CIS C156: WEB DEVELOPMENT WITH JAVASCRIPT AND CLOUD SERVICES

Item	Value
Curriculum Committee Approval Date	11/17/2017
Top Code	070700 - Computer Software Development
Units	3 Total Units
Hours	54 Total Hours (Lecture Hours 54)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Grading Policy	Standard Letter (S), • Pass/No Pass (B)

Course Description

An introduction for aspiring web developers and programmers to the concepts and topics of the JavaScript language. Topics of the course include JavaScript for interactive web development, with flow control, interaction with hypertext markup language (HTML), variables, object-oriented programming, interaction with databases, and JavaScript Object Notation (JSON). Industry concepts dealing with application security are taught, including Identity and Access Management (IAM), third-party authentication (OAUTH), Web Identify Federation, and token-based security. Students will develop a portfolio site hosted publicly using cloud services to display their work. Transfer Credit: CSU.

Course Level Student Learning Outcome(s)

1. Implement Hypertext Markup Language (HTML) in conjunction with JavaScript effectively within the bounds of user requirements.
2. Implement a secure cloud computing environment, adequate to develop web-based experiences.

Course Objectives

- 1. Demonstrate skills in writing and debugging JavaScript code within an HTML (hypertext markup language) web site, with data that flows quickly and in a secure manner to the web page.
- 2. Demonstrate skills in programming JavaScript objects and the ability to handle data in JavaScript Object Notation (JSON) format.
- 3. Demonstrate the ability to use JavaScript to establish, design, and maintain a database on a major industrial cloud-computing platform.

Lecture Content

HTML web page production Divs, images, paragraphs Cascading Style Sheets (CSS), use and concepts assigning ids to elements Document Object Model (DOM) structural elements (head, body, footers, headers) JavaScript Language interacting with HTML elements by id variables flow control iteration, for loops, for Each printing and HTML divs working with CSS attributes JavaScript objects JavaScript Object Notation (JSON) Cloud Computing Skills OAUTH and 3rd party authentication Web Identify Federation and security policy configuration Access Control to Clouds, Identity and Access Management (IAM) Database Management and Interaction for Web Developers DynamoDB and NoSQL databases JSON and JavaScript API usage debugging secure connections integrating security policy with NoSQL systems designing queries in JavaScript

Method(s) of Instruction

- Lecture (02)
- DE Online Lecture (02X)

Instructional Techniques

Guided hands-on instruction via online pre-recorded video Instructor technical demonstration Instructor lecture Group discussion on theory, with assigned textbook Group discussion on technical skills, with reference to homework Posting of program code and HTML, for student inspection/integration

Reading Assignments

Read independent articles that introduce course concepts. Research technical elements which deal with the fundamental JavaScript and/or HTML languages. Conduct independent research in order to study questions asked by other developers.

Writing Assignments

Write statements regarding programming progress. Write statements related to conceptual material.

Out-of-class Assignments

Write independent programs with HTML/JavaScript. Produce a short video to demonstrate their product, then post to a blog.

Demonstration of Critical Thinking

Students will study a concept and discuss how the idea is integrated into a technical engagement, such as a piece of code or a short exercise.

Required Writing, Problem Solving, Skills Demonstration

Students will complete a comprehensive coding project based on the reading, exercises, and skills learned through other assignments in the course.

Eligible Disciplines

Computer information systems (computer network installation, microcomputer ...: Any bachelors degree and two years of professional experience, or any associate degree and six years of professional experience.

Textbooks Resources

1. Required Haverbeke, Marijn. Eloquent JavaScript, 2nd ed. No Starch Press, 2017

Software Resources

1. Eclipse IDE Enterprise Edition (EE). Eclipse Foundation, Neon ed. available for free download at http://www.eclipse.org/downloads/packages/eclipse-ide-java-ee-developers/neon3

Other Resources

1. Coastline Library