CS 1100: Web Development: Client-Side Coding
Fall 2016

Monday/Wednesday/Friday 12:00 - 12:50 p.m., ITTC 322

Instructor:
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Office hours:
Monday/Wednesday: 2:00 - 3:00 p.m.
Tuesday/Thursday: 9:00 - 10:50 a.m.
I am also available whenever I am in my office and my door is open.

Resources
Required texts:

1. *JavaScript Absolute Beginner's Guide* by Kirupa Chinnathambi
   ISBN-13: 978-0789758064

2. *Learn to Code HTML & CSS: Develop and Style Websites* by Shay Howe
   ISBN-13: 978-0321940520
   (this book is available online at http://learn.shayhowe.com/html-css/)

Course website: http://sergey.cs.uni.edu/courses/cs1100/fall2016

Course mailing list: cs-1100-02-fall@uni.edu

Note that to send messages to the course mailing list, you must send from the mailing address from which you are subscribed. By default, that is your uni.edu e-mail address.

Computer Access
The software used in this course is an Internet browser and a text editor. Such software is available on computers in any lab on campus. You may also use the following CHAS computing labs:

- Wright 112. This is a teaching lab used for several classes and may not always be available.
- Wright 339. This is a public lab which is rarely closed for classes.
- ITTC 335. This is a small general purpose student lounge.

Course Description and Objectives

The course is an introduction to the "coding side" of web development: you will learn how to *build* web pages without relying on user-friendly tools that can do it it for you.

What use is this knowledge? Anyone can create a website with WordPress or any other content management system in minutes. However, such tools, while incredibly useful, limit you in what you can do. Yes, they can be customized in many ways. However, without the knowledge of how a web page works, you cannot easily change it to fit your needs; without the knowledge of styling, you cannot modify a theme; and without

understanding the basics of programming, you cannot use all those free JavaScript programs that would add valuable content and functionality to your web site.

Most importantly, knowledge of the technical side of web development, as well as the fundamentals of computing is an open door: with this foundation, you will be able to learn, even teach yourself, other technologies (programming languages, code libraries and frameworks, content management systems, etc.), use other people's code, and share your own.

What you will learn

"Client-side code" refers to code that resides on the user's computer and runs in an Internet browser like Firefox, Chrome or Safari (i.e., the client), as opposed to "server-side code", which resides on the web server that hosts the website.

Although this course is only an introduction, you will be introduced to a lot of ideas and new skills. You will learn about core web technologies, how to display content on a web page - i.e., how to create simple websites with HTML and style them with CSS. You will also learn how to make that content "do" things - i.e., how to write simple programs using JavaScript, how to use a JavaScript library like jQuery to create cool visual effects, and how to tap into public APIs (application programming interfaces) to add dynamic content and functionality to your own web pages.

The course is for beginners: there are no prerequisites, no coding background is assumed.

Requirements

Sessions

Most of the material that we cover in class will expand upon what appears in your texts, so attendance is essential. You will be expected to read assigned topics prior to the class session and to participate actively in class.

Laboratory

There are fourteen laboratory sessions, beginning the first week of class. Attendance of lab sessions is required: you will receive credit for a lab only if you attend. During each lab session, you will do exercises that complement the topics covered in class, usually that same week.

Assignments

Over the course of the semester, you will complete eleven assignments. These assignments will involve applying techniques learned in class and will occasionally involve extending or modifying code originally developed in class or a lab session (the first assignment is an exception: it is a short survey). Only ten assignments will count towards your grade: the assignment with the lowest grade will be dropped.

Exams

We will have two midterm examinations during the semester.

Final project

There is a final project, to be completed by and presented on the day of the final exam.

Evaluation
Final grades will be computed according to the following weights:

In-class labs (14)	20%
Assignments (11)	30%
Midterm exam-1	15%
Midterm exam-2	15%
Final Project	20%

Following is the grading scale used for this class:

93+	A
90 - 92	A-
87 - 89	B+
83 - 86	B
80 - 82	B-
77 - 79	C+
73 - 76	C
70 - 72	C-
67 - 69	D+
63 - 66	D
60 - 62	D-
59-	F

There will be a curve: the top student score will be counted as an A (100%); the rest of the grades will be adjusted accordingly.

General Policies

Assignments
Homework assignments must be submitted through eLearning (unless otherwise indicated). Assignments will not be accepted via email. Assignments are due by the end of the day on the date specified in the assignment. You may submit an assignment up to 24 hours after the due date, but there will be a 10% penalty. Assignments will not be accepted after the late deadline. Exceptional circumstances will be considered only if discussed with the instructor prior to the due date.

Exams and In-Class Labs
You are responsible for being here for the assigned date of your exams and in-class labs. Failing to do so results in a zero grade for the exam or the lab. Excuses will be considered to allow you to make up your exams or labs only when you provide prior notice AND proper documentation for your instructor.

Honesty/Integrity
Working together is encouraged for programming assignments, to help you understand the problems and to encounter different points of view. Acknowledge by name any person with whom you collaborate in the documentation of the code you submit. **However, any work you submit must be your own.** Undocumented or unacceptable collaboration, including the sharing of code, will be considered a form of academic dishonesty.

The guidelines set forth by the University Faculty Senate at UNI will be upheld in this course in regards to cheating and/or plagiarism (www.uni.edu/policies/301). Academic misconduct will not be tolerated and will be severely penalized, possibly resulting in a failing grade for the course. A description of the incident will be forwarded to the appropriate university office and handled through proper university channels.

Email Accounts
It is a requirement that you obtain and use your university email account (even if you only set it up in order to have emails forwarded to another account). You should check your email daily for class announcements.

