

ITMD 462 SYLLABUS

ITMD 462 Web Site Application Development

Hours: 3 credit hours / 45 contact hours

Instructor: Chuck Beck

Textbook, title, author, and year: *Learning Web App Development*, Semmy Purewal, 2014

Specific course information

- a. **Catalog description:** This course is designed to primarily introduce PHP as a server-side programming language for building dynamic web pages and applications. Topics covered include PHP language syntax and usage, handling form data, current libraries and frameworks, web application security, development tools, application architecture, and database access. Other languages for server-side web development and the use of content management systems may be discussed. Students will design and create a web application that will allow for user login pages as well as functionality to create, read, update, and delete database content through a web interface using web forms and basic database structure.
- b. **Prerequisites:** ITM 311 and ITMD 321 and ITMD 361

Specific goals for the course

- a. **Course Outcomes:** Students completing this course will be able to demonstrate a strong knowledge in the design/development of dynamic web pages and web applications using the JavaScript language and associated frameworks. These dynamic web pages and web applications will connect securely to databases, handle user entered data, and provide a user interface using HTML and CSS.
- b. **Course student outcomes:**
 - Explain the client and server architecture of the Internet and related web technologies.
 - Use a basic text editor and other software tools to create dynamic web pages using JavaScript, HTML, CSS, and associated media.
 - Deploy web applications to a Linux-based web server.
 - Configure and setup a local development environment based on Node.js.
 - Explain the role of forms in web applications.
 - Implement and describe basic security for form processing and database use.
 - Explain how to create authenticated user sessions in a web application.

- Use jQuery and JavaScript to add interactivity to your application.
- Connect client and server with AJAX, JavaScript, and JSON.
- Outline the role of dynamic web pages and web applications in the modern web.
- Describe various JavaScript frameworks, open source applications and their use cases.
- Outline the types of resources server applications can connect to and their advantages and disadvantages.
- Explain why automated code testing is beneficial to the development process.
- Outline how Object Oriented programming patterns are used to create reusable functionality.

Topics to be covered

- a. Introductions / Syllabus Review / Overview
- b. Structure and Style – HTML & CSS
- c. Interactivity – Intro to JavaScript
- d. Interactivity – JavaScript Continued
- e. Bridging the Gap – Client to Server
- f. The Server – Node.js
- g. The Data Store – Storing Data
- h. The Platform – Deploying to the Cloud
- i. The Application – Putting it all together
- j. JavaScript Frameworks
- k. Advanced Topics