INFO 6150

Web Design and User Experience Engineering

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Class git repo
https://github.com/aprilbingham-neu/seainfo6150

Class react app repo
https://github.com/aprilbingham-neu/seainfo6150-webapp

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)
- For individual final projects:
    - 15% overall project result
    - 15% individual journal/write-up of project
- For team final projects:
    - 5% overall team project result (awarded equally to each participant)
    - 10% average evaluation from teammates
    - 15% individual journal/write-up of personal contribution to team project

Exams are take-home and online.

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 (This github guide is an excellent place to start: https://guides.github.com/activities/hello-world/)
- 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/

Class Schedule (subject to change!)

Week	Lecture Topics	Assignments/Lab
January 8, 2020 Week 1 Usability & accessibility	• Principles of usability • Validation (html/css) • Principles of accessibility • Low vision/contrast, color blindness • ADA • Section 508 • ARIA • 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/editor for classwork Send me your name, email, and the Github profile that you will be using for this class
January 15, 2020 Week 2 Planning and design: wireframing, IA & design mocks	• Information architecture • Product requirements • Navigation • User flows • Prototypes • Design mocks • Usability testing • Color theory • “Look and feel” • Things to consider at the design/planning stage	Choose a website that evokes a certain “look and feel” (“sophisticated”, “bold”, etc.) Email me an explanation of your choice with principles discussed in lecture and a wireframe of the homepage. You can use the http://framebox.org tool demonstrated in class or any other tool you like (Photoshop, Invision, pen and paper, etc.)
January 22, 2020 Week 3 HTML & JS with React	• Overview of React • Class components • Functional components • Statefulness • Doctypes • DOM • Document parsing • Brief overview of HTML • Viewing HTML file in the browser	Create components in react app with HTML elements, make sure your HTML is validated. (tbd) Exam #1 posted

	• 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	
January 29, 2020 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 5, 2020 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 12, 2020 Week 6 Presentation: Images for web	• GIF • JPG • PNG • SVG • What format to use when? • Loss/compression • Background images • CSS effects (gradients, shadows) • CSS animations	Take the page from week 5 and add images per requirements. (tbd)
February 19, 2020 Week 7	• Flexbox, grid • Responsive layouts • Adaptive vs. Responsive • Viewport	Exam #2 posted

Presentation: Responsive & adaptive layouts	• Display resolutions • Media queries • Responsive images • Responsive developer tools	
February 26, 2020 Week 8 Presentation: Responsive & adaptive layouts	Continuation of topics from week 8.	Exam #2 due
March 4, 2020 Week 9 No Class	Spring break	
March 11, 2020 Week 10 Final projects, week 1	Project work	Based on product requirements, work on wireframes, user flows, IA sitemap & UI designs for app
March 18, 2020 Week 11 Final projects, week 2	Project work	Project implementation
March 25, 2020 Week 12 Final projects, week 3	Project work	Project implementation
April 1, 2020 Week 13 Final projects, week 4	Project work	Usability testing (?) / feedback (TBD)
April 8, 2020	Project work	Project implementation

Week 14 Final projects, week 5		
April 15, 2020 Week 15 Final projects due		Final personal writeups due Final peer evaluations due (if working on a team)
April 22, 2020 Finals week No Class		Final exam due Extra credit project presentation due