Applications Development for Online Environments
Winter 2012-2013

Class Times:

<table>
<thead>
<tr>
<th>Section</th>
<th>Day(s)</th>
<th>Time(s)</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Monday</td>
<td>6:05pm-8:55pm</td>
<td>Southam Hall 313</td>
</tr>
</tbody>
</table>

Instructors:
Shawn Smith-Chao
Office: TBA
Phone: 613-867-8188 (Cell)
Office Hours: Monday 9pm-10pm or by appointment
Email : shawn@smith-chao.com

Course Description
HTML5 reinvents web markup and design, by integrating the various technologies and ideas that have evolved around this medium. Previously, developing skill around web design involved juggling almost half-a-dozen different platforms and technologies, with the result unlikely to render in the same way on two different browsers. HTML5 is designed to simplify the number of concurrent languages to master (HTML5, CSS3, and Javascript), and to present a unified development and presentation platform which transcends both device and vendor. Though unlikely to completely meet this lofty goal, HTML5 now presents a realistic starting point for developers who wish to quickly develop functional skill in web design.

This course will build a foundation in HTML5, with the goal of being able to develop professional-looking, device agnostic, and rich applications. Focus will be on coding working examples which together build a cohesive web experience.

Objectives
- Students will be introduced to the foundation HTML5 concepts including the standard markup, CSS3, Javascript, and the core HTML5 APIs.
- Students will learn how to develop device agnostic web offerings for desktop and mobile delivery.
- Students will learn to develop web applications which provide the functionality and quality of desktop application offerings.
Prerequisites
BUSI 2402 and BUSI 3400, or COMP 1002 and COMP 3005 (with a grade of C- or higher in each).

Resource Materials

Required:
1. **Text:** HTML5 for Masterminds, 2nd Edition, J.D. Gauchat
   ISBN-13 978-1481138505
2. An account on to log into cuLearn.

Supplementary:
Course notes, assignments, sample programs etc. will all be available on WebCT.

Evaluation
Overview
Students will be evaluated in this course according to three measures: Programming assignments, a midterm examination, and a final examination.

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignment 1 – Foundation Web Site</td>
<td>20</td>
</tr>
<tr>
<td>Assignment 2 – API-Enriched Web Site</td>
<td>20</td>
</tr>
<tr>
<td>Assignment 3 – Mobile Standalone Web Site</td>
<td>20</td>
</tr>
<tr>
<td>Final Exam</td>
<td>40</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100%</strong></td>
</tr>
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</table>
Assignments
The purpose of the assignment set is to build skill with the concepts developed in the course. Each assignment will combine new material with previous foundation material, and will be graded based on a set of provided criteria. Assignments will be zipped and delivered to the professor using WebCT on the assignment date by 12am. Assignments will be posted three weeks before their due date, to provide ample time for completion.

Assignment 1 – Foundation Web Site
The initial website will demonstrate the student’s ability to leverage HTML5, CSS, and basic JavaScript. This basic site will include a home page, and a second topic page which highlights the subject matter of the site.

Assignment 2 – API Enriched Web Site
Expands upon the initially created site by adding user login and data entry forms, drag and drop controls, audio, video, and graphics. The site will now include a user signup page, an administrator management page, and a second content page that highlights multimedia options.

Assignment 3 – Mobile Standalone Web Site
The final assignment will bring the users previous site into a mobile experience, and will add offline user capabilities. The site will be modified to be presentable in multiple mobile settings, and will allow users to experience most of the site’s functionality while offline.

Late Assignments
Assignments not ready to be graded by the 12am on the date due will be considered late. Twenty percent (20%) of the assignment mark will be deducted for each day that an assignment is late.

Breakdown of computer networks on the day of or the day preceding the assignment will not be considered a sufficient reason to change the due date or to accept late assignments without penalty. If WebCT is not available at the required assignment submission time, email the assignment directly to the instructor.

