

Course Overview

CS 130:
Tools and Technologies of the World Wide Web
Spring, 2022

Masking REQUIRED all quarter

To ensure the inclusion of all participants in this course, **this classroom will require masks for the duration of the Spring 2022 academic term.** This requirement is a result of an accommodation determination made in line with the Americans with Disabilities Act and supported by the Office of Equity and AccessibleNU. As with previous terms, non-compliance with this requirement will be reported to the Office of Community Standards (OCS) and/or the Office of Equity. Thank you for your assistance in keeping our community safe.

Outline

1. Introductions
2. Overview of the course
3. Logistics
4. Questionnaire

About Me

1. Call me Sarah / she / her
2. I majored in Economics (i.e. non-major) at Yale
3. Have done web design and web programming for almost 20 years and have seen many generations of web technologies and their evolution
4. I learned about web programming after undergrad – took a few community college classes, but mostly learned on the job
5. Received my PhD at the School of Information at UC Berkeley. My research focuses on learning and education; and civic tech and civic engagement

About Me (Continued)

1. I currently co-direct the [TREE Lab](#) with Sepehr Vakil to design technologies and learning experiences that help people think about the ethics and politics of technology
2. I also oversee a community mentoring program – as part of the [YW Tech Lab](#) (in collaboration with the YWCA and Oakton Community College) – where undergraduates help adults in the broader Evanston community learn about web design and web programming

Two Truths and a Lie

- I grew up in Florida
- I used to work for the NSA
- I was an NCAA Gymnast

Your turn (5 minutes)!

Groups of 3-4:

- Your name and year
- Two truths and a lie
- One question you have about the class (either a logistics or a content question)
- Favorite snack / restaurant in Evanston

Be prepared to share out something you learned about a person in your group!

Notes

527 Cafe - T street food

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Overview of the course

1. Why should I take this course?
2. What am I going to learn?
3. How am I going to learn it?

Why should I take this course?

You're already using the web — why not understand how it works?

Web technologies mediate modern life, shaping the news you see, the ads you get, your beliefs, how companies get information about you, etc. While this course will not go into all of these mechanisms in detail, you will be able to see how these systems work, and what is possible to do with them.

Web technologies are expressive and creative

This is a project-based course that is mostly organized around hands-on activities. You will make a real web application, and experiment with a variety of web technologies via short homework assignments. In doing so, you will be able to pursue your own ideas and interests, be creative, and have a real, computational artifact to share at the end of 10 weeks.

Why should I take this course?

Can be a very generative “first programming experience”

For those of you who are interested in design, communications, and/or the applications of technology, this course will help you think about how networked web technologies can be marshaled towards goals that you might care about.

At the same time, many of the practices and dispositions that you will cultivate in this course (coding, debugging, installing technical software, working on the command line, reading technical documentation, experimenting with sample code, etc.) will help you in other computational and data-related contexts.

Web-related skills can serve as a gateway for people who ultimately go on to pursue tech-related careers (broadly defined).

What am I going to learn?

1. HTML Language Basics

Tags, nesting rules, web accessibility, etc

2. CSS Language Basics

Using selectors; understanding the cascade; working with CSS frameworks

3. Design

Some techniques for designing web apps

What am I going to learn?

4. Introductory JavaScript with ES6
 - a. DOM manipulation; some programming; working with data (via AJAX)
5. Web Architecture
 - a. Understanding and designing a simple REST API
 - b. High-level intro to IP addresses, DNS, and some of the social/business aspects of networking
6. Web Tools
 - a. git and GitHub; Visual Studio Code

See the [course schedule](#) for more information.

How am I going to learn all of this?

1. Attending lecture
2. Doing the readings / video watching (from LinkedIn Learning and other sources).
3. Attending your section and office hours
4. Practicing

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Tutorial

- Tutorials make up 20% of your grade, and are due on Friday at 11:59PM
- Tutorials are graded pass / fail
- We will typically not grade you on attendance. That said:
 - Attendance will be required for some tutorial sessions, as you will be presenting your final project and getting feedback from others.
 - Attending the tutorial is a form of low-pressure, built-in accountability that will help you learn.

Tutorials Sections

Please sign up for a [Tutorial Session](#). Your options are:

- Wednesday 5-6PM
- Friday 1-2PM
- Friday 3-4PM

Locations TBD

Grading

60% of your grade will be based on homeworks and tutorials. Therefore, submitting late work will have a serious impact on your grade. Be mindful of this.

4 Homeworks	4 x 10 Points	40%
1 Project	1 x 40 Points	40%
8 Tutorials	8 x 2.5 Points	20%
		100%

Late policy

- Each day your homework is late, you will be penalized by 10%.
- After 5 days, the most you can earn for late work is a 50%

// JavaScript formula:

```
Math.max(0.5, (1 - numDaysLate * 0.1)) * score
```

LinkedIn Learning

For the HTML and CSS sections of this course, we will be using Northwestern's Lynda.com subscription. To login, use the Northwestern login (and authenticate using your NetId):

<https://www.linkedin.com/checkpoint/enterprise/login/75814418?application=learning>

Course Technologies

- We will be coding during regularly scheduled lecture time.
- We will be using [Visual Studio Code](#) as our code editor.
- We will be hosting our websites using GitHub pages (and will therefore be learning how to use git and [GitHub](#))

Accommodations

Any student requesting accommodations related to a disability or other condition is required to register with AccessibleNU (847-467-5530) and provide professors with an accommodation notification from AccessibleNU, preferably within the first two weeks of class.

All information will remain confidential.

Mental Health

This has been a difficult 2 years for us all, and the pandemic continues to present a litany of challenges that can make it difficult to engage in academic work.

If you are struggling with mental health issues, please reach out to me, your advisor, to the Dean of Students, or to CAPS. Being proactive early on makes it easier to come up with a plan and help you to be successful.

I am a Mental Health Ally, and I can help you connect to resources on campus.

Integrity, Honesty, and Climate

This is a course that is designed for **beginners**. Please respect each other's learning process. If you are a more experienced coder / web designer, come to my office hours and we can figure out some more challenging assignments.

Academic Honesty

- Do not exchange code fragments on any assignments
- Do not copy solutions from any source
- You can **look** at others' code, but don't scribe it (whiteboard, paper, code)
- You cannot upload / sell your assignments to code sharing websites
- You cannot "outsource" your work to friends, family, or contractors

Course Staff

Instructor

- Sarah Van Wart

Peer Mentors

- Nathan Ryan
- Erick Meikoki
- Pun Tichachol
- Hao Zhang
- Barbara Sledz

Other Course Logistics

- Office Hours posted on the [course calendar](#)
- Course communication: Campuswire:
 - Join link: <https://campuswire.com/p/GFF598F18>
 - Join Code: **2128**
- Resources and submissions:
 - [Course website](#) for public resources (slides, code files, reference material)
 - **Canvas** for private resource: assignment submissions, etc.

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Questionnaire

<https://forms.gle/Rid5aC3Dv4FAMLoM8>

We'd love to know a bit more about your
background, and interests!

Next Up: Intro to the Browser & Web Languages
[Slides](#)