SYLLABUS

CS44106 – WEB PROGRAMMING II  3 credit hours

Instructor's Name: Angela Guercio

Textbook Books

Course Description
This course is the second of a two-course sequence on Web Programming covering advanced topics on Web Programming based on open standards and best practices. This is a project course exploring advanced aspects of Web programming. Complex web development environments have a fairly substantial learning curve. A fair percentage of course is devoted to teaching the practicalities of developing within it.

Course Content:
Advanced server side programming in PHP; database driven websites; structured query language (SQL) and MySQL; E-commerce; web hosting using Apache, PHP and MySQL; basic and digest authentication; web security, encryption and digital certificates; Extensible Markup Language (XML) for the web, AJAX and web services, scalable vector graphics (SVG); mobile websites.

Pre-requisite Course(s): CS 44105
Designation: The course satisfies a requirement for the Computer Science major and minor.

Student Learning Outcomes
- Demonstrate understanding of how server-side technology works.
- Ability to design and implement advanced dynamic websites.
- Ability to work with server-side technology.
- Master advanced PHP language.
- Demonstrate knowledge of use of databases in web applications.
- Master advanced Javascript and use of jQuery
- Demonstrate use of Node.js and knowledge of frameworks
- Show introductory use of Javascript as a data query language with MongoDB.
- Discuss and apply the common data models used in blogs, forums, and content management systems.
- Demonstrate knowledge of web applications design, including knowledge of layered software architectures as well as tiered designs for scalability and reliability.
- Demonstrate use of mechanisms for maintaining state in web applications.
- Consuming REST and SOAP web services.
- Ability to design and implement web security.
- Discuss Search Engines and SEO

Learning Outcomes Assessment:
- Three semester projects, 2 smaller and one larger.
- Weekly in-class design and programming exercises
- Midterm and final exam