Assignment Due Dates

<table>
<thead>
<tr>
<th>Assignment Description</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignment 1</td>
<td>End of Week 5</td>
</tr>
<tr>
<td>Assignment 2</td>
<td>End of Week 9</td>
</tr>
<tr>
<td>Assignment 3</td>
<td>End of Week 12</td>
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Final Examinations
The final exam will be held during the formal examination period in April. It will cover topics from the entire course and will be closed book. If possible, the exam will be scheduled in a computer lab, such that the exam can be written on computer. The exam will consist of coding tasks that will demonstrate practical knowledge, and brief essays that cover course theory content. The final exam will be worth 40% of your final grade.

You must obtain a passing grade on the final exam to pass the course.
Course Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Topics</th>
<th>Book Chapters</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>HTML5 Basics</td>
<td>Chapter 1</td>
</tr>
<tr>
<td>2</td>
<td>CSS Styling and Box Model</td>
<td>Chapters 2, 3</td>
</tr>
<tr>
<td>3</td>
<td>JavaScript</td>
<td>Chapter 4</td>
</tr>
<tr>
<td>4</td>
<td>Video and Audio, Text Track API, Fullscreen API, Stream API</td>
<td>Chapters 6, 7, 8, 9</td>
</tr>
<tr>
<td>5</td>
<td>Forms</td>
<td>Chapter 5 – Assignment 1 Due</td>
</tr>
<tr>
<td>6</td>
<td>Web Storage API, IndexedDB API, File API</td>
<td>Chapters 14, 15, 16</td>
</tr>
<tr>
<td>7</td>
<td>Canvas API</td>
<td>Chapter 10</td>
</tr>
<tr>
<td>8</td>
<td>3D Canvas API</td>
<td>Chapter 11</td>
</tr>
<tr>
<td>9</td>
<td>Pointerlock API, Drag and Drop API, Geolocation API</td>
<td>Chapters 12, 13, 17 – Assignment 2 Due</td>
</tr>
<tr>
<td>10</td>
<td>History API, Offline API, Page Visibility API, Browser and device detection</td>
<td>Chapters 18,19, 20</td>
</tr>
<tr>
<td>11</td>
<td>Ajax Level 2, Web Messaging API, Web Socket API, Web Workers API</td>
<td>Chapter 21, 22, 23, 26</td>
</tr>
<tr>
<td>12</td>
<td>Course Review</td>
<td>Assignment 3 Due</td>
</tr>
</tbody>
</table>

**Required calculator in BUSI course examinations**
If you are purchasing a calculator, we recommend any one of the following options: Texas Instruments BA II Plus (including Pro Model), Hewlett Packard HP 12C (including Platinum model), Staples Financial Calculator, Sharp EL-738C & Hewlett Packard HP 10bII

**Group work**
The Sprott School of Business encourages group assignments in the school for several reasons. They provide you with opportunities to develop and enhance interpersonal, communication, leadership, follower-ship and other group skills. Group assignments are also good for learning integrative skills for putting together a complex task. Your professor may assign one or more group tasks/assignments/projects in this course. Before embarking on a specific problem as a group, it is your responsibility to ensure that the problem is meant to be a group assignment and not an individual one.

**Medical certificate**
Please note that in all occasions that call for a medical certificate you must use or furnish the information demanded in the standard university form. [http://www2.carleton.ca/registrar/forms/]
Academic Accommodations for Students with Disabilities
The Paul Menton Centre for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring academic accommodations in this course, please contact PMC at 613-520-6608 or pmc@carleton.ca for a formal evaluation. If you are already registered with the PMC, contact your PMC coordinator to send me your Letter of Accommodation at the beginning of the term, and no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with me to ensure accommodation arrangements are made. Please consult the PMC website for the deadline to request accommodations for the formally-scheduled exam (if applicable).

