

SAN DIEGO COMMUNITY COLLEGE DISTRICT
CONTINUING EDUCATION
COURSE OUTLINE

SECTION I

SUBJECT AREA AND COURSE NUMBER

COMM 644

COURSE TITLE

WEB PROGRAMMING INTERMEDIATE

TYPE COURSE

NON-FEE

VOCATIONAL

CATALOG COURSE DESCRIPTION

This course incorporates Java Script and jQuery into the web development process. Students will learn how these programs can enhance a webpage, allowing additional interactivity and more precise control of page elements. More advanced techniques used in creating a website and making the content more dynamic will be taught. Several other program languages will be introduced that can further enhance web-based projects. (FT)

LECTURE/LABORATORY HOURS

140

ADVISORY

Completion of Front End Web Developer I Program or equivalent.

RECOMMENDED SKILL LEVEL

Possess a 10th grade reading level; ability to communicate effectively in the English language;

INSTITUTIONAL STUDENT LEARNING OUTCOMES

1. Social Responsibility
SDCE students demonstrate interpersonal skills by leaning and working cooperatively in a diverse environment.
2. Effective Communication
SDCE students demonstrate effective communication skills.
3. Critical Thinking
SDCE students critically process information, make decisions, and solve problems independently or cooperatively.

INSTITUTIONAL STUDENT LEARNING OUTCOMES (CONTINUED)

4. Personal and Professional Development
SDCE students pursue short term and life-long learning goals, mastering necessary skills and using resource management and self -advocacy skills to cope with changing situations in their lives.

COURSE GOALS

1. Introduce the fundamentals of JavaScript.
2. Introduce the fundamentals of jQuery.
3. Learn retrieving page content.
4. Learn manipulating page content.
5. Understand working with events.
6. Utilize jQuery animations and effects.
7. Utilize progressive enhancement.
8. Understand utilizing programs on a local web server.
9. Have a basic understanding of other programming languages used in website development.
10. Understand server-side includes.

COURSE OBJECTIVES

Upon successful completion, the student will be able to:

1. Describe and use JavaScript.
2. Describe and use jQuery.
3. Explain and demonstrate retrieving page content.
4. Explain and demonstrate manipulating page content.
5. Describe and demonstrate working with events.
6. Demonstrate jQuery animations and effects.
7. Explain and demonstrate progressive enhancement.
8. Demonstrate utilizing programs on a local web server.
9. Explain and demonstrate other programming languages used in website development.
10. Describe and demonstrate server-side includes.

SECTION II

COURSE CONTENT AND SCOPE

1. JavaScript
 - 1.1. Introduction
 - 1.2. Writing and Debugging
 - 1.3. Text editors and browsers
 - 1.4. Console and inspectors
 - 1.5. JavaScript help
 - 1.6. JavaScript jargon
 - 1.7. JavaScript jargon
 - 1.7.1. Document Object Model (DOM)

COURSE CONTENT AND SCOPE (CONTINUED)

2. jQuery
 - 2.1. Introduction
 - 2.2. Overview
 - 2.3. JavaScript library
 - 2.4. Uses of jQuery
 - 2.5. Alternatives to jQuery
 - 2.6. jQuery versions
 - 2.7. Downloading and installing
 - 2.8. Reference materials
3. jQuery-Enabled Page
 - 3.1. Creating
 - 3.2. Features
4. jQuery Concepts
 - 4.1. Preparation
 - 4.2. Selecting elements to use
 - 4.3. Performing multiple operations on the same line with chaining
 - 4.4. Using classes to find what you're looking for
 - 4.5. Adding, modifying, and removing content dynamically
5. Retrieving Page Content
 - 5.1. Overview of selectors and filters
 - 5.2. Using basic jQuery selectors
 - 5.3. Using basic jQuery filters
 - 5.4. Using jQuery attribute filters
 - 5.5. Child, visibility, and content filters
 - 5.6. Traversing documents
 - 5.7. Understanding jQuery statement chaining
6. Manipulating Page Content
 - 6.1. Creating, getting, and setting content
 - 6.2. Manipulating attributes
 - 6.3. Inserting content
 - 6.4. Wrapping, replacing, and removing content
 - 6.5. Working with cascading style sheets (CSS)
 - 6.6. Associating data with page elements
7. Events
 - 7.1. jQuery event handling features
 - 7.2. Binding and unbinding events
 - 7.3. Convenient event helper methods
 - 7.4. Using the jQuery event object
 - 7.5. Using miscellaneous event features
8. jQuery Animations and Effects
 - 8.1. Hiding and showing elements
 - 8.2. Fading elements in and out
 - 8.3. Sliding elements
 - 8.4. Creating custom animations
 - 8.5. Understanding animation easing

COURSE CONTENT AND SCOPE (CONTINUED)

