NYU TANDON SCHOOL OF ENGINEERING

Intro to Web Development
Technology, Culture + Society, IDM
DM-UY 2193 B | Fall 2023

Monday + Wednesday 10:00 am - 11:50 am
September 4 - December 13
IDM - 370 Jay Street, room 307

Course Website: https://github.com/IDMNYU/webDev_B_Fall2023
Bright Space TBD

Professor: rebecca (marks) leopold
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Office: 370 Jay Street, 3rd Floor, room 344
Office hours: By appt - in person: Mondays or remote. Schedule at least 36 hours in advance.

Course Pe-requisites:

Basic computer knowledge. Familiarity with programming is preferred but not required.

Course Description:

This section of 2193 is an introduction to the fundamentals of front end programming through the lens of visual culture. Students are asked to think critically about contemporary imaging + networking tools, techniques and practices while experimenting with interactive media. The semester is scheduled in sequence for an incremental understanding of best web authoring practices. Using the web browser as a creative tool, students will explore responsive web development becoming familiar with: the command line, Git + Github and the fundamentals of HTML5, CSS3 and contemporary JavaScript (aka EcmaScript 6). Students will create and maintain websites that take into consideration aesthetic quality, user experience and technical expertise.

IDM Program Learning Objectives:

Students will:

1. develop conceptual thinking skills to generate ideas and content in order to solve problems or create opportunities.

2. develop technical skills to realize their ideas.

3. develop critical thinking skills that will allow them to analyze and position their work within cultural, historic, aesthetic, economic + technological contexts.

4. gain knowledge of professional practices and organizations by developing their verbal, visual, and written communication for documentation and presentation, exhibition and promotion, networking + career preparation.

5. develop collaboration skills to actively and effectively work in a team or group.

Course Objectives:

* Web Development Workflow Including a local HTTP Server
* Unix Bash shell
* HTML5 / CSS3
* The Responsive Web
* EcmaScript 6
* CSS + Javascript Libraries: Bootstrap, JQuery, etc

Student Learning Outcomes:

By the end of the course, students will be able to:

1. Become comfortable with discomfort by proactively learning - querying the web to research open source tools + documentation
2. Practice effective digital hygiene including navigating system file paths
3. Design, build, and develop assets for professional quality front end websites
4. Use the Github workflow and GH Pages to publish and maintain sites
5. Feel comfortable participating in discussions, presenting research and work to the class using the HDMI connection, collaborate successfully on code projects, learn skills to create their own developer / creative communities

Course Structure:

Class time will be spent as a combination of lecture, discussion, in class exercises, critique, user testing + student presentations. Homework will consist of weekly projects that ask students to respond to readings, thinking critically about the cultural implications of networked technologies while building on each week's technical material. Students should expect to build a new web page every week.

Required Materials:

- Students will need a laptop for class (if this is an issue, come talk to me).
- Text editing software - VCS, Sublime
- Web Browser: Chrome or Firefox
- Command Line - Mac Terminal or Windows Power Shell
- Git, Github Account + Github pages

Course Machines:

Laptops are the only machines that can be used for this course and should be closed during classmate presentations and critique. There will be a zero tolerance policy regarding the use of any software that does not relate to course material during class time. The misuse of communication technologies will negatively impact your performance in this course.

Research + Resources:

All materials for this class are open source + can be accessed via this repository and Brightspace. Regular updates to the class repo will contain links to starter code gone over during class as well as links to further technical reading. Pick and choose what is of most interest to you - the repo is a jumping off point for your own research + you can always return back to a week to catch up on

missed material. Additionally, students will be responsible for citing + discussing their research methods and discoveries with the class.

- For the majority of the semester students are required to use a grainular tool kit outlined in class. This means leaning on documentation rather than pre-existing code or libraries.
- Required Text: The web is a vast trove of thirty plus years worth of folks thinking they have the answer to yr coding questions. Do not belive everyone you read, nor trust that a code snippet is the be-all solution to yr project. For that reason Mozilla Developer Network is the "textbook" for this class and should be your primary resource.
- Open Source vs. Plagerism: Plagerism is strictly forbidden. If you intend to implement some one else's code you must cite your sources. That said, much of learning web dev from the grainular level is how you use the tools to put your puzzle together. This means what you chose to build a project about or for (the word content) become integral to its originality and your technical development. We'll discuss this more throughout the semester.

Readings:

Students will be asked to engage with a variety of texts from the world of art, film, philosophy, technology and literature. Authors include: Ralph Ellison, Jon Berger, Tim Berners Lee, Shannon Mattern, Marshall McLuhan, Selma Sharif, Susan Sontag, among others. Readings will be assigned weekly, provide by the professor and accessible via the Brightspace as links to downloadable portable document formats.

