Miami Dade College

Course Description

COP4834 | Data Driven Web Applications | (Web Administration) |4.00 credits

This upper division course, for students majoring in Information Systems Technology, utilizes modern three-tier application development to build web-based applications that use relational database systems. Students will learn how to integrate client-side and server-side scripts and database server to build a transaction processing and report generating data-driven web application system. Prerequisites: COP1334 and 4723.

Course Competencies:

Competency 1: The student will demonstrate an understanding of various Web Development Stacks by:

1. Describing various Web Development stacks such as LAMP (Linux, Apache, MySQL, PHP), MEAN (MongoDB,
2. Expressing JS, AngularJS and Node.js), Ruby On Rails, .Net and Java Enterprise Edition.
3. Discussing the advantages/disadvantages of various web development environments.

Competency 2: The student will demonstrate an understanding of the Model View Controller design by:

1. Defining the Model View Controller design pattern.
2. Discussing the advantages of the MVC pattern.
3. Discussing which web components are used to implement the MVC architecture.

Competency 3: The student will demonstrate proficiency in a web scripting language by:

1. Using sequence structure, decision structures, repetition structures, errors and exceptions, functions and classes effectively.
2. Discussing the web development environment and web components.
3. Using HTTP input data and session management.
4. Generating web pages from templates.
5. Implement RESTful Web Services using JSON.

Competency 4: The student will demonstrate an understanding of the NoSQL movement by:
Defining NoSQL databases.

1. Listing different types of NoSQL databases.
2. Comparing NoSQL databases to relational databases.
3. Discussing the advantages/disadvantages of using NoSQL databases.

Competency 5: The student will demonstrate proficiency in manipulating data from a database by:

1. Selecting an appropriate database server.
2. Establishing database connectivity from a script.
3. Writing and executing Create, Read, Update, and Delete (CRUD) statements.
4. Enforcing best practices for a secure database access.

Competency 6: The student will demonstrate an understanding of Web Application Security by:

1. Implementing authentication models.
2. Using encryption between a web application and the client browser.
3. Using best practices for secure access.

Learning Outcomes:

1. Computer / Technology Usage
2. Numbers / Data