100 West 49th Avenue, Vancouver, BC, Canada V5Y 2Z6
T 604.323.5511 F 604.323.5555 www.langara.bc.ca

Course Outline

Course Code, Number, and Title: CPSC 1045 - Introduction to web programming

Course Format: : Lecture 2.0 h + Seminar 0.0 h + Lab 4.0 h

Credits: 3 **Transfer Credit:** For information, visit bctransferguide.ca

Course Description, Prerequisites, and Corequisites:

Introduction to programming with a modern programming language (e.g., JavaScript) in a Web-based environment. Program development skills including: analyzing a problem to make it amenable to programming; writing structured, modularized programs; program documentation; interacting with the computer operating system; event driven programming for client-side Web applications.

Prerequisite(s): None. Basic computer literacy is recommended. Prerequisites are valid for only three years.
Co-requisites: None

Learning Outcomes:
Upon successful completion of this course, students will be able to write a well structured client side web-app using HTML and JavaScript. Students will develop strong foundational skills for further studies in computer science or web programming.

More specifically, at the completion of this course students will be able to:

- apply fundamental algorithm constructs, such as:
- sequencing, iteration, conditionals, event handling, variables and arrays, Boolean logic, and functions.
- given a small programming problem:
    - analyze and decompose the problem;
    - define input/output requirements;
    - develop a well-structured algorithmic solution;
    - implement a modularized solution in JavaScript;
    - test and debug their program;
    - correctly document their program and interfaces.
- use utilities, like JSLint, JSFiddle, Firebug, and JSTidy to create well-formatted, standards-compliant code and reduce programming errors.
- apply 'best practices' in writing JavaScript code for an HTML5 web page.
- discuss and apply the concept of "event-driven" programming.
- define and discuss a few of the issues and constraints related to programming for the web.

Utilize some HTML5 features to program

Instructor(s): Kim Lam

Office: B246H **Phone:** Do not phone **Email:** kimlam@langara.bc.ca

Office Hours: Monday 10:30 -11:30
Tuesday 9:30-11:30
Wednesday 10:30-11:30
Thursday 9:30-11:30

Textbook and Course Materials:
Note: *This course may use an electronic (online) instructional resource that is located outside of Canada for mandatory graded class work. You may be required to enter personal information, such as your name and email address, to log in to this resource. This means that your personal information could be stored on servers located outside of Canada and may be accessed by U.S. authorities, subject to federal laws. Where possible, you may log in with an email pseudonym as long as you provide the pseudonym to me so I can identify you when reviewing your class work.*

Textbook: Haverbeke, Marijin. Eloquent JavaScript: A Modern Introduction to Programming. No Scratch Press, c2011

Online resources: https://d2l.langara.bc.ca**Useful websites:**

- **w3schools.com:** http://www.w3schools.com/
- **w3schools validator:** http://validator.w3.org/
- **JsHint:** http://jshint.com/

Assessments and Weighting:

Labs: 15%
- Approximately 50% of labs will be graded in lab consisting of:
  - a small demonstration
  - short oral examination
- Approximately 50% of lab will be submitted to drop box for grading.

Worksheets: 10%
Midterms :
- 2 Written exam 12%, 6% each
- 2 Lab exam 18%, 9% each

Final Exam 25%
Projects 20%

Grading:

A+	90-100%	B+	76-79%	C+	64-67%	D	50-54%
A	85-89%	B	72-75%	C	60-63%	F	0-49%
A-	80-84%	B-	68-71%	C-	55-59%		

Note: your assigned grade may differ from your calculated grade up to one letter grade category due to instructor discretion and items not explicitly accounted for in the evaluation scheme.

Detailed Course Schedule:

	Lecture Topic	**Worksheet**	**Lab Topic**
04-Jan	Course Intro/HTML	Worksheet 1	Lab orientation Lab 1: HTML
11-Jan	Expressions	Worksheet 2	Lab 2: Expression Lab
18-Jan	Drawing with Canvas	Worksheet 3	Lab 3: Canvas Lab
25-Jan	If and Switch statements	Worksheet 4	Lab 4: Conditional Lab
01-Feb	Loops	Worksheet 5	Lab 5: Loops
08-Feb	Spring break	Spring Break	Spring Break
15-Feb	Review Exam Week 1		Lab Exam1/Midterm 1
22-Feb	Functions/Variable Scopes	Worksheet 6	Lab 6: Functions Lab
29-Feb	Functions and Basic Events and Adding events handlers in HTML	Worksheet 7	Lab 7: Functions Events Lab
07-Mar	Arrays	Worksheet 8	Lab 8: Array Lab
14-Mar	Exam Week 2 Objects		Lab Exam 2/Midterm 2 Lab 9: Objects
21-Mar	Objects/ Adding event handlers in JavaScript Keyboard and Mouse events	Worksheet 9	Lab 10: Keyboard and mouse events

28-Mar	Events: Timers	Worksheet 10	Lab 11: Timer events
04-Apr	Review		No Lab

As a student at Langara, you are responsible for familiarizing yourself and complying with the following policies:

College Policies:

E1003 - Student Code of Conduct

F1004 - Code of Academic Conduct

E2008 - Academic Standing - Academic Probation and Academic Suspension

E2006 - Appeal of Final Grade

F1002 - Concerns about Instruction

E2011 - Withdrawal from Courses

Departmental/Course Policies:

Departmental Policies:

1. Students will receive a failing mark if they miss 20% of the course components including lectures, seminars, labs and projects unless there is verifiable evidence of an acceptable excuse.

2. In order to get a C or higher in computer science courses, a student must achieve at least an average of 50% in the exam components of the course.

Course Policies:

1. Normally, a score of zero will be given for a missed exam, tests quiz, lab, etc. Makeup exams are generally NOT permitted, except in circumstances of well-documented serious illness or injury, or the death of a close family member.
2. The Labs form a compulsory portion of the course. Students must attempt and summit all labs. Students missing 30% or more of the labs may be asked to meet with the instructor to review their progress in the course. The instructor has the discretion not to grant a grade of C or higher, in this case. All assignments are due as scheduled. Absolutely no late assignments will be accepted
3. The final examination is common to all sections of CPSC 1045 and will be two (2) hours in duration.

4. Questions and problems regarding assignments will be posted on D2L. Students are responsible for regularly checking D2L for any updates.
5. Each student is expected to do his/her own work and enter his/her own keystrokes. While helping one another is encouraged, direct copying of assignments is cheating and will be penalized appropriately.