

**CSC496/CSC581 Modern Web Applications Using Server-Side Technologies  
Winter (1/3/2022-1/22/2022)**

In this course, we will provide training in building web applications using Node.js (with Express, and MongoDB) for the backend and EJS for the front-end user interface. No web programming experience is needed although helpful. For undergraduates, this course counts toward “Complex Systems”.

**Textbook:** Jonathan Wexler, “Get Programming with Node.js,” Manning Publications, 2019. (Required)

**Course Outline:**

1. Introduction to HTML/CSS, Node.js, Visual Studio Code, and JavaScript.
2. Installation of Node.js and developer tools.
3. JavaScript Programming with Asynchronous Programming.
4. Node.js and Express.js
5. MongoDB for the persistent data storage accessing.
6. REST API development and consumption.

**Format:** Hands-on labs and student projects will be the highlights of the Winter course. Three individual projects will be used for evaluation.

Contact Dr. Yang at [cyang@wcupa.edu](mailto:cyang@wcupa.edu) for more details.