Computer Science Technology 420.B0

420-2W6-AB
COURSE OUTLINE

GENERAL INFORMATION

Program	Computer Science Technology 420.B0
Course Title	**User Interfaces**
Course Number	**420-2W6-AB**
Timetable and Classroom	**Section 2** **Room:** P327 **Schedule:** Tues 2:30pm-4:00pm, Wed 1:00pm-4:00pm, Fri 3:00-4:30pm
Ponderation	2 hour lecture + 4 hours laboratory + 3 hour homework
Number of Credits	3.00
Competency and Code	Develop transactional Web applications. 00SU.
Prerequisites	420-1P6-AB
	This course is a prerequisite for 420-3W5-AB and 420-4A8-AB
Semester	**Winter 2023**
Teacher Name Office Phone Email Office Hours	Michael Haaf Penfield 311 N/A michael.haaf@johnabbott.qc.ca TBA. Appointments can be made outside of the posted hours when the need arises.

INTRODUCTION

This course provides the student with the tools and techniques required to design and program user interfaces in web applications. It is designed as a front-end web development course with HTML and CSS at the presentation level and JavaScript providing functionality. Accessibility in the user experience as well as responsive web design will also be explored.

COURSE OBJECTIVES

Competency 00SU. Develop transactional Web applications.

Achievement Context

- **For transactional Web applications: reservations, registrations, collaboration, inventory management, e-commerce, etc.**
- **For new applications and applications to be modified**
- **Based on design documents**
- **Using images**
- **Using issue tracking and version control procedures**

Elements of competency	Performance criteria
00SU.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 Suitable creation of Web forms 4.5 Adaptation of the interface based on the display format and resolution

EVALUATION PLAN

Objective:	00SU.4
Assignments Labs & Quizzes 40%	x
Test 1 (Week 8) 15%	x
Test 2 (Week 14) 15%	x
Project Milestone 1 15%	x
Project Milestone 2 15%	x

(Note: Weeks indicated for Tests and Project are tentative)
Final evaluation consists of the tests, the project, and the assignments.

COURSE CONTENT

User Interfaces
- Designing for the user
- Accessibility

HTML5
- DOM Model
- Audio-visual elements
- Properties and Values
- Browser tools

Cascading Style Sheets (CSS)
- Cascading behaviour
- References (Class, Id)
- CSS Frameworks
- Navigation Bar

Creating Responsive Web Designs

Content Management Systems

HTML Forms
- Validations

JavaScript
- Manipulating the DOM
- Dynamic styling
- Event-driven UI

TENTATIVE SCHEDULE

Week 1	UI fundamentals; Tools: VS Code, Browser Dev Tools, Codepen
Week 2	HTML – Syntax, Elements, Structure vs. Content
Week 3	HTML – DOM Model, Semantic HTML
Week 4	Introduction to CSS – Syntax, Selectors, Styles
Week 5	Introduction to CSS – Layouts, Box model
Week 6	Introduction to CSS – Flexbox
Week 7	Introduction to JavaScript – Manipulating the DOM, Dynamic styling
Week 8	**Test 1**
Week 9	Responsive Web Design
Week 10	Intermediate CSS – Layouts, Grid
Week 11	Intermediate CSS – The Cascade, Best Practises
Week 12	Putting it all together: HTML Forms
Week 13	HTML Forms with Event-driven UI
Week 14	Content Management Systems, **Test 2**
Week 15	Content Management Systems

SUGGESTED TEXT

No textbook is required. Suggested readings from excerpts and the web will be provided on the course website.

COURSE COSTS

N/A

TEACHING METHODS

This course consists of 90 hours of scheduled lectures and lab work. In addition, each student will be required to do 45 hours of personal study that includes research, personally booked computer time and work at home. In addition, LEA will be used for the submission of labs, assignments, projects or for testing. Further details will be provided if applicable.

LATE POLICY

All assignments and projects are expected to be submitted by the required due date. A late penalty of up to 10% per day might apply to assignments submitted late up to a maximum number of allowed late days. The exact percentage and the maximum will be indicated on the instructions specific to that assignment. Any work submitted after the maximum number of allowed late days has been reached will not be graded

DEPARTMENTAL ATTENDANCE POLICY

Attendance is compulsory. Unexcused absences of more than 20% of any class activities will result in a grade of 0 for the assessment related to that activity.

COLLEGE POLICIES - IPESA, Institutional Policy on the Evaluation of Student Achievement: Policy-7-IPESA.pdf

□ **Changes to Evaluation Plan in Course Outline** (Article 5.3)

Changes require documented unanimous consent from regularly attending students and approval by the department and the program dean

□ **Religious Holidays** (Articles 3.2.13 and 4.1.6)
Students who wish to miss classes in order to observe religious holidays must inform their teacher of their intent in writing within the first two weeks of the semester

Student Rights and Responsibilities: (Articles 3.2.18 and 3.3.6)

□ It is the responsibility of students to keep all assessed material returned to them and/or all digital work submitted to the teacher in the event of a grade review. (The deadline for a Grade Review is 4 weeks after the start of the next regular semester.)

□ Students have the right to receive graded evaluations, for regular day division courses, within two weeks after the due date or exam/test date, except in extenuating circumstances. A maximum of three (3) weeks may apply in certain circumstances (e.g. major essays) if approved by the department and stated on the course outline. For evaluations at the end of the semester/course, the results must be given to the student by the grade submission deadline (see current Academic Calendar). For intensive courses (i.e. intersession, abridged courses) and AEC courses, timely feedback must be adjusted accordingly;

□ **Academic Procedure: Academic Integrity, Cheating and Plagiarism** (Article 9.1 and 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.

College Definition of Cheating:
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.

College Definition of Plagiarism:
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.

For PowerPoint on cheating and plagiarism refer to the JAC Portal: My JAC Communities / Academic Council / Curriculum Validation Committee (CVC) / Course Outlines – Reference Documents / Academic Integrity.

For link to interactive tutorial on how to cite sources correctly: http://citeit.ccdmd.qc.ca