

SAN DIEGO COMMUNITY COLLEGE DISTRICT
CONTINUING EDUCATION
COURSE OUTLINE

SECTION I

SUBJECT AREA AND COURSE NUMBER

COMM 646

COURSE TITLE

RESPONSIVE WEB DESIGN

TYPE COURSE

NON-FEE

VOCATIONAL

CATALOG COURSE DESCRIPTION

This course introduces the student to responsive web design for websites that automatically adapt their layout to various screen sizes, orientations, resolutions and work on multiple devices. Topics include planning, building, testing and creating navigation that is specific for a responsive website. Students will learn how to create a single website and customize the display for desktop and mobile devices. Students will incorporate a variety of media into a website for optimized delivery and use on various devices. (FT)

LECTURE/LABORATORY HOURS

90

ADVISORIES

Completion of Front End Web Developer Program I 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 responsive design development including planning, building and navigation specific concerns.
2. Design websites that automatically adapt their layout to various screen sizes and work on multiple devices.
3. Create a single HTML document and customize the display for desktop and mobile devices.
4. Develop fluid based websites.
5. Utilize media queries to target a variety of screen sizes.
6. Incorporate jQuery and JavaScript into a website to enhance responsive behavior.
7. Incorporate a variety of media into a website for use on various devices.

COURSE OBJECTIVES

Upon successful completion, the student will be able to:

1. Describe planning, building and navigation for responsive web design.
2. Demonstrate websites that automatically adapt their layout to various screen sizes and work on multiple devices.
3. Demonstrate creating a document and customizing the display for desktop and mobile devices.
4. Demonstrate a fluid based website.
5. Demonstrate utilizing media queries for a variety of screen sizes.
6. Use jQuery and JavaScript in a website.
7. Use a variety of media on a website for use on various devices.

SECTION II

COURSE CONTENT AND SCOPE

1. Responsive Design
 - 1.1. Introduction
 - 1.2. Uses
 - 1.3. Components of a responsive site
2. Planning Responsive Designs
 - 2.1. Building responsive mockups
 - 2.2. Planning responsive UX (User Experience)
 - 2.3. Developing a content strategy for responsive sites
 - 2.4. Understanding the mobile context
 - 2.5. Designing for mobile capabilities

COURSE CONTENT AND SCOPE (CONTINUED)

- 2.6. Creating flexible HTML
- 2.7. Structuring page regions
- 2.8. Structuring content for multiple devices
- 3. Building Responsive Layouts
 - 3.1. Controlling the viewport
 - 3.2. Understanding screen densities
 - 3.3. Designing for multiple screen densities
 - 3.4. Defining default styles
 - 3.5. Understanding media queries
 - 3.6. Defining media queries
 - 3.7. Creating breakpoints with media queries
 - 3.8. Using reset templates
 - 3.9. Using fluid grids
 - 3.10. Improving site performance
 - 3.11. Building the basic desktop layout
 - 3.12. Building the basic tablet layout
 - 3.13. Building the basic mobile layout
 - 3.14. Refining desktop layouts
 - 3.15. Refining tablet layouts
 - 3.16. Refining mobile layouts
- 4. Responsive Navigation
 - 4.1. Defining a responsive navigation strategy
 - 4.2. Structuring basic menus
 - 4.3. Styling basic menus
 - 4.4. Using cascading style sheet (CSS) sprites in menus
 - 4.5. Structuring complex menus
 - 4.6. Using jQuery for menu behavior
 - 4.7. Responding to changes in screen size
 - 4.8. Minimizing menus for small screens
 - 4.9. Expanding submenus through touch
 - 4.10. Replacing hover styling with touch
 - 4.11. Resetting menus for large screens
 - 4.12. Preventing conflicts
 - 4.13. Providing fallbacks
 - 4.14. Dynamically replacing menus
 - 4.15. Converting menus to select elements
 - 4.16. Converting select elements to menus
- 5. Creating Responsive Media
 - 5.1. Creating fluid images
 - 5.2. Making video fluid
 - 5.3. Using CSS in place of images
 - 5.4. Image gallery overview
 - 5.5. Structuring a responsive image gallery
 - 5.6. Controlling gallery styling
 - 5.7. Adding image gallery functionality

COURSE CONTENT AND SCOPE (CONTINUED)

6. Enhancing Sites for Mobile
 - 6.1. Adding phone functionality
 - 6.2. Adding home screen icons
7. Managing Resources
 - 7.1. Overview
 - 7.2. Loading resources
 - 7.3. Conditional resource loading
8. Supporting Older Versions of Internet Explorer
9. Testing Responsive Designs

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 responsive web site, participate in group discussions, work individually and in groups to build responsive websites for mobile devices. 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, and demonstration of use of information architecture, 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

- Responsive Web Design (Brief Books for People Who Make Websites, No. 4)*, Ethan Marcotte, A Book Apart, current edition
- Responsive Web Design with HTML5 and CSS3*, Ben Frain, Packt Publishing, current edition
- Responsive Web Design by Example*, Thoriq Firdaus, Packt Publishing, current edition
- Responsive Web Design Overview: For Beginners*, Brett Romero, Create Space Independent Publishing Platform, current edition
- Responsive Design Workflow*, Stephen Hay, New Riders, current edition
- The Mobile Web Designer's Idea Book: The Ultimate Guide to Trends, Themes and Styles in Mobile Web Design*, Patrick McNeil, HOW Books, 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