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

GRAPHIC DESIGN 223 – ADVANCED WEB ANIMATION

2 hours lecture, 3 hours laboratory, 3 units

Catalog Description
Develop interactive, rich media web animation applications. Includes principles of interaction and content design, object oriented programming, and techniques to effectively incorporate animation, sound and graphics.

Prerequisite
"C" grade or higher or "Pass" in GD 222 or equivalent

Recommended Preparation
"C" grade or higher or "Pass" in CIS 211 or equivalent or ability to create and upload a simple website/web animation

Entrance Skills
Without the following skills, competencies and/or knowledge, students entering this course will be highly unlikely to succeed:
1) Define web animation terms and explain animation concepts.
2) Create frame-by-frame and tweened vector animations and display them in a web page.
3) Use symbols and libraries to create efficient animations.
4) Describe, synthesize and apply animation and interface design principles.

Course Content
1) Analysis and Planning
2) Design Principles
   a. Interaction design
   b. Content design
3) Animation Implementation
   a. Principles of Object Oriented Programming
   b. HTML5 javascript animation
4) Viewing and Optimization Strategies

Course Objectives
Students will be able to:
1) Apply current applicable programming skills to create animated interactive web content.
2) Describe, synthesize and apply interaction and content design principles outlined in the course.
3) Assess the effectiveness of web animation with regard to design and usability based on criteria provided by the instructor.

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) Quizzes and exams that measure students' ability to use design terminology and explain design and technology concepts.

2) Practical exams that measure students' ability to use animation to solve real-life graphic design problems provided by the instructor.
3) Exercises that demonstrate effective visual and technical problem-solving techniques based on criteria specified by the instructor. For example, students will create an interactive web application that meets the needs of a simulated client, demonstrates application of interaction and content design principles, and uses appropriate dimensions and file size so that it will fit within a web page and download quickly.
4) Exercises that require skillful use of hardware and software applications. For example, students will use an animation program to create an interactive web interface that includes digitized audio.
5) Exercises that require planning skills. For example, given a client need, students will prepare a written proposal that clarifies the project details and timeline and includes sketches of effective approaches.
6) Critiques that require students to verbalize and apply feedback to improve work based on criteria specified by the instructor.

Special Materials Required of Student
Removable storage (USB drive) if using campus lab and access to computer with course specified animation program(s) and reliable Internet

Minimum Instructional Facilities
Computer lab with Internet access, projection and appropriate software

Method of Instruction
1) Lecture and demonstration
2) Analysis of interactive, rich media applications
3) Assignments and projects
4) Individual student conferences
5) Student presentations, exhibitions
6) Instructor/student critiques

Out-of-Class Assignments
1) Reading and research assignments
2) Animation projects and exercises

Texts and References
1) Required (representative examples):
   a. Shapiro, Julian. *Web Animation using JavaScript*. 1st edition. Peachpit Press, 2015.
   b. Frain, Ben. *Responsive Web Design with HTML5 and CSS: Develop future-proof responsive websites using the latest HTML5 and CSS techniques*, 3rd Edition, Packt Publishing Ltd., 2020.
2) Supplemental (representative example): *HTML5 Animation with GreenSock (GASP) Workbook*. 1st edition. Noble Desktop, 2014.

Student Learning Outcomes
Upon successful completion of this course, students will be able to:
1) Develop and apply the concepts and production skills required to create professional quality animations from initial concept through final production.
2) Collaborate on team projects while focusing on time management, resources and outcomes.