9. Progressive Enhancement
 - 9.1. Utilize a JavaScript library
 - 9.2. Introduction to modernizer
 - 9.3. Use modernizer to take advantage of HTML5 and CSS3
10. Local Web Server
 - 10.1. Utilizing programs
 - 10.1.1. MAMP (Mac)
 - 10.1.2. XAMPP or WAMP (PC)
 - 10.2. Setting up a local server
 - 10.3. Overview of phpMyAdmin
 - 10.4. Testing dynamic content locally
11. SASS and LESS
 - 11.1. Overview
 - 11.2. Downloading and installing the tools
12. LESS
 - 12.1. Introduction
 - 12.2. Using LESS on the client
 - 12.3. Using variables
 - 12.4. Working with mixins
 - 12.5. Using nested rules
 - 12.6. Using operators
13. SASS
 - 13.1. Introduction
 - 13.2. SASS command-line basics
 - 13.3. Using variables
 - 13.4. Defining nested rules
 - 13.5. Working with mixins
 - 13.6. Using operators
14. AJAX and AHAH
 - 14.1. Introduction
 - 14.2. Using AJAX and AHAH to Get Data
 - 14.3. Updating information without reloading the page using AJAX
 - 14.4. Simplifying the process with AHAH
15. PHP
 - 15.1. Introduction
 - 15.2. Using PHP in a web page
 - 15.3. Using PHP to make web pages dynamic
 - 15.4. Using variables to store information
 - 15.5. Storing numbers and text in variables
 - 15.6. Displaying the values of number and text variables
 - 15.7. Using functions to manipulate values
 - 15.8. Adding comments to PHP scripts

COURSE CONTENT AND SCOPE (CONTINUED)

16. Server-Side Includes
 - 16.1. Overview and definition
 - 16.2. For common page elements
 - 16.3. Include commands
 - 16.4. Moving common elements to include files
 - 16.5. Internal links in an include file

APPROPRIATE READINGS

Readings of appropriate reading level may include, but are not limited to materials such as a textbook, supplemental reading assignments, industry-related periodicals or magazines, manuals, videos, online help, articles posted on the Internet, and information from web sites, online libraries and databases.

WRITING ASSIGNMENTS

Typical writing assignments may include completing assigned projects, providing written answers to assigned questions, performing internet research and reporting on that research.

OUTSIDE ASSIGNMENTS

Assignments may include, but are not limited to: appropriate internet research, reading, preparing reports and studying as needed to perform successfully in class.

APPROPRIATE ASSIGNMENTS THAT DEMONSTRATE CRITICAL THINKING

Assignments which demonstrate critical thinking may include, but are not limited to creating a variety of web pages that demonstrate a thorough understanding of class material, participate in group discussions, and work individually and with others to build web pages and websites. Students may also be expected to participate in online class discussion posts, in-class discussions and project reviews.

EVALUATION

Evaluation methods may include, but are not limited to performance in a variety of activities and assignments, such as completing a research project individually or in a group, hands-on projects, demonstrating programming methodologies, quizzes, class participation, written and practical tests, attendance and punctuality.

Upon successful completion of the course a Certificate of Course Completion will be issued. Upon successful completion of all courses in the program a Certificate of Program Completion will be issued.

METHOD OF INSTRUCTION

Methods of instruction may include, but are not limited to lectures, discussion, hands-on demonstrations, computer-assisted instruction, laboratory assignments and field trips. This course, or sections of this course, may be offered through distance education.

TEXTS AND SUPPLIES

Books

Learning Web Design: A Beginner's Guide to HTML, CSS, JavaScript, and Web Graphics, Jennifer Niederst Robbins, O'Reilly Media, current edition

Learning PHP, MySQL, JavaScript, and CSS: A Step-by-Step Guide to Creating Dynamic Websites, Robin Nixon, O'Reilly Media, current edition

JavaScript & JQuery: Interactive Front-End Web Development, Jon Duckett, Wiley, current edition

The Principles of Object-Oriented JavaScript, Nicholas C. Zakas, No Starch Press current edition

Programming PHP, Kevin Tatroe, Peter MacIntyre and Rasmus Lerdorf, O'Reilly Media, current edition

Online Video Training:
www.lynda.com

Supplies:

Pen, journal (composition book), notebook paper and a soft 3-ring binder, or a one-subject 110 sheet college ruled notebook, and appropriate storage media such as a USB Drive or external hard drive.

PREPARED BY Emily Kay DATE February, 18, 2014

REVISED BY _____ DATE _____

Instructors must meet all requirements stated in Policy 3100 (Student Rights, Responsibilities and Administrative Due Process), and the Attendance Policy set forth in the Continuing Education Catalog.

REFERENCES:

San Diego Community College District Policy 3100
California Community Colleges, Title 5, Section 55002
Continuing Education Catalog