efficient modification of a previously automated operation. • 6.3 Appropriate selection of shortcut buttons. • 6.4 Appropriate modification of toolbars. • 6.5 Efficient and appropriate creation of personalized buttons.

Element 7. **To produce organization charts and diagrams.** – 7.1 Optimum use of applications to produce organization charts and diagrams. • 7.2 Appropriate information organization and presentation. • 7.3 Use of appropriate methods to optimize the visual impact of organization charts and diagrams, both on-screen and in printouts.

COURSE POLICIES

It is the student's responsibility to be familiar with and adhere to all Vanier College Policies. A summary of the course-level policies that apply in this and all other Vanier courses can be found under "Course-Level Policies" in Important Vanier Links on Omnivox, or by following this link:

<http://www.vaniercollege.qc.ca/psi/course-level-policies/>.

Complete policies can be found on the Vanier College website, under Policies.