Practical Web Design & Development for Everyone

Syllabus and Policies, Fall 2017

Instructor

Tessa Joseph-Nicholas: nicholas@cs.unc.edu; office hours FB 114, TR 11-12:15 and by appointment

LAs (Undergraduate Learning Assistants)

Each of you has been assigned an LA. **Your LA should be your primary point of contact for help with assignments, all administrative stuff (such as attendance), general questions about the course, and questions about your lab and homework grades. For any of those things, please contact your LA first;** she'll escalate to me when necessary. (For questions about quiz, exam, or other major grades, or with anything you'd rather keep between us, please feel free to continue to contact me directly.)

Ivy and Helen's regular office hours are Mondays and Fridays, 12pm-1pm, in FB 114 (Tessa's office). If those times don't work for you, no worries; just email "your" LA (Ivy or Helen) for an appointment.

Helen Hansen's group, hvh@live.unc.edu

Micaela Abbatine, Ben Albano, Nikolas Amirian, Tyler Anwar, Emmie Banks, Tyler Carter, Joey Chau, Matthew Crabtree, Johna Dalton, Dillon Davis, Elise Dixon, Nicholas Dixon, John Doban, LJ Enloe, Gavry Eshet, Tristen Frampton, Lily Gavazov, Matt Guerrera, Emily Hilliard, Maggie Hobson, Joel Hockaday, Kit Holben, Hyun Joon Hong, James Hunt, Ian Jackson, Brandon Kang

Ivy Liu's group, jiayi312@live.unc.edu

Charles Kelly, Jane La, Hoi Ching Lee, Tian Liu, Dexiu Lu, Caitlin Mahoney, Taylor Marks, Lukas O'daniel, Joshua Osborne, Kelly Patch, Kerry Scott, Sydney Seferyn, Dhruv Shankar, India Simpson, Eric Smith, Olivia Stafford, Kurt Steinke, Brendan Sykes, Carolyn Tiller, Bill Wang, Robert West, Kiera Whalen, Alex White, Toby Wong, Ding Yu, Derek Zhang

Class Meeting Place & Time

TR 12:30-1:45, SN 011

Course Description

This course provides a ground-up introduction to current principles, standards, and best practices in website design, usability, accessibility, development, and management through project-based skills development in HTML, CSS, and introductory JavaScript.

Required Textbooks

Duckett, John. *HTML and CSS: Design and Build Websites.* 2011: John Wiley & Sons. 978-1118008188

Beaird, Jason and James George. *The Principles of Beautiful Web Design: Designing Great Web Sites is Not Rocket Science!* 3rd Edition. 2015. 978-0992279448

Horton, Sarah and Whitney Quesenbery. *A Web for Everyone: Designing Accessible User Experiences.* Rosenfeld Media. 2014. 978-1933820972

Target Audience

This course was designed to be useful in different ways to students at a number of different levels, from absolute beginners--the math-phobic, the anti-logical, the programming-naive--to more advanced programmers hoping to complement back-end web development skills with an understanding of the front-end design and implementation process. It welcomes and equally prioritizes the goals of not only aspiring professional web developers but artists developing their digital toolkits, authors of multimedia fiction and e-literatures, entrepreneurs seeking creative control over their online brands and profiles, librarians, digital humanists, musicians, remix artists, hobbyists, and everyone else. No prior technical expertise or programming experience is assumed or required.

CS major/minors, experienced programmers, and all those with web development skills please note!: You are welcome to use this course as a place to sharpen your skills and learn about the new HTML5, CSS3, and accessibility standards; current best practices in web development and design; and aesthetics/design. However, **please be aware that this beginner-friendly course may move a bit too slowly for you and, perhaps more importantly, that it does not count toward the major or minor in Computer Science and fulfills no General Education requirements.** If you're not sure, please contact me to discuss your decision before enrolling.

Again: **this course does not count toward the major BS, BA, or minor curriculum in Computer Science, nor does it fulfill any General Education requirements.**

Prerequisites

There are none.

