

## CS601: Web Application Development

This class focuses on HTML5, CSS 3+ and ES5/6 with ReactJS. Students should bring their laptops to every class for the hands-on laboratories. (Most of our learning comes from hands-on training and code reviews with the instructor.)

### Instructor

[asheehan@bu.edu](mailto:asheehan@bu.edu) Office hours – By appointment (Please reserve and time & place ahead of time..)

### Classroom Location

"CAS" – 725 Commonwealth Avenue. Room B06A

### Required eBooks

- HTML and CSS Design and Build Websites (Free PDF/online)  
<https://medium.com/easyread/e-book-node-js-notes-for-professionals-book-e13db79d7b08>
- Exploring ES6  
<http://exploringjs.com/es6.html>
- jQuery  
<https://books.goalkicker.com/jqueryBook/>
- Eloquent JavaScript  
[https://eloquentjavascript.net/Eloquent\\_JavaScript.pdf](https://eloquentjavascript.net/Eloquent_JavaScript.pdf)
- React JS books (online; free)  
<https://books.goalkicker.com/ReactJSBook/>

[https://html5hive.org/wp-content/uploads/2018/04/The-Complete-Beginners-Guide-to-React\\_Dyrr.pdf](https://html5hive.org/wp-content/uploads/2018/04/The-Complete-Beginners-Guide-to-React_Dyrr.pdf)

[https://www.valentinog.com/blog/redux/#React\\_Redux\\_tutorial\\_what\\_problem\\_does\\_Redux\\_so](https://www.valentinog.com/blog/redux/#React_Redux_tutorial_what_problem_does_Redux_so)

## Course Policies

- Homework will not be accepted after the due date.
- If you do not participate in class or do not show up, the professor does take notice.

## Grading Policies

- Homework/Laboratories: 25%
- Midterm Examination: 25%
- Term Project: 25%
- Final Examination: 25%

# Schedule

Week (Monday)	Topics	Readings
September 9	<ul style="list-style-type: none"> <li>• Course Introduction</li> <li>• How to debug</li> <li>• Values, Types and Operators</li> <li>• Core HTML elements and their attributes</li> <li>• The Document Object Model "DOM"</li> </ul> Cascading Stylesheets (CSS)	<ul style="list-style-type: none"> <li>• Eloquent: Chapters 1,2 and 8</li> </ul>
September 16	<ul style="list-style-type: none"> <li>• Functions</li> <li>• Control Structures</li> <li>• Event Handling</li> </ul> Cascading Stylesheets (CSS)	<ul style="list-style-type: none"> <li>• Eloquent: Chapters 3, 15</li> </ul>
September 23	<ul style="list-style-type: none"> <li>• More Event Handling</li> <li>• Data Structures: Arrays, Sets and Maps</li> <li>• Classes and Object Literals</li> <li>• Destructuring, Spread</li> </ul> Cascading Stylesheets (CSS)	<ul style="list-style-type: none"> <li>• Eloquent: Chapters 4 and 6</li> <li>• developer.mozilla.com (for Set and Map)</li> </ul>
September 30	<ul style="list-style-type: none"> <li>• Modules</li> <li>• Callbacks, Promises</li> <li>• async and await</li> </ul> Cascading Stylesheets (CSS)	<ul style="list-style-type: none"> <li>• Eloquent: Chapters 10, 11</li> </ul>
October 7	<ul style="list-style-type: none"> <li>• Ajax: Using XHR, jQuery and Fetch/Axios</li> </ul> Cascading Stylesheets (CSS)	<ul style="list-style-type: none"> <li>• <a href="https://developer.mozilla.org/en-US/docs/Web/API/Fetch_API">https://developer.mozilla.org/en-US/docs/Web/API/Fetch_API</a></li> <li>• jQuery PDF: Chapter 16</li> <li>• Eloquent: Chapter 18</li> </ul>
October 15	Review for Midterm Exam	
October 21	Midterm Examination	
October 28	<ul style="list-style-type: none"> <li>• ReactJS</li> </ul>	<b>Coverage:</b> <ul style="list-style-type: none"> <li>• Architecture (High-Level)</li> <li>• Create-React-App</li> <li>• Components and JSX</li> <li>• Handling Events</li> </ul>
November 4	<ul style="list-style-type: none"> <li>• ReactJS</li> </ul>	<b>Coverage:</b> <ul style="list-style-type: none"> <li>• Routing</li> <li>• State and Props</li> <li>• Styling Components</li> </ul>
November 11	<ul style="list-style-type: none"> <li>• ReactJS with Redux</li> </ul>	<ul style="list-style-type: none"> <li>• State Management</li> </ul>
November 18	<ul style="list-style-type: none"> <li>• ReactJS with Node</li> </ul>	<b>Coverage:</b> <ul style="list-style-type: none"> <li>• Services</li> <li>• Creating RESTful NodeJS API</li> </ul>
November 25	Building a ReactJS application (hands-on lab)	
December 9	Term Project Presentations	
December 16	Final Exam	