COMP 4021 Internet Computing

Fall 2015

Announcements

- 4021 Final Exam: Dec 14, 4:30pm - 7:30pm, LG4 Student Common Rooms, Lift 3

Course Info

Technologies and standards for World Wide Web (WWW), user interfaces and Browsers, authoring tools, Internet protocols, Internet servers, database connectivity, Robots, Search engines, server-side programming, client-side programming, security and privacy, recent advances.

Section	Date & Time	Venue
Lecture	Tue & Thur, 3:30pm-4:20pm	2406 (Lift 17/18)
Lab	Thu, 10:30am-12:20pm	4210 (Lift 19/20)

Textbook (Optional): Internet and World Wide Web: How to Program

Evaluation: Assignments (48%), Midterm (18%), Final (34%)

Instructor

Dik Lun LEE (Web)
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Room: 3534 (Lift 25/26)
Office hours: Tue/Thu 2:30-3:30pm or by email appointment

Teaching Assistants

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Course Outcomes

On successful completion of this course, students are expected to be able to:

1. Evaluate the use of the Internet in society.
2. Assess HTML and related display techniques including CSS.
3. Build browser-based programs using the JavaScript language, including DHTML and event handling.
4. Program advanced browser display technologies including Flash and SVG, and differentiate between the technologies.
5. Develop code for handling communication between web page components such as JavaScript, Flash and applets.
6. Install and describe the operation of a server such as Apache and develop server side code in an appropriate language such as PHP.
7. Identify the most common HTTP instructions and their methods of client-server interaction, including cookies.
8. Identify XML and related technologies including DOM handling.
9. Develop complex programs for browser-server communications, including use of Ajax.

Lectures

Week	Tue Lecture, 3:30pm-4:20pm	Thur Lecture, 3:30pm-4:20pm	Lab, Thur, 10:30pm-12:20pm
#1 Sep 1 & 3	• **Course details** slides, Important notes new! • **Introduction to Internet Computing and Web** slides	*Special Holiday*	No Lab
#2 Sep 8 & 10	• **HTML** slides ◦ RGB colors ◦ HTML reference, tutorial ◦ W3School Tryit Editor Recommend ◦ HTML editor (full-page version accepts more HTML tags than full-feature version)	• **JavaScript 1** slides ◦ Examples for JavaScript 1 PPT ◦ JavaScript and HTML DOM Reference ◦ JavaScript Tutorial	**Lab #1** (self study, no need to go to the lab) Hammer Game Solution using audio tag
#3 Sep 15 & 17	• **JavaScript 2** slides ◦ Examples for JavaScript 2 PPT ◦ IE events • **Example project: Click Game** ◦ Result here, pdf	• **Divs, Image-Maps** slides ◦ Examples for divs maps PPT ◦ Convert table to div using HMTL Cleaner • **Cascade Style Sheet (CSS)** slides ◦ CSS examples	No Lab
#4 Sep 22 & Sep 24	• **jQuery and Autocomplete** slides ◦ Examples for jquery PPT ◦ jsfiddle jQuery tester ◦ An example on jsfiddle	• **More on jQuery and Autocomplete** slides ◦ Example code 1 ◦ Example code 2	**Lab #2** (Sep 24) JQUERY
#5 Sep 29 & Oct 1	• **SVG Basics** slides ◦ SVG basics examples ◦ W3C SVG spec ◦ W3C SVG path spec ◦ Inkscape SVG graphics editor ◦ Online SVG Editors: svg-edit ◦ SVG definition, clipping and pattern examples ◦ SVG gradient examples (ref only) ◦ All gradient examples in pdf (ref only) ◦ Wikipedia and SVG examples	*Pubic Holiday*	No Lab
#6 Oct 6 & 8	• **Dynamic SVG** slides ◦ SVG transformation examples ◦ SVG animation examples	• **Coordinate Systems and Matrix Transformation** slides	**Lab #3** (Oct 8) SVG-1

#7
Oct 13 & 15
	• **JavaScript 3** slides
	  ◦ Examples for JavaScript 3 PPT
	• **More Web Browser Programming Techniques** slides
	  ◦ Examples, pdf of all examples
	  ◦ Control between parent and child windows
		• **Dynamic SVG Using JavaScript** slides
		  ◦ SVG animation examples using JavaScript
		  ◦ SVG/Flash comparison Examples [for ref only]
		• **Midterm Exam General Information**
		• **Example midterm exam questions**
		  ◦ Two questions with answers
		  ◦ One question with answer
			Lab #4
			(Oct 15)
			SVG-2

#8 Oct 20 & 22	*Midterm takes place on Tue, Oct 20, 7:00-8:30pm.* *Venue: LSK1014* *No Lecture on this day, Tuesday Oct 20*	• **Continue Dynamic SVG Using JavaScript** • **Cookies** slides ◦ JavaScript cookies demo	**Lab #5** (Oct 22) SVG-3