Goals & Objectives

The primary goal of this course is to help students become competent advanced-beginner- to intermediate-level web designers, independent learners, and capable problem solvers through a project-based approach to web design and development and associated troubleshooting strategies. To this end, the primary objectives and planned learning outcomes are are as follows.

By the end of this course, students will:

- Possess an understanding of the basic and necessary processes, strategies, and skills necessary for web design and development;
- Be able to apply the principles described above to evaluate and critique their own and others' web sites;
- Possess a working HTML5 and CSS skill set and a basic understanding of the use of JavaScript in web development;
- Be able to put the principles, strategies, and skills associated with modern web design and development into practice in the design, construction, and maintenance of their own web sites;
- Possess the knowledge necessary to effectively pursue further formal or self-motivated education in more advanced web development strategies and technologies;
- Have experience designing and developing web sites in a collaborative, team-based environment;
- Have developed a well-designed, well-functioning live web site suitable for inclusion in, or as, a professional, artistic, and/or academic portfolio.

Software & Tools

Sakai. I'll make heavy use of Sakai to communicate, participate in discussion forums, submit assignments, and share information, documents and resources.

For writing and editing HTML, CSS, and JS: at first, you can generate the necessary files in a simple text editor like TextEdit (Mac) or Notepad (Windows). However, you'll need to become comfortable using a true code

editor--software designed for writing and testing code--to create full projects. If you already use a code editor that you know supports HTML, CSS, and JS, you're welcome to stick with that. The rest of you may choose from a number of excellent free options. My personal favorites for web development are Brackets (this one is particularly beloved by beginners) or Sublime Text; other good options are Aptana Studio, Komodo Edit (or Komodo IDE, its full-function version, which is not free), and Atom. There are more. Find the editor that speaks to you!

For browser-based testing and experimentation, code editing, and online collaboration on group development projects, we will use Cloud9, a cloud-based web development platform that offers real-time collaborative code editing (think Google Docs). We'll get you all signed up to use the tool through my educational license.

Other fully online options for web stuff testing, sharing, building, and making: repl.it; JSFiddle; JSBin; Codepen; Codeanywhere; Mozilla Thimble; ICE Coder

To check differences between text/code files: diffChecker

For image editing: Pixlr Express

For accessing and moving files into and out of a web server: I will instruct you on the use of Filezilla Client, a software package called an SFTP client, for this purpose.

Important notes on Filezilla installation: 1. If you are on a Mac, you must use Safari to download Filezilla Client. 2. Select Filezilla Client, not Filezilla Server, unless you know exactly what you're doing and want Filezilla Server for your own reasons. 3. Annoyingly, the Client download interface will suggest that you bundle your download of Filezilla Client with other software packages. SAY NO, unless you know that you want those things for your own reasons. We won't be using any of them in this class. 4. Finally, if you already know how to use a different SFTP client and prefer to stick with that instead of downloading Filezilla, you are welcome to do so.

Recommended Resources

Castro, Elizabeth, & Hyslop, Bruce. (2013). *HTML and CSS: Visual QuickStart Guide,* 8th Edition. Peachpit Press.

Krug, Steve. (2014). *Don't Make Me Think, Revisited: A Common Sense Approach to Web Usability,* 3rd Edition. New Riders Publishing.

Lynch, Patrick, & Horton, Sarah. Web Style Guide, 3rd Edition.

Mozilla Developers' Network Documentation: you'll find everything here, with more detail and more reliably up-to-date than anywhere. Many consider this the gold standard for web development documentation.

W3Schools' HTML pages, W3Schools' CSS pages, W3Schools' JS pages, and W3Schools' Bootstrap pages: from the W3Consortium, so usually up to date with the newest standards; includes easy-to-use built-in demos and examples: in general, a good place for quick references and testing, though not quite as thorough and comprehensive as the MDN documentation.

HTMLDog's HTML, CSS, and JS Tutorials are excellent for practice and review.