Grading + Attendance Policy:

Participation (20% of grade): Please arrive on time having completed the assignments. Engaging in class discussions and peer feedback are not only expected, but will be reflected in your grade. Please arrive on time having completed the readings and other daily assignments. Students must attend all classes on time.This Office then alerts Professors if the absence may be excused. Excessive absences are grounds for failing the course. Attendance will be taken at the beginning of every class. Lateness may be marked as an absence. **2 late arrivals of 15 minutes or more equals one missed class.**

*****Leaving the room during class:** This class is 110 minutes long. Only get up to leave the room if it is absolutely necessary. Constant coming and going is very distracting for both students and the professor. We will have studio time where you can move in and out freely or we'll take a five minute break if it is a lecture heavy lesson.

Weekly Writing, Design + Code Exercises (40% of grade): will be executed through the semester by following in class demonstrations, online tutorials and assigned readings. These assignments will be essential for learning markup and coding and to successfully complete more complex projects.

Students will be expected to document their work, write reading and personal reflections on a website built for + during class using **Github Pages**. We will build this site together incrementally during the first few weeks, following assignments + projects are added + linked to throughout the semester. **It is mandatory that you use Github pages to publish your sites. You will lose points on any assignment that is not hosted on Github.**

Pair Programming Presentations (20% of grade)
The midterm assignment will be a project that demonstrates a working knowledge of HTML and CSS elements. This project must be completed, published + presented in class. There will be an additional ppp when we get to JavaScript.

Final Project (20% of grade)
Class will culminate with final projects. It is expected that these will be both technology and content driven. The final project will be built over the course of several weeks. This project must be completed, published + presented in class.

Qualitative Grading Overview

A. Excellent (90-100)
Performance, participation, and attendance of the student has been of the highest level, showing sustained excellence in meeting course responsibilities. Work clearly differentiates itself from other work, has memorable impact, pursues concepts and techniques above and beyond what is discussed in class. The student thoroughly understands the web design and development process.

B. Very Good / Good (80-89)
Performance, participation, and attendance of the student has been good, though not of the highest level. Work demonstrates a better than average web design and development process.

C. Satisfactory (70-79)
Performance and attendance of the student has been adequate, satisfactorily meeting the course requirements. Work is average and competent, showing a basic understanding of the web design and development process.

D. Poor; Below Average (60-69)
Performance and attendance of the student has been less than adequate. Work is lacking in many or most areas that show any understanding of visual foundation. Problems may include lack of interest, procrastination, poor planning and poor craft.

F. Unacceptable (59 & Below)
Performance and attendance of the student has been such that course requirements have not been met. Work shows no overall understanding of the course material on many levels or either a severe lack of interest.

Academic Accommodations:
If you are student with a disability who is requesting accommodations, please contact New York University's Moses Center for Students with Disabilities at 212-998-4980 or mosescsd@nyu.edu. You must be registered with CSD to receive accommodations. Information about the Moses Center can be found at http://www.nyu.edu/csd. The Moses Center is located at 726 Broadway on the 2nd floor.

Weekly Schedule:

** Note - the following schedule is an outline, subject + likely to change. After the first week please refer to the class Github repo + bright space.

Part 1 - Introduction to Web 1.0 - 2.0

Week 1	* Intro to Course + participants * What is the web? * Creating a basic HTML page using a text editor * Github * Assignment #1: Maintaining the Zoo + Setting up Github
Week 2	* Git and Git Pages * Review local vs. remote: file paths * HyperText Narratives + Web 1.0 * < a href="http://www.google.com> Hyperlinking * Assignment #2: Vannear Bush + Tim Berners Lee
Week 3	* Intro to CSS styling * HTML Box Model * Assignment #3: Web 2.0 Surveillance and Art - Christian Fuchs

Part 2 - Why build a website? Making things w/ CSS

Week 4	* CSS Positioning * Classmate portraits * Intro to net.art * Assignment #4: Ways of Seeing - John Berger
Week 5	* Responsive Web Design * CSS Flexbox + Grids * Assignment #5: Personal Effects - Solmaz Sharif
Week 6	* Fall Break - class meets Tuesday + Wed October 10 + 11 * CSS Animation * Assignment #6: Animation
Week 7	* net.art Pair programming Presentations * Intro to JavaScript

⌖ Part 3 - Programming in the Browser with JavaScript ⌖

Week 8	* Intro to JavaScript + the DOM * Assignment #7: theButton
Week 9	* Native JavaScript * Assignment #8: The Medium is the Massage - Marshall McLuhan
Week 10	* Programming in the Browse\r w p5.js * Intro to JQuery * Assignment #9: Pair programming project 2
Week 11	* Pair programming studio * Assignment #10: Pair programming project 2
Week 12	* Pair programming project 2 presentations
Week 13	* Final Project Proposals
Week 14	* Final Project User Testing
Week 15	**Final Projects Due (Presentations)**

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