**Location:**

**Time:** Tue – Thu, 6:00pm – 9:00pm

**Instructor:** Mike Truax

**Description**

Foundations of Web Development is a 13-week course focusing on HTML, CSS, and JavaScript as well as basic user experience and design theory. Students will learn about the common tools and practices used by professional developers and the development lifecycle behind creating a fully functional website.

**Outcomes**

Students, upon completion of this course, will have proven their knowledge and skills in the following areas:

* HTML, CSS, and JavaScript
* Responsive web development strategies and best practices
* Standard web development tools, frameworks, and content management systems
* Basic design theory
* User experience best practices
* Web development lifecycle and related processes

**Course Structure**

The course covers six major topics as described below, including a summary of learning outcomes and objectives. This approach is meant to provide students knowledges and skills they can build upon as each topic is introduced and provide them a holistic understanding of how each topic fits into the web development lifecycle. After all six topics have been introduced, students will have two weeks to complete a final project using what they’ve learned throughout the course to create a fully responsive website.

Topic #1: HTML – Week 1

Learning Objectives:

* Basic overview and format
* Tags and elements
* Images, tables, and forms
* Embedded audio, video, and other media

Outcome:

Students will understand how HTML structure is used to create basic sites without styling.

Topic #2: Basic CSS – Week s 2 - 5

Learning Objectives:

* Basic overview and format
* Standard stylesheet organization
* Testing and troubleshooting
* Color and text
* Basic design elements
* Floats and positioning
* FlexBox
* Grids
* Queries
* Best Practices and Layouts
* Working from Mockups

Outcomes:

Students will understand how CSS and HTML combine to create static websites with basic design elements and will be introduced to basic design principles for universal accessibility. Using grid and flex structures students will be able to design responsive layouts and will see the importance of designing for multiple platforms.

Topic #3: Basic JavaScript – Weeks 5 - 7

Learning Objectives:

* Introduction to basic programming tools
* Variables, functions, and Booleans
* Incorporating JavaScript into HTML
* Queries and APIs
* The DOM

Outcome:

Using HTML, CSS, and JavaScript, students will be able to build a responsive website while following proper structure and best practices. Students will also begin to see how HTML, CSS, and JS combine to create immersive online experiences.

Topic #4: Advanced CSS – Week 7

Learning Objectives:

* Basics of transitions and transformations
* Basic overview of SCSS

Outcome:

Students will get a basic overview of alternatives to raw CSS, as well as a cursory look at the more advanced options CSS has to offer.

Topic #5: Bootstrap – Weeks 8-9

Learning Objectives:

* Introduction to Bootstrap
* Implementation and uses

Outcome:

Students will be able to see how using existing libraries can increase functionality of their sites while simultaneously reducing initial time investment.

Topic #6: jQuery – Weeks 10 -12

Learning Objectives:

* Introduction to jQuery

Outcome:

Students will be able to more easily design responsive sites that allow for user interaction without the need for verbose JavaScript. Students will also be able to further improve productivity by using existing resources for site design and functionality.

Topic #7: Review and Personal Project Work – Weeks 12-14

Learning Objectives:

* Use independent time to finish a project for final consideration.

Outcome:

Using all the tools learned in the class, students will build a fully working mockup of a live site allowing for interaction between the site and the user.

**Resources**

Mozilla MDN Docs:

[JavaScript](https://developer.mozilla.org/en-US/docs/Web/JavaScript)

[HTML](https://developer.mozilla.org/en-US/docs/Web/HTML)

[CSS](https://developer.mozilla.org/en-US/docs/Web/CSS)

Code practice:

[Code Academy](https://www.codecademy.com/)

Code learning & review:

[Learn to Code Online Book: Shay Howe](https://learn.shayhowe.com/html-css/)

Book for Review:

[“HTML and CSS: design and build websites” - Jon Duckett](https://www.amazon.com/HTML-CSS-Design-Build-Websites/dp/1118008189/)

IDE (Integrated Development Environment) for writing code in and out of class:

[Atom IDE for JavaScript](https://ide.atom.io/)