#9
Oct 27 & Oct 29
	• **DOM** slides
	  ◦ DOM examples
	  ◦ More DOM examples
	  ◦ DOM SVG example, pdf
	  ◦ Live DOM Viewer Recommend!
	• **DOM discussion**
	  ◦ Whitespace nodes
	  ◦ Firefox Firebug DOM tool
		• **The Browser Process and HTTP** slides
		  ◦ HTTP Headers for Dummies
		  ◦ HTTP viewer here, example sequence here, another viewer
		  ◦ Acid test (maybe old), HTML5 conformance test
			Lab #6
			(Oct 29)
			SVG-4

#10
Nov 3 & 5
	• **PHP 1** slides
	  ◦ PHP examples , ZIP file
	  ◦ Online PHP code tester
	• php.net, php manual
		• **Forms** slides
		  ◦ Example 1 - map
		  ◦ Example 2 - general
		• **Forms in HTML5** slides
		• **Use of Hidden Fields** slides
		  ◦ Color selector example , zipped client and server codes
			Lab #7
			(Nov 5)
			PHP-1

#11
Nov 10 & 12
	• **Ajax** slides
	  ◦ Ajax client-server example (zip file), pdf
	  ◦ W3schools simple Ajax example on retrieving text data
	  ◦ W3schools Ajax example on retrieving and formatting XML data
		• **Ajax in jQuery** slides
		  ◦ jQuery Ajax examples
		• **PHP 2** slides
		  ◦ PHP examples 2, ZIP file
		  ◦ W3schools PHP header() examples
			Lab #8
			(Nov 12)
			PHP-2

#12
Nov 17 & 19
	• **PHP 3** slides
	  ◦ PHP examples 3, ZIP file
	• **PHP Sessions** slides
	  ◦ Examples, ZIP file
		• **More on CSS** slides
		  ◦ CSS examples
		  ◦ CSS examples from Microsoft website
		• **XML and XSL** slides
		  ◦ XML with CSS example (zip file), web
		  ◦ XML with XSL examples (zip file), web
			Lab #9
			(Nov 19)
			PHP-3

#13
Nov 24 & 26
	• **XML DTD and Schema** slides
	• **More XML/XSL examples**
	  ◦ ChessGML example (IE)
	  ◦ Music example (IE)
		• **Web Services and RESTFUL** slides
		• **Web Accessibility** slides
		• **Final exam details** here
		• **Example exam questions**
		  ◦ Quick review questions with solution
		  ◦ More review questions and solution
			No Lab

Assignments

• [jQuery Project]
• **Due: Oct 7 Wed, 23:59**
• **Weight: 8%**
  ◦ Lab 2
	• **SVG Project**
	• **Due: Nov 8 Sunday, 23:59**
	• **Weight: 20%**
	  ◦ Lab 3-6
	  ◦ Details
	  ◦ Flipping the player
	  ◦ Disappearing platform
		• **Chat Room Project**
		• **Due: Nov 29 Sunday, 23:59**
		• **Weight: 20%**
		  ◦ Lab 7-9
		  ◦ Details

		Projects Submission Page

Grades

- Homework 1 marks
- Homework 2 marks
- Mid term marks

Grade distribution

Course grades will normally fall within the following percentage bands:

- A 10 - 20%
- B 25 - 40%
- C 35 - 45%
- D 5 - 10%
- F 0 - 5%

There is no particular distribution within the subgrades of a grade.

Bonus points

- In grading the project assignments, the grader will grade your submission based on the required functions with reasonable designs. As frequently happened in the past, some students put in additional functions and impressive design. To reward their efforts, some bonus points may be given (typically around 5%). These bonus points are not disputable by the students (whatever given is given). In order not to affect the grades of students without bonus points, grades are first assigned to all students according to the distribution above. Thresholds between subgrades are set. Then, bonus points are added to students. A student's grade will be re-assigned (moved up) according to his/her new score. The end result is that students who do not have bonus will not be penalized by other students having bonus.

About open-book exams

- Both the mid-term and final exams are open book. You can bring your lecture notes (slides and notes) and one book to the exam venue. While you do not need to memorize everything (e.g., codes and names, etc.) by heart, the examinations are set assuming you know the materials well. That is, the notes/slides are there to help you with "what are an image's attributes" or "how is onmoustdown spelled", etc., but you should not flip through the slides page by page to see "if I can find the answer of Q.3a there". Flipping through the slides too much will slow you down and at the end you do not have enough time to finish all of the questions. Bear in mind that you still need to study hard!

Policy

- All materials (e.g., assignments, labs, and examinations) you submit for grading must be on your own. You are allowed to discuss problems and methodologies with other students, but you should write up your own solutions by yourself.
- If you find some useful code from the internet, you must acknowledge the source, including the complete http address, in your submission. To be safe, please ask the instructor first.