



MET CS401/CS601

Web Application Development

This class focuses on HTML5, CSS and ES6. Students are highly encouraged to use their laptops to class for our laboratories. Most of our learning comes from hands-on laboratories.

Instructor

Andrew Sheehan asheehan@bu.edu

Office Hours

Office hours are by appointment (They can be over Zoom or face to face). Please reserve your slot ahead of time with your professor.

Classroom Location

CAS 426 (College of Arts and Sciences)
685–725 Commonwealth Avenue, Boston, MA 02215

Required eBooks

Most are free and online

- HTML and CSS Design and Build Websites. Jon Duckett
<https://wtf.tw/ref/duckett.pdf>
- JavaScript: The Definitive Guide. David Flanagan
https://read.amazon.com/kp/embed?asin=B088P9Q6BB&preview=newtab&linkCode=kpe&ref_=cm_sw_r_kb_dp_1k29FbMBDWC4T
- Exploring ES6. Dr. Axel Rauschmayer
<http://exploringjs.com/es6.html>
- jQuery

<https://books.goalkicker.com/jqueryBook/>

- Eloquent JavaScript

https://eloquentjavascript.net/Eloquent_JavaScript.pdf

- Bootstrap

[Bootstrap homepage](#)

Course Policies

- Homework will not be accepted after the due date.
- Exams and quizzes cannot be made up or rescheduled.

Grading Policies for MET CS601 Students

- Homework, Quizzes and Laboratories: 25%
- Midterm Examination: 25%
- Term Project: 25%
- Final Examination: 25%

Grading Policies for MET CS401 Students. (Has no Term Project Requirement)

- Homework, Quizzes and Laboratories: 34%
- Midterm Examination: 33%
- Final Examination: 33%

Assignments

All assignments will be listed on our onlinecampus.bu.edu site

Schedule

Weeks (Thursdays)	Topics	Readings
September 2	<ul style="list-style-type: none"> • Course Introduction: Setting expectations • Developer Tools: Text Editors and IDE's • Core HTML Elements • The Document Object Model ("DOM") • Using the Chrome debugger • Writing your first HTML page • Beginning CSS 	Duckett: 1-5
September 9	<ul style="list-style-type: none"> • Core HTML: Forms and Tables • Introduction to Javascript • Expressions, Javascript Data Types • Control Structures • Built-in Objects: Window, Document, String and Date • Introduction to Declared Functions • Using DOMContentLoaded with addEventListener() • Continuing with CSS 	Duckett: chapters 6,7 Flanagan: 1-5,11 Haverbeke: 3 https://developer.mozilla.org/en-US/docs/Web/API/Window https://developer.mozilla.org/en-US/docs/Web/API/document https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/String https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Date https://developer.mozilla.org/en-US/docs/Web/API/Window/DOMContentLoaded_event
September 16	<ul style="list-style-type: none"> • Core HTML: Audio and Video Elements • Functions: Arrow, Anonymous and Expressions • More with Events • The jQuery library • jQuery Event Binding • https://learn.co/lessons/fewpjs-js-fundamentals-lexical-scoping • https://www.sitepoint.com/demystifying-javascript-variable-scope-hoisting/ 	Duckett: 9 Flanagan: 8, 19 https://developer.mozilla.org/en-US/docs/Web/API/Window/DOMContentLoaded_event https://medium.com/@mandeep1012/function-declarations-vs-function-expressions-b43646042052

September 23	<ul style="list-style-type: none"> • Cascading Style Sheets • Using Selectors • The !important Selector 	Duckett: 10 https://css-tricks.com/when-using-important-is-the-right-choice/ https://developer.mozilla.org/en-US/docs/Web/CSS/CSS_Selectors
September 30	<ul style="list-style-type: none"> • Continuation of CSS • Flexbox • CSS Floating, Visibility and Display • CSS Media Queries 	Flanagan: 8, 15 https://css-tricks.com/all-about-floats/ https://getbootstrap.com/docs/4.5/getting-started/introduction/ More about CSS float https://bit.ly/2WTrBXU https://mzl.la/2OXOk0x https://medium.com/tandemly/basic-scope-a3a6f80800e6 https://css-tricks.com/snippets/css/a-guide-to-flexbox/
October 7	<ul style="list-style-type: none"> • Promises and Callbacks • Using async and await 	Flanagan: 13 https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Promise https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Statements/async_function https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Operators/await
October 14	<ul style="list-style-type: none"> • Destructuring • Rest and Spread • Introduction to Ajax: Native XHR and jQuery • The Fetch API • Axios 	Flanagan: 6,9,15 https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Operators/Spread_syntax https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Functions/rest_parameters https://github.com/axios/axios https://developer.mozilla.org/en-US/docs/Web/API/Fetch_API
October 21	Midterm Examination	
October 28	<ul style="list-style-type: none"> • Javascript Modules • Classes, Objects and Literals 	Flanagan: 6,9,10 https://developer.mozilla.org/en-US/docs/Web/JavaScript/Guide/Modules
November 4	<ul style="list-style-type: none"> • Introduction to Bootstrap 	https://getbootstrap.com/docs/5.0/getting-started/introduction/ https://itnext.io/bootstrap-5-tutorial-how-to-create-a-simple-web-page-using-bootstrap-5-28d851a2a08b

November 11	<ul style="list-style-type: none"> • Data Structures: Array, Set and Map • Review of JSON and XML data formats 	Flanagan: 7,11 https://json.org/json-en.html https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/JSON https://www.w3schools.com/js/js_json_parse.asp https://www.w3schools.com/xml/xml_parser.asp https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Map https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Set
November 18	<ul style="list-style-type: none"> • Introduction to ReactJS framework 	The professor will have slides and code reviews with the class. No need to buy books on this topic.
October 25	Thanksgiving Recess - No Classes	
December 2	Course Review. We may have early presentations from MET CS601 Students!	
December 9	601 Students Only - Student Presentations - Term Projects	
December 16	Comprehensive Final Examination	