Lecture Contact Hours: 32-36; Homework Hours: 64-72; Total Student Learning Hours: 96-108
Laboratory Contact Hours: 48-54; Homework Hours: 0; Total Student Learning Hours: 48-54

CUYAMACA COLLEGE
COURSE OUTLINE OF RECORD

COMPUTER AND INFORMATION SCIENCE 225 – WEB DEVELOPMENT CAPSTONE

2 hours lecture, 3 hours laboratory, 3 units

Catalog Description
In this course, participants build professional quality websites, gaining the experience and work examples necessary to find employment in the field. The practical, hands-on work of the class will require participants to reinforce and synthesize learning from the Web Development degree core and explore topics too new or advanced for prior courses. Participants will be guided through project analysis, design, development, implementation and evaluation.

Prerequisite
"C" grade or higher or "Pass" in CIS 211 or equivalent and completion of 15+ units with a "C" grade or higher or "Pass" from the following: CIS 140, 211, 213, 215, 219; GD 105, 126, 217

Entrance Skills
Without the following skills, competencies and/or knowledge, students entering this course will be highly unlikely to succeed:
1) Apply file management best practices to organize, name, backup, and upload files.
2) Read, write, analyze, and debug HTML and CSS to create standards compliant web pages that include formatted text, internal and external links, images, tables, forms, and lists.
3) Use CSS to control presentation, including fonts, colors, backgrounds, layout, and list-based navigation.
4) Apply web design best practices to develop an attractive and usable web site.

Course Content
1) Project Analysis
   a. Working with clients
   b. Developing specifications
   c. Clarifying expectations
   d. Selecting appropriate technologies
   e. Developing a schedule
   f. Working on teams
2) Project Design
   a. Comps
   b. Wireframes
   c. Responsive design for multiple platforms and devices
   d. Accessible, universal design for all users
3) Development
   a. Using a testing server
   b. Graphics production
   c. Writing copy
   d. Developing a prototype and template
   e. HTML and CSS coding & validation
   f. Web programming
   g. Usability testing
   h. Search Engine Optimization
   i. Testing on multiple browsers and platforms

4) Implementation
   a. Launching on a production server
   b. Site promotion
5) Evaluation
   a. Testing on the production server
   b. Analytics
6) Advanced topics as needed

Course Objectives

Students will be able to:

1) Work with a client to develop project specifications and a schedule.
2) Select technological approaches that fit project requirements.
3) Create a design approach and develop comps and wireframes (or similar) to communicate look and feel, navigation, and functionality.
4) Develop a professional quality website using valid HTML and CSS, effective graphics, well-written copy.
5) Use web programming (JavaScript, PHP) to add interactivity and functionality to the website.
6) Apply best practices to develop a site that is usable, accessible, optimized for search engines, and responsive to multiple platforms.

Method of Evaluation

A grading system will be established by the instructor and implemented uniformly. Grades will be based on demonstrated proficiency in the subject matter determined by multiple measurements for evaluation, one of which must be essay exams, skills demonstration or, where appropriate, the symbol system.

1) Hands-on exercises that require students to code and upload web pages that use valid HTML and CSS.
2) Quizzes and exams that measure students' ability to use terminology and explain concepts.
3) Practical exams that measure students' ability to use computer applications to solve real-life web design problems.
4) Projects that require students to develop planning documents that clarify specifications, schedule, design approach, navigation, and functionality.
5) Projects that require students to integrate production skills and design best practices to create technically proficient and well-designed websites.
6) Instructor and peer critique that requires students to verbalize and apply feedback to improve their work.

Special Materials Required of Student

1) File storage system
2) Access to web-based course material and software specified in syllabus

Minimum Instructional Facilities

Computer lab with Internet access, appropriate software

Method of Instruction

1) Lecture and demonstration
2) Hands-on practice
3) Web-based curriculum and research
4) Online discussion and or conferencing

Out-of-Class Assignments

1) Projects that require students to develop planning documents that clarify specifications, schedule, design approach, navigation, and functionality.

2) Projects that require students to integrate production skills and design best practices to create technically proficient and well-designed websites.

Texts and References

1) Required (representative example): None
2) Recommended (representative example): Boehm & Ruvalcaba. Murach's HTML5 and CSS3, 4th Edition. 2018.

Student Learning Outcomes

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

1) Integrate design skills and modern web development technologies to create a website that meets 80% of the technical, organizational, structural, and presentation requirements outlined in a detailed scoring rubric based on the course content and objectives.