

# INFO 6150

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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)
- 15% overall team project result (awarded equally to each participant)
- 15% individual journal/write-up of personal contribution to team project

You may submit a maximum of 2 revisions to weekly assignments up to 2 weeks after the original assignment date. For example, week 1's assignment may be revised 2 times up to the beginning of week 3, week 2's assignment to the beginning of week 4, etc. I reserve the right to change this policy.

Exams are take-home and online. You will have 2 attempts over 5-7 days to complete each exam to your satisfaction.

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/>

Class Schedule (subject to change!)

| Week   | Lecture Topics  | Assignments/Lab  |
|--|---|--|
| <b>May 8, 2019</b><br>Week 1<br><br>Usability & accessibility                            | <ul style="list-style-type: none"><li>• Principles of usability</li><li>• Validation (html/css)</li><li>• Principles of accessibility</li><li>• Low vision/contrast, color blindness</li><li>• ADA</li><li>• Section 508</li><li>• ARIA</li><li>• tabindex</li><li>• Screen readers</li></ul>   | Send me an email with 4 different websites:<br>1 you think is usable<br>1 you think is not usable<br>1 you think is accessible<br>1 you think is not accessible<br>Explain your choices with principles discussed in lecture<br><br>Fork class git repo<br>Fork class react app repo<br>Download IDE/editor for classwork  |
| <b>May 15, 2019</b><br>Week 2<br><br>Planning and design: wireframing, IA & design mocks | <ul style="list-style-type: none"><li>• Information architecture</li><li>• Product requirements</li><li>• Navigation</li><li>• User flows</li><li>• Prototypes</li><li>• Design mocks</li><li>• Usability testing</li><li>• Color theory</li><li>• "Look and feel"</li><li>• Things to consider at the design/planning stage</li></ul>  | 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 <a href="http://framebox.org">http://framebox.org</a> tool demonstrated in class or any other tool you like (Photoshop, Invision, pen and paper, etc.) |
| <b>May 22, 2019</b><br>Week 3<br><br>HTML & JS with React                                | <ul style="list-style-type: none"><li>• Overview of React</li><li>• Class components</li><li>• Functional components</li><li>• Statefulness</li><li>• Doctypes</li><li>• DOM</li><li>• Document parsing</li><li>• Brief overview of HTML</li><li>• Viewing HTML file in the browser</li><li>• Document outline</li><li>• html, head, meta</li><li>• Semantic html</li><li>• Sectioning blocks</li></ul> | Create components in react app with HTML elements, make sure your HTML is validated. (tbd)   |

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|---|--|---|
|   | <ul style="list-style-type: none"> <li>• Body, main, div, section, p, span</li> <li>• A</li> <li>• Strong, em</li> <li>• Ul, ol, dl</li> <li>• Img</li> <li>• H1 - H6</li> <li>• Header, footer, aside, nav, article</li> <li>• Figcaption, figure</li> <li>• Tables</li> <li>• Forms</li> <li>• HTML best practices</li> </ul>  |   |
| <b>May 29, 2019</b><br>Week 4<br><br>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)<br><br>Exam #1 due |
| <b>June 5, 2019</b><br>Week 5<br><br>Presentation: CSS                            | <ul style="list-style-type: none"> <li>• Brief overview of CSS</li> <li>• Cascade/inheritance</li> <li>• Specificity</li> <li>• Inline vs. external</li> <li>• Classes, ids</li> <li>• Box model, margin, padding</li> <li>• Color, background color</li> <li>• Borders</li> <li>• Selectors</li> <li>• Float</li> <li>• Positioning</li> <li>• CSS best practices</li> <li>• CSS modules</li> <li>• Typography overview</li> <li>• Importing fonts</li> </ul> | Take the components from week 3 & 4 and style them per requirements, make sure your CSS is validated. (tbd)   |
| <b>June 12, 2019</b><br>Week 6<br><br>Presentation: Images for web                | <ul style="list-style-type: none"> <li>• GIF</li> <li>• JPG</li> <li>• PNG</li> <li>• SVG</li> <li>• What format to use when?</li> <li>• Loss/compression</li> <li>• Background images</li> <li>• CSS effects (gradients, shadows)</li> <li>• CSS animations</li> </ul>  | Take the page from week 5 and add images per requirements. (tbd)  |
| <b>June 19, 2019</b><br>Week 7<br><br>Presentation: Responsive & adaptive layouts | <ul style="list-style-type: none"> <li>• Flexbox, grid</li> <li>• Responsive layouts</li> <li>• Adaptive vs. Responsive</li> <li>• Viewport</li> <li>• Display resolutions</li> <li>• Media queries</li> <li>• Responsive images</li> <li>• Responsive developer tools</li> </ul>  | Take the page from week 6 and make it responsive per requirements. (tbd)                                      |

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| <b>June 26, 2019</b><br>Week 8<br><br>Presentation:<br>Responsive &<br>adaptive layouts | Continuation of topics from week 7.   | Take the page from week 7 and make it<br>adaptive per requirements. (tbd)<br><br>Exam #2 due         |
| <b>July 3, 2019</b><br>Week 9<br><br>Testing &<br>performance                           | <ul style="list-style-type: none"> <li>• AB/multivariate testing</li> <li>• Feature flagging</li> <li>• Performance</li> <li>• Network tabs</li> <li>• Lighthouse (Google)</li> <li>• Jest component testing</li> </ul> | Split into teams for team projects   |
| <b>July 10, 2019</b><br>Week 10<br><br>Team projects, week<br>1                         | Project work  | Based on product requirements, work on<br>wireframes, user flows, IA sitemap & UI<br>designs for app |
| <b>July 17, 2019</b><br>Week 11<br><br>Team projects, week<br>2                         | Project work  | Project implementation   |
| <b>July 24, 2019</b><br>Week 12<br><br>Team projects, week<br>3                         | Project work  | Project implementation   |
| <b>July 31, 2019</b><br>Week 13<br><br>Team projects<br>presentations                   | Final presentations of projects from teams  | Final personal writeups due  |
| <b>August 7, 2019</b><br><br><br>No Class   |   | Final exam due   |

**August 14, 2019**  
Finals week

No Class