INFO 6150

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Office hours: Wednesdays, 5-6pm

# Course objectives

At the end of this course, students will be able to:

* Identify HTML5/CSS and create a basic page with these languages
* Write valid, well-formed, scalable, and semantically appropriate HTML5 and/or CSS within the context of a React app
* Position web page elements using CSS
* Identify the types of images used in modern web design and explain what types are appropriate for different functions
* Understand basic usability, user experience and accessibility principles

Grades will be based on the following:

* 30% exams (3 Exams, 10% each)
* 40% weekly assignments (weeks 1-8, 5% each)
* 15% overall team project result (awarded equally to each participant)
* 15% individual journal/writeup of personal contribution to team project

Academic integrity:

I expect that, as a student of this class, you will adhere to the academic integrity standards of Northeastern University and that all work on exams and class projects will be your own, unless as part of a team project. Any evidence of copying someone else’s work or allowing your own work to be copied by someone else will be used as the basis of a report opened with the Office of Academic Integrity.

Requirements:

* No previous knowledge of HTML or CSS necessary
* Basic knowledge of how to view websites via a browser is helpful
* Basic knowledge of how to push/pull code from git repo is helpful
* While JS, HTML, CSS can be written in a simple text editor, an IDE that can give context clues and guide basic syntax is useful. Here are some recommendations:
  + <https://atom.io/>
  + <https://www.sublimetext.com/>
  + <https://code.visualstudio.com/>

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### Class Schedule (subject to change!)

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| **Week** | **Lecture Topics** | **Assignments/Lab** |
| **January 9, 2018**  Week 1 Usability & accessibility | * Principles of usability * Validation (html/css) * Principles of accessibility * Low vision/contrast, color blindness * ADA * Section 508 * ARIA * tabindex * Screen readers | Send me an email with 4 different websites:  1 you think is usable  1 you think is not usable  1 you think is accessible  1 you think is not accessible  Explain your choices with principles discussed in lecture  Fork class git repo  Fork class react app repo  Download IDE for classwork |
| **January 16, 2019**  Week 2 Planning and design: wireframing, IA & design mocks | * Information architecture * Product requirements * Navigation * Mobile first philosophy * Progressive enhancement * User flows * Prototypes * Design mocks * Usability testing with wireframes * Color theory * “Look and feel” * Things to consider at the design/planning stage | Choose a website that reflects a feeling (“sophisticated”, “bold”, etc.) Email me an explanation of your choice with principles discussed in lecture, a wireframe of the homepage and an outline of the sitemap. |
| **January 23, 2019**  Week 3 HTML & JS with React | * Overview of React * Container components * Functional components * Statefulness * Doctypes * DOM * Document parsing * Brief overview of HTML * Viewing HTML file in the browser * Document outline * html, head, meta * Semantic html * Sectioning blocks * Body, main, div, section, p, span * A * Strong, em * Ul, ol, dl * Img * H1 - H6 * Header, footer, aside, nav, article * Figcaption, figure * Tables * Forms * HTML best practices | Create components in react app with HTML elements, make sure your HTML is validated. (tbd) |
| **January 30, 2019**  Week 4 HTML & JS with React | Continuation of topics from week 3. | Create components in react app with HTML elements, make sure your HTML is validated. (tbd)  Exam #1 due |
| **February 6, 2019**  Week 5 Presentation: CSS | * Brief overview of CSS * Cascade/inheritance * Specificity * Inline vs. external * Classes, ids * Box model, margin, padding * Color, background color * Borders * Selectors * Float * Positioning * CSS best practices * CSS modules * Typography overview * Importing fonts | Take the components from week 3 & 4 and style them per requirements, make sure your CSS is validated. (tbd) |
| **February 13, 2019**  Week 6 Presentation: Images for web | * GIF * JPG * PNG * What format to use when? * Loss/compression * Background images | Take the page from week 5 and add images per requirements. (tbd) |
| **February 20, 2019**  Week 7 Presentation: Responsive & adaptive layouts | * Flexbox, grid * Responsive layouts * Adaptive vs. Responsive * Viewport * Display resolutions * Media queries * Responsive images * Responsive developer tools | Take the page from week 6 and make it responsive per requirements. (tbd) |
| **February 27, 2019**  Week 8 Presentation: Responsive & adaptive layouts | Continuation of topics from week 7. | Take the page from week 7 and make it adaptive per requirements. (tbd)  Exam #2 due |
| **March 6, 2019** No Class | Spring break, no class this week. |  |
| **March 13, 2019** Week 9Testing & performance | * User testing * AB/multivariate testing * Feature flagging * Performance * Network tabs * Lighthouse (Google) * Jest component testing | Split into teams for team projects |
| **March 20, 2019**  Week 10 Team projects, week 1 | Project work | Based on product requirements, work on wireframes, user flows, IA sitemap & UI designs for app |
| **March 27, 2019**  Week 11 Team projects, week 2 | Project work | User testing and refine designs based on results |
| **April 3, 2019**  Week 12 Team projects, week 3 | Project work | Project implementation |
| **April 10, 2019**  Week 13 Team projects, week 4 | Project work | Project implementation |
| **April 17, 2019**  Week 14 Team projects presentations | Final presentations of projects from teams |  |
| **April 24, 2019**  Finals week No Class |  | Final exam due |