Lots more tools and resources are available at our course resources site, here: https://webdemos.web.unc.edu/

Grading

Attendance/participation, homework assignments: 20%

Quizzes: 20%

Final project checkpoints: 20%

Midterm: 15%

Final project: 25%

Unless otherwise specified, regular homework assignments and in-class exercises (with the exception of final project checkpoints) will be scored on a 0-2 scale, as follows:

- 0: No assignment was submitted by the due date or within the one-week late assignment acceptance window; or the submission clearly did not fulfill enough of the assignment requirements to warrant grading
- 1: The assignment was submitted late (but within the one-week late assignment window), incomplete, or presenting significant problems meeting the functional requirements of the assignment as described

- 2: The assignment was submitted to Sakai as directed and on time, meets all the requirements of the assignment, and is in overall good functional shape, with only rare and minor errors

Some aspects of participation and your final projects will be graded holistically; I'll provide rubrics detailing my standards and expectations for each.

Communication

I will send frequent updates and documents via email and will use the Sakai group email feature to send messages to the entire class. It is your responsibility to ensure that the email account associated with your Sakai profile (usually your UNC address) is functional and that you check that account often. I will also post the text of any class email notifications in the Announcements section on our Sakai page.

Email is the best way to get in touch with me and your LA. However, unless otherwise notified, please allow 24 hours for a response to any message sent after 5 pm and until Monday for messages sent over the weekend. Make sure to include your full name in all correspondence. Please be aware that we will likely not receive late-night or last-minute messages in time to help you.

Requests for extensions and other special considerations will generally be granted if received at least 24 hours in advance.

Hardware & Devices

Use of a laptop will be necessary for much of the work in this class. If yours goes missing, is stolen, dies, etc., ITS can probably provide you with a loaner. If they aren't able to for any reason, let me know; I may be able to help.

Please respect the value of your education and our time together and the long efforts of those who've fought (and who fight) to provide access to quality education for all by keeping electronic distractions to a minimum during class time.

Exams

There will be a midterm exam and a final exam. The final exam will be given in compliance with UNC's final exam regulations and according to the UNC Final Exam calendar.

Late Assignments & Extensions

In this class, I will accept late assignments for credit (with late penalty) for only one week after the assignment's original due date. After that, the books on that assignment are closed for good.

Requests for reasonable extensions will be considered when requested preferably 24 but at least 12 hours in advance. For group projects, all group members must agree to request the extension and submit the request jointly.

Attendance & Participation

My goal is to completely avoid making any judgment calls about which absences are "valid" enough to excuse. However, I do give everyone two absences to use for any reason, without penalty or side-eye. After that, your participation grade will be penalized three points for each missed class. Again, this counts for all absence types.

In the case of unexpected craziness leading to unexpectedly high numbers of absences, please a) let me know you're okay when you're able; and b) contact the Dean's Office. They will generally confirm the situation and issue a letter to your instructors requesting special consideration due to emergency circumstances, which I'll be happy to honor.

Also, coming to class more than 30 minutes late will be considered an absence.

Accommodations, Diversity, Mutual Respect

I am deeply committed to providing a learning environment that is warm, respectful, and welcoming of a diversity of voices and perspectives. I consider this part of my duty to you as human beings and to the well-being of our world, as well as my professional obligation; I take the former just as seriously as the latter. I hope you will all work with me to accomplish this goal, and I hope you will feel comfortable letting me know if ever I or another member of our community misses something.

If you require any special accommodations to complete the work in this course, please make sure the appropriate campus entity makes me aware of your needs. You are welcome to discuss the specifics with me but absolutely not required to do so. I take your privacy and personal integrity seriously, in this area and all others.

Honor Code & Plagiarism

Every time you turn in an assignment at this University, you implicitly agree—whether or not you sign anything—that you have neither given nor received unauthorized aid, that the work you present is your own, and that you've properly cited and attributed all source materials.

Plagiarism is a serious breach of UNC's Honor Code and of your own intellectual and personal integrity. It includes any use of another's words, ideas, or research—whether quoted, paraphrased, or mentioned— without proper and full citation and attribution. This applies to any type of writing or media, from Wikipedia to legal documents to films to articles and beyond, and to code cut and pasted from the Internet.

