WEB 215 Advanced Markup and Scripting

COURSE DESCRIPTION:

Prerequisites: WEB 115
Corequisites: None

This course covers the advanced programming skills required to design Internet applications and interactive web content. Emphasis is placed on the programming techniques required to develop Internet applications, interactive web content, frameworks, and using libraries. Upon completion, students should be able to design, code, debug, and document Internet-based programming solutions to various real-world problems.
Course Hours per Week: Class, 2. Lab, 3. Semester Hours Credit, 3.

LEARNING OUTCOMES:

Upon completing requirements for this course, the student will be able to:

1. Create a web-based front-end application.
2. Create a web-based back-end API and database.
3. Integrate a front-end application with a back-end API.

OUTLINE OF INSTRUCTION:

I.   Discuss assignment types and class structure
II.   Introduction to the MEAN stack
III.   Angular Setup
IV.   Cli
V.   Project Structure
VI.   Basic TypeScript
VII.   Binding
VIII.   Directives
IX.   Routing
X.   Forms
XI.   Services
XII.   State
XIII.   Introduction to stores
XIV.   Introduction to Node.js
XV.   Introduction to Mongo DB
XVI.   Introduction to Express.js
XVII.   Build an API using Node, Express, and Mongo DB
XVIII. Angular HTTP service
XIX.   GET and POST requests
XX.   Introduction to Rxls
XXI.   Async topics
XXII.   Angular lazy loading
XXIII. Unit Tests
XXIV.   Advanced Angular topics and typescript features

REQUIRED TEXTBOOK AND MATERIAL:

The textbook and other instructional material will be determined by the instructor.