

MET CS701 - Rich Internet Application Development

Instructor

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Course Description

The Rich Internet Application (RIA) Development course concentrates primarily on building rich client web applications in the browser for desktop and mobile devices. The course is divided into various modules covering in depth the following technologies: HTML5, AngularJS, and Ionic framework. Along with the fundamentals underlying these technologies, several applications will be showcased as case studies. Students work with these technologies starting with simple applications and then examining real world complex applications. At the end of this course, students would have mastered the latest and widely used RIA methodologies.

Course Prerequisites

CS520 (*Information Structures*) and **CS601** (*Web Application Development*), or instructor's consent.

Course Grading Policy

The course grade will be based on active class participation and discussions (10%), programming assignments (30%), proctored final exam (30%), and a term project (30%). Assignments are expected to be submitted by their respective due dates. Late submissions carry a penalty.

Course Web Site

- <https://learn.bu.edu>

References

Reference Books

- "Pro HTML5 Programming, 2nd edition", by Peter Lubbers, Brian Albers, and Frank Salim, APress, 2011. ISBN13: 978-1-4302-3864-5. (**Reference book**)
- "Angular 2 Development with TypeScript", by Yakov Fain and Anton Moiseev, Manning Publications, 2016. ISBN: 9781617293122 (**Reference book**)

On the Web

- [The World Wide Web Consortium](#)
- [Angular](#)
- [Ionic](#)

Student Conduct Code

[Please review the academic conduct code](#)

Tentative Course Schedule

- Module 1 -- Advanced JavaScript & HTML5, Part1
 - JavaScript functions, JSON, Constructors, Inheritance
 - Scopes, Patterns, Namespaces
 - HTML5 Overview, Graphics (Canvas & SVG)
 - Audio & Video, Forms
- Module 2 -- HTML5, Part2
 - Drag and Drop, Geolocation
 - Web Workers, Web Storage
 - IndexedDB
 - Server Sent Events and WebRTC
- Module 3 -- Angular 1
 - Overview, Controllers, Scope, Model, and Views
 - Modules, Filters, Directives, and Services
 - Routing and Components
- Module 4 -- Typescript & Angular2
 - Typescript - Language Overview, Functions, Interfaces & Classes, Modules
 - Angular2 Components
 - Angular2 Directives and Pipes
- Module 5 -- Angular2
 - Angular2 HTTP & Routing
 - Angular2 Observables - Services and View Components
- Module 6 -- Ionic Framework
 - Overview, Project Structure
 - Components, Component APIs and Service APIs
 - Ionic Native, Storage
 - Theming
- **Final Project Presentations**
- **Final Exam**