WINTER 2016 COURSE OUTLINE

course title COMP 4513: Web 3 – Advanced Web Development

prerequisites COMP 3512 with a minimum grade of C-

instructor Randy Connolly

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office hours As posted outside the Department. Feel free to drop in at anytime that is

not crossed out on my schedule.

lectures 001 TR 12:30 – 13:50 a.m. EB-1109

occasionally E203

description This course covers advanced web development topics, applying the

foundation client and server techniques learned in Web I and II, and database topics from Databases I. In addition to practical theory, students will learn about asynchronous JavaScript, web services, electronic commerce, search engine optimization and content management systems. Students will use a modern API to develop an application using maps,

social network plug-ins, or other advanced web technology.

Required text Connolly and Hoar, *Fundamentals of Web Development* (Pearson, 2014).

grading The final grade for this course will be determined as follows:

 Quizzes (4 @ 2.5% each)
 10%

 Midterm (February 11, 2016)
 15%

Lab Exercises (5 @ 2% each) 10%

Assignments (two) 35%

Final Exam 30%

Percentage grades will be converted to letter grades as follows:

95-100	A+	67-69	C+
85-95	A	63-66	C
80-84	A-	60-62	C-
77-79	B+	55-59	D+
73-76	В	50-54	D
70-72	B-	<50	F

The University's complete grading system is described in the Calendar.

educational outcomes

At the end of the course, the acquired knowledge and skills will enable the student to successfully accomplish many of these outcomes:

- Plan and implement cross-browser and cross-platform solutions.
- Write an asynchronous web application using programming best practices.
- Integrate third party web services into an application.
- Understand and utilise sessions across multiple site visits.
- Apply a variety of password protection techniques.
- Understand and apply search engine optimization techniques.
- Understand principals of search engines and write crawler/scraper scripts
- Evaluate and choose a hosting package to satisfy their needs.
- Understand the implications of customizing open source projects.
- Utilize automated emailing from web server
- Understand the basic principles of LAMP administration
- Understand web usage statistics.
- Schedule tasks, including automated backup and emailing
- Configure and understand email principals, including MX records, spam and opt in/out policies.
- Integrate third party API's into a web site (such as Google Map)
- Identify how content can be created/refreshed automatically
- Understand how to write, and obey robots.txt files
- Utilise API's to generate images/pdf files.
- Utilise software versioning systems in a web development context
- Evaluate and deploy different content management systems.

examinations

The midterm date is specified in the marks breakdown section. If any changes to this date are necessary, students will be notified well in advance. Students will not normally be permitted to write a missed test at a later date. If alternative arrangements are possible, they must be made with the instructor prior to the date of the test.

The midterm will focus on understanding and applying the concepts taught in class. These tests will be made up of short answer style questions, as well as a limited number of larger questions to test students' abilities.

assignments

Assignments will consist of larger applications of the topics covered in lectures.

NOTE: In order to obtain a grade of C or better in the course, you must obtain a minimum of 50% in the overall mark for assignments. Failure to pass the assignment portion of the course will result in a D+ grade or lower for the course, regardless of the marks in the other components.

Assignments will be considered late if submitted after the time specified on the assignments. Unless an assignment states otherwise, it will be accepted up to one day late; however, 10% will be deducted for being late (even for part of a day late). Assignments will not be accepted more than one day late. This includes weekends, so if an assignment is due Friday at 4:00 p.m. then Saturday at 4:00 p.m. is the latest it can be handed in. Start your work early and schedule adequate time for completion.

cheating

It is expected that all work handed in by a student will be original work that has been done by the individual. If it is not, then this act of intellectual dishonesty will be dealt with severely. Normally, any student who cheats will get o on the assignment (in the case of one student giving part of his/her assignment to another student, both students are considered to be cheating). Any further cheating by the student (either in the same course, or in any subsequent COMP course) will result in a grade of "F" for the course. At that time, a note will be made in the student's records, and any further act of intellectual dishonesty will result in expulsion from the University.

While students are expected to work reasonably independently, we do not expect you to work in isolation. Often you learn best when working with others on an assignment. So what degree of collaboration is expected and, indeed, encouraged, and what is deemed to be cheating? In general, we encourage things like bouncing ideas off one another, discussing which of two alternate solutions might be better (and why), and getting another's idea on how to resolve a difficulty that you have already spent time on. You should not be working so closely together that someone else's solution becomes incorporated into your product. These general guidelines apply to any type of assignment.

general department policy

Students are responsible for attendance at all lectures and labs, for completion of assignments in open lab time, and for requesting assistance from their instructor or from the instructional assistant when they are having difficulty with the course material.