If you do not understand the definitions of plagiarism, citation, attribution, or "unauthorized aid", it is your responsibility to remedy that. Ignorance of the policy will not be accepted as an excuse. Try this useful guide to the necessary concepts and procedures: http://guides.lib.unc.edu/plagiarism-citing

Because it is neither my responsibility nor my place to determine whether or not breaches of the Honor Code are intentional or unintentional, I will immediately report all suspected violations to the Honor Court, which may result in a failing grade, probation, suspension, or expulsion.

Please contact me with any additional questions.

Disclaimer

The professor reserves the right to make changes to this syllabus. These changes will be announced as early as possible and the online course calendar will be revised accordingly.

Course Schedule: Overview

Note: The details of specific Exercises and assignments can be found in the Assignments and/or Calendar tools on Sakai.

Week 1: Introductions

T 8/22: Overview, enrollment stuff

R 8/24: How the Internet works

Week 2: Introduction to HTML

T 8/29: Read Duckett, *HTML & CSS,* Chapters 1-4; Exercise 1 Due

R 8/31: Quiz 1, practice

Week 3: Images, Forms, Tables

T 9/5: Read Duckett, *HTML & CSS,* Chapters 5-7; Exercise 2 Due

R 9/7: Quiz 2, practice

Week 4: Extra Markup (Classes & IDs), Flash/Media, Introduction to CSS

T 9/12: Read Duckett, *HTML & CSS,* Chapters 8-10; Exercise 3, Part 1 Due

Recommended Reading: Life After Flash: Multimedia for the Open Web; W3C Guide to Changes in HTML5 Structural Elements

R 9/14: Exercise 3 lab

Week 5: CSS: Color, Text

T 9/19: Read Duckett, *HTML & CSS,* Chapters 11-12; Exercise 3, Part 2 (full project) Due

R 9/21: Quiz 3, Box Model Lab work session

Week 6: CSS: Boxes, Lists, Tables, Forms

T 9/26: Read Duckett, *HTML & CSS,* Chapters 13-14; Exercise 4 Due; Box Model Lab due

R 9/28: Quiz 4, practice

Week 7: CSS: Layout

T 10/3: Read Duckett, *HTML & CSS,* Chapter 15; Tessa sick, so no in-person meeting

R 10/5: Exercise 5 workshop, extended positioning practice

Week 8: CSS: Images, HTML5 Layout

T 10/10: Quiz 5 (on Chapter 15); read Duckett, *HTML & CSS,* Chapters 16-17; Exercise 6 due

R 10/12: University Day, no class; midterm practice exam & extended office hours available

Week 9: Midterm

T 10/17: Midterm Exam

R 10/19: Fall Recess, no class

Week 10: Layout, Composition, Color

T 10/24: Read Beaird & George, *The Principles of Beautiful Web Design,* Chapters 1-2

R 10/26: Website evaluation workshop

Week 11: More On Design

T 10/31: Read Beaird & George, *The Principles of Beautiful Web Design,* Chapters 3-5; finish Website Evaluation Lab

R 11/2: Bootstrap setup

Week 12: Introduction to Media Queries & CSS Grids/Simple Grid/Bootstrap

T 11/7: Exercise 7 Due; **Tessa away at a conference, so no class**

R 11/9: More Bootstrap; in-class exercise

Week 13: Accessibility & Project Work

T 11/14: Bootstrap troubleshooting; introduction to final project

R 11/16: Read Horton & Quesenberg, *A Web for Everyone,* Chapters 1-3; accessibility concerns; project work

Week 14: Project Work

T 11/21: **Checkpoint 1: Project Brief Due;** hosting at Github Pages; Bootstrap and accessibility

R 11/23: **Thanksgiving Break, no class**

Week 15: Project Work

T 11/28: **Checkpoint 2: Wireframe/Mockups, Design Specs Due at the end of class;** project work time during class

R 11/30: Project work; a bit of Javascript if time/interest permits

Project Peer Review

T 12/5: **Checkpoint 3: Working Prototypes Due:** come to class with a solid draft due for peer review and feedback session; last class

F 12/8, 12 noon: **Final Exam/Project Presentations Session** *(attendance mandatory)*