Disabilities and Special Needs
The University of Northern Iowa is an Affirmative Action Equal Opportunity Institution. The Americans with Disabilities Act of 1990 (ADA) provides protection from illegal discrimination for qualified individuals with disabilities.

Please address any special needs or special accommodations with me at the beginning of the semester or as soon as you become aware of your needs. Those seeking accommodations based on disabilities should obtain a Student Academic Accommodation Request (SAAR) form from Student Disability Services (SDS) (phone 319-273-2677, for deaf or hard of hearing, use Relay 711). SDS is located on the top floor of the Student Health Center, Room 103.

Learning Assistance
I encourage you to utilize UNI's Academic Learning Center's free assistance with writing, math, reading, and learning strategies at no cost to currently-enrolled UNI students:

- The Writing Center offers one-on-one writing feedback for all UNI undergraduate and graduate students. Certified Writing Coaches work with students to help them successfully manage all phases of the writing process, from getting started, to citing and documenting, to editing and proofreading.
- Math and Science Services serves as an academic resource to bridge the learning gap that exists once the student leaves the classroom. Students may walk in during the semester to review for an exam, ask questions about preparing and studying for an exam/class, discuss confusing concepts, complete homework, meet with a study group, or study in a quiet setting. Individual consultations with trained staff are available by appointment.
- The College Reading and Learning Center helps students transition to college-level reading and learning expectations at UNI. Students work with trained Academic Coaches by signing up for workshops, scheduling appointments, or walking in.

UNI's Academic Learning Center is located in 008 ITTC. Visit the website at www.uni.edu/unialc or call 319-273- 6023 for more information and to set up an appointment.

Privacy
The Family Educational Right to Privacy Act, also known as the Buckley Amendment, is a federal law designed to protect student privacy. This means that only you have legal access to your grades. Your parents, friends or significant others have no right to discuss with us your course performance. You have the option to sign a waiver of these rights, but if you have not signed such a waiver, we are not allowed by federal law to discuss your grades with anyone but you. Please realize: if your parents contact us to talk about your grades, federal law prohibits us from doing so.

Schedule

A detailed up-to-date schedule that includes assigned readings and tutorials is available on the course web site: http://sergey.cs.uni.edu/courses/cs1100/fall2016

Week	Date	Topics	Labs	Homework
	Mon, 08/22	Session 1: Introduction to the course		
	Wed, 08/24	Session 2: Internet & WWW, client-server model, static & dynamic websites, HTML & CSS		
1	Fri, 08/26		Lab-1	Homework 1
	Mon, 08/29	Session 3: HTML: common elements, links, images, structure & semantics		
	Wed, 08/31	Session 4: CSS common properties: color and length; selectors; cascading and inheritance		Homework 2
2	Fri, 09/02		Lab-2	
	Mon, 09/05	LABOR DAY		
	Wed, 09/07	Session 5: HTML lists & tables; CSS box model		Homework 3
3	Fri, 09/09		Lab-3	
	Mon, 09/12	Session 6: Introducing CSS layout: positioning & floats		
	Wed, 09/14	Session 7: Responsive design: displaying web pages on any device		Homework 4
4	Fri, 09/16		Lab-4	
	Mon, 09/19	Session 8: Creating reusable layouts with CSS		
	Wed, 09/21	Session 9: Simplifying responsive design with Bootstrap		Homework 5
5	Fri, 09/23		Lab-5	
	Mon, 09/26	Exam-1		
	Wed, 09/28	Session 10: Introduction to programming & JavaScript		
6	Fri, 09/30		Lab-6	
	Mon, 10/03	Session 11: How JavaScript "sees" your web page: the Document Object Model (DOM)		
	Wed, 10/05	Session 12: Simplifying your code with functions		Homework 6
7	Fri, 10/07		Lab-7	
	Mon, 10/10	Session 13: Code that makes decisions: conditional statements; modifying & styling DOM elements		
	Wed, 10/12	Session 14: (continued)		Homework 7
8	Fri, 10/14		Lab-8	
	Mon, 10/17	Session 15: Code that knows how to repeat things: loops; traversing the DOM		
	Wed, 10/19	Session 16: (continued)		Homework 8
9	Fri, 10/21		Lab-9	
	Mon, 10/24	Session 17: Events that happen in the browser: code that listens and reacts		
	Wed, 10/26	Session 18: (continued)		Homework 9
10	Fri, 10/28		Lab-10	
11	Mon, 10/31	Session 19: Writing code that will rewrite your code: creating, adding & removing DOM elements		

	Wed, 11/02	Session 20: Putting it all together: modifying the DOM tree in response to browser events		Homework 10
	Fri, 11/04		Lab-11	
	Mon, 11/07	Exam-2		
	Wed, 11/09	Session 21: Simplifying it all: introducing jQuery		
12	Fri, 11/11		Lab-12	
	Mon, 11/14	Session 22: Visual effects with jQuery		
	Wed, 11/16	Session 23: Beautiful user interfaces with jQueryUI		Homework 11
13	Fri, 11/18		Lab-13	
	Mon, 11/21			
	Wed, 11/23	THANKSGIVING BREAK		
14	Fri, 11/25			
	Mon, 11/28	Session 24: Updating parts of the web page without reloading it: a gentle introduction to AJAX & JSON		
	Wed, 11/30	Session 25: Working with JavaScript APIs		
15	Fri, 12/02		Lab-14	
	Mon, 12/05	Session 26: Integrating cloud-based content into web pages		
	Wed, 12/07	Session 27: (continued)		
16	Fri, 12/09	Session 28: Course review, Q&A		
17	Mon, 12/12	Final Project Presentation (1:00 - 2:50 p.m.)		