Religious observance
Students requesting academic accommodation on the basis of religious observance should make a formal, written request to their instructors for alternate dates and/or means of satisfying academic requirements. Such requests should be made during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist, but no later than two weeks before the compulsory academic event. Accommodation is to be worked out directly and on an individual basis between the student and the instructor(s) involved. Instructors will make accommodations in a way that avoids academic disadvantage to the student. Students or instructors who have questions or want to confirm accommodation eligibility of a religious event or practice may refer to the Equity Services website for a list of holy days and Carleton's Academic Accommodation policies, or may contact an Equity Services Advisor in the Equity Services Department for assistance.

Pregnancy
Pregnant students requiring academic accommodations are encouraged to contact an Equity Advisor in Equity Services to complete a letter of accommodation. The student must then make an appointment to discuss her needs with the instructor at least two weeks prior to the first academic event in which it is anticipated the accommodation will be required.

Plagiarism
The University Senate defines plagiarism in the regulations on instructional offenses as: "to use and pass off as one's own idea or product work of another without expressly giving credit to another."
Borrowing someone else's answers, unauthorized possession of tests or answers to tests, or possession of material designed in answering exam questions, are also subject to university policy regarding instructional offences. For more information on Carleton University's Academic Integrity Policy, consult: http://www1.carleton.ca/studentaffairs/academic-integrity/
Important Dates & Deadlines – Winter 2013

January 7, 2013
- Winter-term classes begin.

January 18, 2013
- Last day for registration for winter term courses.
- Last day to change courses or sections for winter term courses.

January 31, 2013
- Last day for withdrawal from winter term and winter portion of fall/winter courses with full fee adjustment.

February 1, 2013
- Last day for receipt of applications for admission to the Bachelor of Architectural Studies and the Bachelor of Social Work degree programs for the 2013-14 fall/winter session.

February 15, 2013
- April examination schedule available online.

February 15-23, 2013
- Fall-term deferred examinations will be written. Examinations are normally held in the day and evening during the Monday to Saturday period. In exceptional circumstances, it may be necessary to schedule an examination on a Sunday.

February 18, 2013
- Statutory holiday. University closed.

February 18-22, 2013
- Winter Break, classes suspended.

March 1, 2013
- Last day for receipt of applications from potential Spring (June) graduates.
- Last day for receipt of applications to the Bachelor of Humanities, Bachelor of Industrial Design, Bachelor of Information Technology (Interactive Multimedia and Design), Bachelor of Journalism, and the Bachelor of Music degree program for the 2013-2014 fall/winter session.
- Last day for receipt of applications for admission to a program for the 2013 summer terms.

March 8, 2013
- Last day to submit, to the Paul Menton Centre for Students with Disabilities, Formal Examination Accommodation Forms for April examinations.

March 27, 2013
- Last day for tests or examinations in courses below the 4000-level before the final examination period (see Examination Regulations in the Academic Regulations of the University section of this Calendar).

March 29, 2013
- Statutory holiday. University closed.

April 1, 2013
- Last day for receipt of applications for admission to a program (except Bachelor of Architectural Studies, Bachelor of Humanities, Bachelor of Industrial Design, Bachelor of Information Technology (Interactive Multimedia and Design), Bachelor of Journalism, Bachelor of Music, and Bachelor of Social Work, for the 2013-2014 fall/winter session, from candidates whose documents originate outside Canada or the United States.

April 10, 2013
- Winter term ends.
- All classes follow a FRIDAY schedule.
• Last day of fall/winter and winter-term classes.
• Last day for academic withdrawal from fall/winter and winter-term courses.
• Last day for handing in term work and the last day that can be specified by a
  course instructor as a due date for term work for fall/winter and winter-term
  courses.

April 11-12, 2013
• Review period. No classes take place.

April 13-27, 2013
• Final examinations in winter term and fall/winter courses may be held. It may be
  necessary to schedule examinations during the day for classes held in the
  evening and vice versa. In exceptional circumstances, it may be necessary to
  schedule an examination on a Sunday.

April 16, 2013
• Winter Co-op Work Term Reports are due.

April 27, 2013
• All take home examinations are due on this day.