

VCIM-2291: WEB PUBLISHING IV: DATA-DRIVEN SITES

Cuyahoga Community College

Viewing: VCIM-2291 : Web Publishing IV: Data-Driven Sites

Board of Trustees:

May 2023

Academic Term:

Fall 2023

Subject Code

VCIM - VC-Interactive Media

Course Number:

2291

Title:

Web Publishing IV: Data-Driven Sites

Catalog Description:

Learn to create data-driven, dynamic websites. Combines an overview of programming terms and concepts with practical examples.

Credit Hour(s):

3

Lecture Hour(s):

2

Lab Hour(s):

3

Requisites

Prerequisite and Corequisite

VCIM-1570 Web Publishing I: HTML or IT-2310 Web Programming.

Outcomes

Course Outcome(s):

Demonstrate knowledge of the basic concepts for creating dynamic web pages.

Essential Learning Outcome Mapping:

Critical/Creative Thinking: Analyze, evaluate, and synthesize information in order to consider problems/ideas and transform them in innovative or imaginative ways.

Objective(s):

- a. Demonstrate knowledge of basic programming concepts using a server-side language.
- b. Construct template-parts using a server-side language to form a dynamic website.
- c. Create a database on the server which will store and retrieve information based on user input from the dynamic site.

Course Outcome(s):

Demonstrate knowledge of content management systems.

Essential Learning Outcome Mapping:

Critical/Creative Thinking: Analyze, evaluate, and synthesize information in order to consider problems/ideas and transform them in innovative or imaginative ways.

Quantitative Reasoning: Analyze problems, including real-world scenarios, through the application of mathematical and numerical concepts and skills, including the interpretation of data, tables, charts, or graphs.

Objective(s):

- a. Identify current popular content management systems along with their individual strengths and weaknesses.
 - b. Create a complete website using a content management system.
 - c. Research and install available plug-ins or extensions that are available for the content management system.
 - d. Create a custom theme that you can install for a content management system.
-

Methods of Evaluation:

- a. Class assignments and exercises
- b. Written exams
- c. Research papers
- d. Oral presentations
- e. Participation in group activities

Course Content Outline:

- a. An overview of how websites utilize databases via server-side technology.
 - i. How modern websites are created using template-parts
 - ii. Terminology
 - 1. CMS
 - 2. Client-side languages
 - 3. Server-side languages
 - 4. Scripting and programming
 - 5. Learning essential terms related to various data, databases and options for handling it
 - iii. The pros and cons of proprietary versus open source software
- b. Server-side scripting language
 - i. Inserting comments
 - ii. Data types
 - iii. Conditional statements
 - iv. Loops
 - v. User-defined and built-in functions
 - vi. Debugging
- c. SEO: Unique challenges and opportunities for data-driven sites.
 - i. Search Engine friendly URL formatting
 - ii. SEO-friendly Meta titles for every page
- d. Database basics
 - i. Creating a database
 - ii. Loading information into database tables
 - iii. Retrieving and sending information to the database using a server-side scripting language
- e. Content Management Systems
 - i. Manipulating existing themes
 - ii. Creating new themes
 - iii. Building websites from themes
 - iv. Understanding how and when to plug-ins/extensions
 - v. Security best practices
- f. Construction and maintenance issues
 - i. Site structure
 - ii. Debugging
 - iii. Backing up CMS content and settings
 - iv. Updating CMS versions and plug-ins/extensions
- g. Staying relevant: connecting with the web community, online and in person
 - i. Identifying and joining relevant local professional organizations
 - ii. Identifying and joining relevant online communities
 - iii. Identifying quality resources to reference on a regular basis to maintain knowledge of current technology trends

Resources

Ullman, Larry. *PHP for the Web: Visual QuickStart Guide*. 5. Peachpit Press, 2016.

Sklar, David; Trachtenberg, Adam. *PHP Cookbook: Solutions & Examples for PHP Programmers*. 3. O'Reilly Media, 2014.

Nixon, Robin. *Learning PHP, MySQL & JavaScript: With jQuery, CSS & HTML5*. 5. O'Reilly Media, 2018.

Thomson, Laura; Welling, Luke. *PHP and MySQL Web Development*. 5. Addison-Wesley Professional, 2016.

Stern, Hal; Williams, Brad. *Professional WordPress: Design and Development*. 3. Wrox, 2015.

MacDonald, Matthew. *WordPress: The Missing Manual (Missing Manuals)*. 2. O'Reilly Media, 2014.

Resources Other

- a. <http://php.net>
- b. <https://www.mysql.com>
- c. <https://wordpress.org>
- d. <http://www.alistapart.com>
- e. <http://www.lynda.com>
- f. <https://teamtreehouse.com>
- g. <http://w3c.org>

Top of page

Key: 4380