



Art 22 Winter 2016: Introduction to Computer Programming for the Arts

Time: T/Th 1:00-3:50pm

Location: Arts 2220 | eStudio

Instructor: Ryan McGee <ryanmichaelmcgee@gmail.com>

TA: Sölen Kiratli <solenk@gmail.com>

<Description>

Using a project-based approach, the basic components of web development and computer programming are explored in HTML, CSS, and JavaScript. The class is intended to create a general understanding of computer programming, its use and cultural implications, as well as provide a foundation for utilizing programming in a wide range of projects, from traditional to new media. Emphasis will be placed on JavaScript and general programming concepts that can be applied to other languages. No prerequisites.

<Assignments>

- 3 Programming Exercises
- 3 Sets of Online Readings with Responses
- Final Project Proposal (2 page research and design document)
- Final Project (a website and/or app incorporating HTML/CSS/JavaScript)

<Grading>

- 30% Programming Exercises and Reading Responses
- 50% Final Project and Proposal
- 20% attendance and participation

In addition, the class grade is mitigated by attendance. If you miss more than 2 classes, your grade will be lowered. You cannot pass the class if you miss 6 or more classes. To help you progress through the class, projects and assignments must be turned in on the due dates.

<Tentative Schedule>

//Readings, Assignments, and Due Dates will be posted on GauchoSpace.

Week 1 [1.5 and 1.7]

- Introduction. Define course goals, expectations, and content. Overview of programming languages and creative coding. Download and install FTP client and text editor. Setting up webspace and your computer for HTML and CSS development.

Week 2 [1.12 and 1.14]

- Common HTML tags and page content, modifying HTML with CSS
- The DOM model: manipulating HTML and CSS using JavaScript

Week 3 [1.19 and 1.21]

- Introduction to programming with JavaScript: syntax, variables, operators, functions, arrays, loops, conditionals, events

Week 4 [1.26 and 1.28]

- Introduction to p5.js, setup draw functions, using the reference
- Incorporating p5 in your page: connecting the p5 canvas to a div

Week 5 [2.2 and 2.4]

- Pixel and color spaces, shape primitives, keyboard and mouse interactivity
- Coding animation, randomness, and probability

Week 6 [2.9 and 2.11]

- Audio for the web using p5.sound.js
- Creating GUIs using p5.dom.js

Week 7 [2.16 and 2.18]

- Intro to object-oriented programming
- In class example: collaboratively coding a simple game for the web

Week 8 [2.23 and 2.25]

- Using other JavaScript APIs
- Intro to data visualization and sonification concepts

Week 9 [3.1 and 3.3]

- Beyond JavaScript: overview of other creative programming environments
- Additional topics and review to aid realization of final projects

Week 10 [3.8 and 3.11]

- Open Lab: In class work on final projects (3.8)
- Final Projects Due with Presentation at 1pm on 3.10