Course Description:

Introduces the fundamentals of modern web development, design patterns, and frameworks. This course will focus on developing complex web applications using Javascript based technologies along with best practices and design principles. Designed to develop expertise in Single Page Application (SPA) development. Topics include HTML, CSS, Javascript, ES6, RxJS, Reactjs, Redux and React Router.

4.00 Credit Hours
4.00 Lecture Hours

Grading:

Assignments: 40%
Mid-term & Final: 20%
Final Project: 40%
Note: *Late submission leads to direct zero.*

Lecture Details:

Lecture 1: Introduction to HTTP, Unix shell, Git
Lecture 2: HTML Basics- Document Metadata, Content Sectioning, Text Content, Image, Forms, & Table
Lecture 3: CSS - Basics, Selectors, values & units, cascade & inheritance, box model
Lecture 4: CSS and SCSS
Lecture 5: Programming basics and Introduction to Javascript
Lecture 6: DOM, Event handling and Regex
Lecture 7: Building JavaScript projects using Webpack
Lecture 8: Introduction to Typescript and Angular
Lecture 9: Angular - component based UI, template & data binding, forms, NgModules, DI, Services.
Lecture 10: MVC architecture, REST APIs, Nodejs, and MongoDB

Lecture 11: Reactjs
Lecture 12: Redux

Reference Books:

CSS - http://shop.oreilly.com/product/0636920012726.do
JavaScript - https://ericelliottjs.com/product/programming-javascript-applications-ebook/
REST - http://shop.oreilly.com/product/9780596805838.do

Academic Integrity

A commitment to the principles of academic integrity is essential to the mission of Northeastern University. The promotion of independent and original scholarship ensures that students derive the most from their educational experience and their pursuit of knowledge. Academic dishonesty violates the most fundamental values of an intellectual community and undermines the achievements of the entire University.

Some specific guidelines for this course:

Midterm and Final exams are individual effort and collaboration of any kind would be considered a violation.
For group activities, such as assignments and in class discussion, you are strongly encouraged to work with the other members of your group. You are also encouraged to discuss with others outside your group provided that the discussion does not result in an exchange of solutions or partial solutions. You can talk about the course material, the problem, general approaches to the problem, but not specific details of the solution. You cannot share your code in any form with other teams.
All code delivered as part of assignments must be “original” i.e. authored by members of your team. You cannot use code found on sites such as stackoverflow.com. You are however permitted to use code snippets that may be used during lectures or 3rd party open source libraries. If you use a 3rd party library, it must be listed in the README for your assignment.
You can review NEU’s Academic Integrity policy here.