VCIM-2281: WEB PUBLISHING III: JAVASCRIPT

Cuyahoga Community College

Viewing: VCIM-2281 : Web Publishing III: JavaScript

Board of Trustees:

May 2023

Academic Term:

Fall 2023

Subject Code

VCIM - VC-Interactive Media

Course Number:

2281

Title:

Web Publishing III: JavaScript

Catalog Description:

Provides an introduction and solid foundation in JavaScript, including syntax, conditionals, functions, manipulating the DOM, and event handling. Working commonly used JavaScript libraries are also covered. Prior scripting or programming experience is welcome but not required.

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):

Follow professional best practices for coding JavaScript.

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 basic programming fundamentals such as conditional statements, loops, and functions using basic JavaScript.
b. Create a web-based interface to collect information from a user.
c. Complete basic DOM manipulation.

Course Outcome(s):

2. Utilize networks and research to continue to learn new and emerging techniques as they become available.

Essential Learning Outcome Mapping:

Information Literacy: Acquire, evaluate, and use information from credible sources in order to meet information needs for a specific research purpose.

Objective(s):
 a. Determine which technologies best meet the needs of the project/client.
 b. Determine a list of resources and establish a schedule to regularly get updates on industry changes to be aware of emerging technologies.

Course Outcome(s):

3. Plan, design and build multi-device friendly, interactive user interfaces.

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. Using user experience design best practices design a web-based interface which collects information from a user.
 b. Combine HTML, CSS and JavaScript skills to implement the web-based interface.

Methods of Evaluation:
 a. Participation in discussions, planning sessions and critiques
 b. Lab and field activities
 c. Oral and Written Reports
 d. Exercises and projects

Course Content Outline:
 a. Introduce JavaScript, including differences between client-side and server-side programming.
 b. Introduce basic programming concepts using JavaScript:
     i. Variables, variable types
     ii. Strings, string operations
     iii. If/else
     iv. For loops, While loops
     v. Arrays, array operations
     vi. Date/time object
 c. Learn how to use console.log and browser debugging
 d. Learn how to work with source control system
 e. HTML form validation using JavaScript
 f. User interface design best practices
 g. Introduce JSON object notation, JSON operations
 h. Introduce commonly used JavaScript libraries
     i. How to read library documentation
     ii. How to choose an appropriate library
     iii. How to implement JavaScript library
     iv. Code delivery networks
 i. Bring it all together, developing an interface from scratch, use JavaScript and JSON to collect and modify data
 j. Keeping up and staying relevant
     i. Professional Organizations
     ii. Local groups
     iii. Research tools
     iv. Tutorials
     v. Online support and discussions

Resources

Bevacqua, Nicolas. *Practical Modern JavaScript: Dive into ES6 and the Future of JavaScript*. 1st. No Starch Press, 2016.

Duckett, Jon. *JavaScript: Interactive Front-End Web Development*. 1st. Wiley, 2014.

Haverbeke, Marijn. *Eloquent JavaScript: A Modern Introduction to Programming*. 2nd. No Starch Press, 2015.

McFarland, David Sawyer. *JavaScript & jQuery: The Missing Manual*. Third Edition. O'Reilly Media, 2014.

McPeak, Jeremy. *Beginning JavaScript*. 5th. Wrox, 2015.

Pollock, John. *JavaScript, A Beginner's Guide*. 4th. New York : McGraw-Hill Education, 2013.

Resources Other
David Walsh (https://davidwalsh.name/) - blog
Superherojs.com (http://superherojs.com/) - a curated collection of articles/resources on a variety of js topics
CodePen.io (https://codepen.io/) - an online IDE and publicly available code samples to learn from
Mozilla Developer Network (https://developer.mozilla.org/en-US/docs/Web/JavaScript/) - js section
CodeCademy (https://www.codecademy.com/en/tracks/javascript/) - js lessons
Lynda.com (https://www.lynda.com/) - js lessons

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