

Las Positas College
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Course Outline for CIS 59C
WEB PROGRAMMING - JAVASCRIPT
Effective: Spring 2018

I. CATALOG DESCRIPTION:

CIS 59C — WEB PROGRAMMING - JAVASCRIPT — 3.00 units

Develop client-side, interactive webpages using JavaScript and/or jQuery scripting languages. Write JavaScript scripts that manipulate with the JavaScript Document Object Model (DOM), control program flow, validate forms, animate images, target frames, and create cookies.

2.50 Units Lecture 0.50 Units Lab

Strongly Recommended

CIS 59 - Web Dev: HTML/CSS/Javascript

Grading Methods:

Letter or P/NP

Discipline:

- Computer Information Systems

	MIN
Lecture Hours:	45.00
Lab Hours:	27.00
Total Hours:	72.00

II. NUMBER OF TIMES COURSE MAY BE TAKEN FOR CREDIT: 1

III. PREREQUISITE AND/OR ADVISORY SKILLS:

Before entering this course, it is strongly recommended that the student should be able to:

A. CIS59

1. Create basic web pages using hypertext markup language (HTML), cascading style sheets (CSS) and Javascript;
2. Use an HTML editor, graphics image editor, and special effects applications to speed development of the web page tag code and enhance web page presentation;
3. Using Javascript coding techniques to create interactive web pages, form validation;

IV. MEASURABLE OBJECTIVES:

Upon completion of this course, the student should be able to:

- A. Explain and apply JavaScript syntax and rudiments of programming logic
- B. Develop proficiency in client-side web programming using HTML, CSS and JavaScript
- C. Incorporate interactive JavaScript elements into web pages
- D. Develop good structured programming techniques
- E. Explain and implement document object model, event handlers, variables and functions, browser detection, forms validation, text and image rollovers
- F. Design and implement of a wide range of JavaScript functions and procedures
- G. Produce functional and user-friendly JavaScript commands to control web page windows and information

V. CONTENT:

- A. Use HTML, CSS and Javascript tags to create webpages
- B. Create a webpage using a text editor
- C. Identify the differences between client-side scripts and server-side scripts
- D. Document Object Model and the Document Object Model hierarchy
- E. Write JavaScript and jQuery programs that include the following:
 1. variables (numeric and string) and how to declare and name them and data types
 2. create scripts that use arithmetic, comparison, and logical operators
 3. simple loops: Use Do While, While Do, and For Next looping control structures to repeat blocks of code
 4. create conditional and nested expressions: IF/THEN/ELSE
 5. arrays - create and declare arrays
 6. use built-in functions in JavaScript
 7. create functions and procedures in JavaScript
 8. call functions and procedures in JavaScript

- F. Scripts
 - 1. Writing, testing, debugging
 - 2. Using a Hyperlink to send data
 - 3. Sending data using an online form
- G. Processing form data
 - 1. Variables and assignment statements
 - 2. Data validation in formst

VI. METHODS OF INSTRUCTION:

- A. **Lecture** -
- B. **Discussion** -
- C. Videos; reading assignments; tutorials
- D. Hands-on explanation utilizing personal computers
- E. Laboratory experience: hands-on lab projects
- F. Computer demonstrations with overhead display panel

VII. TYPICAL ASSIGNMENTS:

- A. Project 3, Case 1: Your uncle has a used car lot. He has hired you to develop his new Web page. He wants to display pictures of the cars he has in stock, but he does not want customers to have to wait for 30 to 50 pictures to load. You tell him the easiest way to solve the problem is to use a drop-down list that shows the current models and when the user selects a particular model a picture displays along with the car's specifications.
- B. Project 4 Case 1: Your friend owns a local computer store. His web page has become very popular and several local merchants have purchased advertising on the page. He wants visitors to see different advertisements on each visit to the page. Each ad is a graphic image. You need to use cookies to keep track of the last ad that the view say and then show the next ad next visit. When the last ad has been seen, the cycle begins again with the first ad.

VIII. EVALUATION:

- A. **Methods**
 - 1. Exams/Tests
 - 2. Quizzes
 - 3. Group Projects
 - 4. Lab Activities
- B. **Frequency**
 - 1. Two to three quizzes (theory) per semester
 - 2. mid-term exam (optional) lab or theory
 - 3. final exam (required) lab or theory
 - 4. Weekly lab assignments to reinforce and demonstrate programming skills

IX. TYPICAL TEXTS:

- 1. Gosselin, Don. *JavaScript: The Web Warrior Series*. 6th ed., Cengage, 2016.
- 2. Deitel, Paul. *JavaScript Fundamentals I and II LiveLessons Bundle*. 5th ed., Prentice Hall, 2016.
- 3. Barksdale, Karl. *HTML and JavaScript Basics*. 5th ed., Course Technology, 2016.

X. OTHER MATERIALS REQUIRED OF STUDENTS:

- A. mobile storage media: flash drive, external portable hard drive, cloud storage