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, Angular, 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%), closed book/closed notes 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://onlinecampus.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

- Web technology for developers
- 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
- Module 3 -- AngularJS (version 1)
  - Overview, Controllers, Scope, Model, and Views
  - Modules, Filters, Directives, and Services
  - Routing and Components
- Module 4 -- Typescript & Angular, Part1
  - Typescript - Language Overview, Functions, Interfaces & Classes, Modules
  - Angular Components
  - Angular Directives and Pipes
- Module 5 -- Angular, Part2
  - Angular Services
  - Angular HTTP & Routing
- Module 6 -- Ionic Framework
  - Overview, Project Structure
  - Components, Component APIs and Service APIs
  - Ionic Native, Storage
- **Final Project Presentations**
- **Final Exam**