

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 RxJs
- 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.