

SAN DIEGO COMMUNITY COLLEGE DISTRICT  
CONTINUING EDUCATION  
COURSE OUTLINE

**SECTION I**

**SUBJECT AREA AND COURSE NUMBER**

COMP 645

**COURSE TITLE**

MOBILE APP HTML DEVELOPMENT

**TYPE COURSE**

NON-FEE

VOCATIONAL

**CATALOG COURSE DESCRIPTION**

This course introduces students to the modern web technologies that are used to develop cross-platform mobile web applications. Students will be introduced to mobile application development, open source mobile application frameworks, and the process for determining the appropriate open source solution. Students will learn about the construction of multiple content screens, transitions, user input, and geolocation services. Students will also be introduced to common markup, styling, and programming languages. (FT).

**LECTURE/LABORATORY HOURS**

28

**ADVISORY**

Microcomputer Basics or equivalent.

**RECOMMENDED SKILL LEVEL**

Possess a 10<sup>th</sup> grade reading level; ability to communicate effectively in the English language; knowledge of math concepts at the 8<sup>th</sup> grade level and basic computer literacy.

**INSTITUTIONAL STUDENT LEARNING OUTCOMES**

1. Social Responsibility  
SDCE students demonstrate interpersonal skills by learning and working cooperatively in a diverse environment.
2. Effective Communication  
SDCE students demonstrate effective communication skills.

### INSTITUTIONAL STUDENT LEARNING OUTCOMES (CONTINUED)

3. Critical Thinking  
SDCE students critically process information, make decisions, and solve problems independently or cooperatively.
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 Hypertext Markup Language (HTML).
2. Introduce Cascading Style Sheets (CSS).
3. Introduce JavaScript (JS).
4. Illustrate how a JavaScript library can speed the development process.
5. Illustrate the use of offline storage solutions.
6. Illustrate the use of conditional statements.

### COURSE OBJECTIVES

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

1. Construct an HTML-compliant document.
2. Apply CSS to HTML documents.
3. Create external JS documents.
4. Set up a project based on a JavaScript Library, such as jQuery.
5. Construct a feature-rich web application with multiple screens.
6. Apply HTML data- attributes as necessary.
7. Devise a system for user input storage and retrieval.
8. Test for various web browsers.

## SECTION II

### COURSE CONTENT AND SCOPE

1. Approaches to Cross-Platform Mobile Applications
  - 1.1. Traditional approach
    - 1.1.1. Positive aspects
    - 1.1.2. Negative aspects
    - 1.1.3. Examples
  - 1.2. Modern approach
    - 1.2.1. Positive aspects
    - 1.2.2. Negative aspects
    - 1.2.3. Examples

COURSE CONTENT AND SCOPE (CONTINUED)

2. Introduction to Hypertext Markup Language
  - 2.1. Language syntax
  - 2.2. Tags
    - 2.2.1. DocType
    - 2.2.2. Head and body blocks
    - 2.2.3. Meta data
    - 2.2.4. Headings
    - 2.2.5. Paragraphs
    - 2.2.6. Hyperlinks
    - 2.2.7. Images
  - 2.3. HTML5 concepts
  - 2.4. Semantic HTML5
3. Introduction to Cascading Style Sheets
  - 3.1. Language syntax
  - 3.2. Selectors
    - 3.2.1. Tag selectors
    - 3.2.2. ID selectors
    - 3.2.3. Class selectors
  - 3.3. Style sheets
    - 3.3.1. Inline
    - 3.3.2. Embedded
    - 3.3.3. External CSS
  - 3.4. CSS3 concepts
  - 3.5. Rounded corners
  - 3.6. Drop shadows
  - 3.7. Alpha transparency
4. Introduction to JavaScript
  - 4.1. Language syntax
  - 4.2. Variables
  - 4.3. Functions
  - 4.4. Debug with the console
  - 4.5. Capture user input
  - 4.6. jQuery
  - 4.7. Objects
  - 4.8. Changing HTML content
  - 4.9. Changing CSS content
5. Introduction to jQuery Mobile
  - 5.1. Mobile-friendly framework
  - 5.2. CDN vs Local
  - 5.3. Language syntax
  - 5.4. Data-role
  - 5.5. Incorporating Semantic HTML5
6. Screen Development
  - 6.1. Information architecture
  - 6.2. Screen placeholders
  - 6.3. Linking screens

## COURSE CONTENT AND SCOPE (CONTINUED)

- 6.3.1. Persistent navigation
- 6.3.2. Internal links
- 6.3.3. External links
- 6.3.4. Transitions
- 7. Widgets
  - 7.1. Navigation elements
    - 7.1.1. Headers
    - 7.1.2. Footers
    - 7.1.3. Tabs
  - 7.2. Collapsible sets
  - 7.3. List view sets
  - 7.4. Panels
- 8. Offline Storage Solutions
  - 8.1. Collecting user input
  - 8.2. Saving user input with HTML5 local storage
  - 8.3. Retrieving user data via conditional statements
- 9. Adaptive Web Design Considerations
  - 9.1. User agent detection
  - 9.2. Conditional statement redirection
- 10. Project Packaging
  - 10.1. Favicon
  - 10.2. Apple touch icon
  - 10.3. Windows icon
  - 10.4. Uploading to a server
  - 10.5. Pre-flight check
- 11. Project Planning
  - 11.1. Defining purpose
  - 11.2. Wireframing
  - 11.3. Planning for future mobile application development

## APPROPRIATE READINGS

Appropriate readings may include, but are not limited to, periodicals, magazines, instructor-written materials, manuals, instructor selected URLs, and publications related to mobile application development.

## WRITING ASSIGNMENTS

Appropriate writing assignments may include, but are not limited to, preparing text for an assigned project, keeping a journal on all laboratory and project work, and completing all assigned reports.

## OUTSIDE ASSIGNMENTS

Outside assignments may include, but are not limited to, reading texts and reference resources; research as needed to complete projects; and organizing and preparing written answers to assigned questions.

### APPROPRIATE ASSIGNMENTS THAT DEMONSTRATE CRITICAL THINKING

Assignments which demonstrate critical thinking may include, but are not limited to, analysis and evaluation of assigned text and reference resources, and utilize this analysis in classroom discussions, writing assignments, and in performing laboratory activities. Students must select and use appropriate methods and resources to complete laboratory assignments.

### EVALUATION

A student's grade will be based on multiple measures of performance and will include evaluation of student's ability to:

1. Perform in a variety of activities and assignments.
2. Complete written and practical examinations.
3. Contribute to class and group discussions.
4. Maintain attendance and punctuality per current policy.
5. Demonstrate ability to work independently and as a team member.

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

*JavaScript and jQuery: Interactive Front-End Web Development*, Duckett, Wiley, current edition

*Sams Teach Yourself jQuery Mobile in 24 Hours*, Dutson, Sams Publishing, current edition

Web Resources: <http://w3schools.com>, <http://jquerymobile.com/>

Supplies: Journal (composition book), USB Drive or other storage media

PREPARED BY: Victor Campos and Richard Gholson                      DATE: 11/24/2015

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