DM-IC 1133: FALL: Creative Coding

Schedule: Tues 10.30-12.20
Thurs 10.30-12.20
Classroom: Room 811

Professor: Tega Brain
Email: brain@nyu.edu
Office hours: Thursday 2-4pm, otherwise by appointment
Office Location: Room 882

Links

Course Site: http://courses.tegabrain.com/cc18
Slack Channel: https://cc18fall.slack.com/
Open Processing: https://www.openprocessing.org/class/58425
Github repository: https://github.com/IDMNYU/CreativeCoding-Brain

Course Description

In this course you will learn how to make works of art and design in the medium of software. We will be exploring poetic and creative computation using the free and open-source programming environments, Processing and P5.js. We will be learning fundamental programming concepts, exploring computation as a medium for art and looking at a range of artists who work in this area. You will be experimenting with a range of different techniques to realize creative projects which will be documented online. Topics will include programming interactivity, generative graphics and computer vision.

Course Objectives

- Learn the fundamentals of **computational thinking** applied in the Processing (Java) and P5JS (Javascript) environments.
- Learn **best practices for designing software** within an event-driven, object-oriented, real time framework.
- **Ideate and conceptualize** original creative works in the medium of software
- To develop a **cultural literacy** of the computational arts by critically engaging with historic and contemporary practices.
- Develop **personal learning strategies**, project planning and problem solving skills.

Books

The textbook for this class are:

- Shiffman, Daniel. Learning Processing: a beginner's guide to programming images, animation, and interaction. Morgan Kaufmann, 2009. Learning Processing.
- Make: Getting Started with p5.js: Making Interactive Graphics in JavaScript and Processing, by Lauren McCarthy, Ben Fry, and Casey Reas.

It is compulsory that you get these texts and you are likely to refer to them both throughout your time at NYU. Although softcopies might be easy to find, it is required that you get hardcopies of these books so that you can easily refer to them, write notes in them, do the exercises in them, sleep with them and so forth. These book will be your guiding light this term. They are also in the library.

Assessment

Assessments in this class will occur through class assignments and research posts, final project milestones and the final project submission. See the grade breakdown below and the calendar and weekly deliverables.

Work in this class is divided into coding exercises, weekly projects and the final assignment. The coding exercises will help you to grasp specific concepts and the weekly projects will help you to apply these in creative ways. Remember finished is better than perfect. It is much better to hand in an attempt than nothing at all.

Students will evaluate their own progressed in a course in two ways: 1) A course evaluation form, which will be developed based on the course's individual objectives. 2) Students will also participate in a self reflection assignment due Week 7 & Week 14 or as otherwise noted. This written evaluation is worth a small percentage of your grade and is to be submitted to me outside of this blog. In it you will be asked to:

• Critically analyze/evaluate how much time was spent learning syntax & structure, programming concepts vs. actually programming, and how does this reflect on the final quality of your end result.

• Comment on your successes and frustrations with Processing and P5.js.

• In week 14 your will be asked to compare and contrast the Object Orientated Programming style versus Procedural Programming style not simply in definition, but rather your own understanding of each as well as your usage/fluidity with each.

Attendance

Please check the course calendar weekly on the class site. This calendar will be adjusted through term depending on the pace and interests of the class. Students are expected to attend all classes, except in cases of emergency, grave illness, religious commitment, or pre-planned event of critical importance. In the case of a planned absence, notify me. For illnesses, provide documentation whenever possible.

For any absence, it is the student's responsibility to inquire with classmates for notes, make up any exercises completed in class, and to complete impending assignments.

Lateness and unexcused absences will significantly impact your grade. Two unexcused absences will result in the deduction of a letter grade (eg. an A goes to A-). Five unexcused absences and you will be dismissed from the course.

This course contains a great deal of technical, functional, and creative information and it is cumulative. Regular attendance and active participation in the class are essential and catching up is difficult. Come to class prepared to engage in active discussion; bring questions, feedback, and inspiration for yourself and your classmates.

Grades

- 45% Class projects (weeks 1-10)
- 25% Final Project (weeks 10-14)
- 10% Class quizzes
- 10% Research posts
- 10% Self-Assessments (Tickets to Leave & mid term self assessment)

See the grading rubric section of the website to see how grades are determined in this class.

FAQ

Do I have to be good at Math to do well in this course?

No! Of course it helps, but don't worry we will be revising the basic Math in class and it's much easier and relevant when applying it to enjoyable past times like animation. What is more important than being a brilliant mathematician is that you are organized in your approach to writing programs and solving problems.

Do I have to be good at using computers to do this course?

Again of course this helps, but we are starting at the beginning and you will be introduced to everything you need to know to satisfy the course requirements. Remember, vibrant artistic and creative ideas are as important as technical proficiency in this course.

Is this a web design course?

No. This is a course to introduce you to programming and programming concepts. We are learning a language similar to java and a javascript framework in this course that is very flexible. It is typically used by artists to make interactive applications, graphics and data visualizations.

Will I be a proficient programmer at the end of this course?

No, that take years of practice. This is an introductory course and will get you started on your path to using computation in your creative work. This course is as much about art and creativity as it is about programming.

Academic Integrity

Violations of academic integrity are considered to be acts of academic dishonesty and include (but are not limited to) cheating, plagiarizing, fabrication, denying other access to information or material, and facilitating academic dishonesty, and are subject to the policies and procedures noted in the Student Handbook and within the Course Catalog, including the Student Code of Conduct and the Student Judicial System. Please note that lack of knowledge of citations procedures, for example, is an unacceptable explanation for plagiarism, as is having studied together to produce remarkable similar papers or creative works submitted separately by two students, or recycling work from a previous class.

Please review NYU's School of Engineering's academic dishonesty policy in its entirety. Procedures may include, but are not limited to: failing the assignment, failing the course, going in front of an academic judicial council and possible suspension from school. Violations will not be tolerated.

All work for this class must be your own and specific to this semester. Any work recycled from other classes or from another, non-original source will be rejected with serious implications for the student. Plagiarism, knowingly representing the words or ideas of another as one's own work in any academic exercise, is absolutely unacceptable. Any student who commits plagiarism must re-do the assignment for a grade no higher than a D. In fact, a D is the highest possible course grade for any student who commits plagiarism. Please use the MLA or Chicago Manual style for citing and documenting source material.

This includes copying code for other sources, using code from other sources with only slight modifications and using code from other sources without a reference.

Educational Accessibility Statement

NYU-Tandon is committed to assuring equal educational opportunity and full participation for all students. The mission of the Office for Students with Disabilities is to provide

individuals with learning differences (a.ka. disabilities) the same access to programs and activities as other students. We assist students to maximize their potential while helping them develop and maintain independence.

Students who believe they are eligible for course accommodations under the ADA or Section 504 or have had accommodations please contact New York University's Moses Center for Students with Disabilities at 212-998-4980 or mosescsd@nyu.edu. You must be registered with CSD to receive accommodations. Information about the Moses Center can be found at http://www.nyu.edu/csd. The Moses Center is located at 726 Broadway on the 2nd floor.

Faculty can provide course accommodations/modifications only after receipt of an approved accommodations letter from the Moses Center for Students with Disabilities. Accommodation letters can be provided to qualified students at any time during the semester, but grades earned before the faculty receives the letter cannot be changed.