If this course is a prerequisite for other courses, the minimum grade required in order to take the subsequent course is stated elsewhere in this course outline.

The midterm test dates are indicated in the Assessment section. Should changes become necessary, students will be notified well in advance. Students will not normally be permitted to write a missed test at a later date. If alternative arrangements are possible, they must be made with the instructor prior to the date of the test.

The final examinations will be scheduled by the Registrar during the period from April 19 - April 29, 2016. Do not make any plans for that period until the final examination schedule has been posted.

Programs will be graded for documentation and style, as well as for correctness. All files must be left in the student's directory until the marked program has been returned.

As a rule, the deadline for assignments will not be extended for computer downtime of less than 24 hours; however, this will be at the instructor's discretion. Any exception will be communicated to the class as quickly as possible.

In general, assignments are due at 16:00 and will be considered late if submitted after that time. Assignments will be accepted up to one day late; however, a penalty of 10% will be deducted, even for a partial day late. Assignments will not be accepted more than one day late. This includes weekends!

Students should familiarize themselves with the University policy on the integrity of student work as described in the Calendar and with the departmental policy on cheating detailed on the attached sheet. Cheating of any form is a serious matter and will be dealt with severely.

The last day for withdrawal from this course is March 18, 2016.

Students should familiarize themselves with the Statement of Student Rights and Responsibilities contained in the University Calendar.

Requirements for third-party tools and accounts

Rather than submitting assignments to a university submit drive, you will be submitting code for marking on third-party sites such as github or bitbucket. As well, I will be accessing your assignments from some type of live publicly-available server, which typically requires an expenditure in the \$15-\$25 range.

You will need to create accounts with these third-party sites and tools and accept the terms of service for developer access to these services.

By remaining enrolled in this course you are agreeing to create accounts and accept terms of serve as required to complete the assignments and labs.

In the event you do not wish to use a particular third-party party tool you can research and suggest an alternative service, which may be acceptable depending on the characteristics of the tool. You agree that the instructor will have sole authority to decide if an alternative is acceptable.

If any of this gives you pause, you should consider withdrawing from the course now, while you can still have your fees refunded.

technology in lectures

Unless you are expecting a baby, communicating with a dying loved one, or some other emergency, please keep your phone off your desk and out of sight. In return, I promise to give you a short technology break half way through the class. Similarly, I would encourage you to use paper notes rather than a laptop; if you do use a laptop, please do not run videos, go to Facebook, check email, etc., except during your technology break.

Texting and/or non-academic laptop usage during lectures is strongly correlated with lower GPAs. There is ample research evidence for this conclusion. You might think you are different or that your occasional texting will do no harm, but this is not true. Also, there are many times in adult life (dating, family events, and business meetings come to mind) when you just need to learn how to function without technological distractions, so you might as well start practicing now.

I would encourage you to read any of the following recent articles for evidence of the deleterious effects of technological distractions on academic performance:

Carrier, L. M., Rosen, L. D., Cheever, N. A., & Lim, A. F. (2015). Causes, effects, and practicalities of everyday multitasking. *Developmental Review*, 35, 64-78.

Gaudreau, P., Miranda, D., & Gareau, A. (2014). Canadian university students in wireless classrooms: What do they do on their laptops and does it really matter?. *Computers & Education*, 70, 245-255.

David, P., Kim, J. H., Brickman, J. S., Ran, W., & Curtis, C. M. (2014). Mobile phone distraction while studying. *New Media & Society*, 1461444814531692.

Dietz, S., & Henrich, C. (2014). Texting as a distraction to learning in college students. *Computers in Human Behavior*, 36, 163-167.

Gupta, N., & Irwin, J. D. (2014). In-class distractions: The role of Facebook and the primary learning task. *Computers in Human Behavior*.

Gingerich, A. C., & Lineweaver, T. T. (2014). OMG! Texting in class= u fail:(empirical evidence that text messaging during class disrupts comprehension. *Teaching of psychology*, 41(1), 44-51.

Junco, R. (2012). Too much face and not enough books: The relationship between multiple indices of Facebook use and academic performance. *Computers in Human Behavior*, 28(1), 187-198.

Junco, R., & Cotten, S. R. (2012). No A 4 U: The relationship between multitasking and academic performance. *Computers & Education*, 59(2), 505-514.

Jacobsen, W. C., & Forste, R. (2011). The wired generation: Academic and social outcomes of electronic media use among university students. *Cyberpsychology, Behavior, and Social Networking*, 14(5), 275-280.

Fried, C. B. (2008). In-class laptop use and its effects on student learning. *Computers & Education*, 50(3), 906-914.