

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

Cuyahoga Community College

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

Board of Trustees:

May 2025

Academic Term:

Fall 2025

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):

1. Demonstrate knowledge of basic programming concepts using a server-side language.
2. Construct template-parts using a server-side language to form a dynamic website.
3. 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):

1. Identify current popular content management systems along with their individual strengths and weaknesses.
 2. Create a complete website using a content management system.
 3. Research and install available plug-ins or extensions that are available for the content management system.
 4. Create a custom theme that you can install for a content management system.
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Methods of Evaluation:

1. Class assignments and exercises
2. Written exams
3. Research papers
4. Oral presentations
5. Participation in group activities

Course Content Outline:

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

Resources

Finan, Lewis. (2023) *Mastering WordPress 2024: The Complete Guide to Building Professional Websites from Beginner to Expert, Unleash the Full Potential of WordPress to Elevate Your Online Presence*,

Hayden, Grace. (2023) *Start an E-Commerce Business from Scratch: The Simple Starter Guide to Unlocking Profitable Online Businesses*,

Wharton, Jude; Wharton, Chris. (2022) *The Website Handbook: Plan and Create a Website That Attracts Leads and Makes Sales*,

Resources Other

1. Wordpress.org (<https://wordpress.org/>)
2. Webflow (<https://webflow.com/>) .(2024)
3. Figma (<https://www.figma.com/>)
4. LinkedIn Learning (<https://www.linkedin.com/learning/>) . (2024)
5. O'Reilly (<https://www.oreilly.com/>) .(2024)

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