

Parsons School of Design
School of Art Media and Technology
BFA Communication Design

Creative Computing

PUCD 2035 Section K, CRN 7640

Fall 2017

Tuesdays, 7:00 – 9:40pm

2 West 13th Street, Room 402

Instructor

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Course Website

<http://agneschang.net/cc>

Course Description

Creative Computing is designed to introduce students to programming as a creative medium—as a way of making and exploring. The coursework focuses on developing a vocabulary of interaction design principles which can then be applied across a range of platforms. Students are encouraged to experiment with various media, tools, and techniques, ultimately producing a portfolio of interactive and visual projects designed for the screen. An emphasis is placed on typography as it applies to a screen context, research-based problem solving and a “learning through making” approach to technical skill building. Historical and current interaction design precedents will be discussed.

Learning Outcomes

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

- Demonstrate knowledge of fundamental programming concepts
- Develop several visual & interactive projects
- Objectively present their design process and workflow
- Integrate a variety of media elements into their projects
- Problem solve with other students through reading other students’ code
- Demonstrate the ability to research and learn unfamiliar technical topics
- Concept projects that use code in a creative way
- Research historic and current design precedents to contextualize their work

Assessable Tasks

Assignment 1: Do What?

Write a program using the English language which produces a composition via a set of instructions. Your instructions should be simple enough that they could be executed by any one of your classmates within in less than 10 min., with only a black sharpie, a tabloid sheet of white paper and no additional guidance. Your resulting composition should be something that you find interesting.

Email me (flying@alum.mit.edu) with your instructions by noon on September 5th.

Due 9/5

Assignment 2: Your Class Homepage

Build an index page for yourself using the HTML structure and tags we discussed in class. Consider how the page could reflect your particular design sensibility. We will be using this page as a springboard to link to the projects you make this semester, so think about how your navigational structure could evolve to accommodate a growing archive of work.

Due 9/12, 12/12

Assignment 3: 20 Compositions

Using the elements we discussed in class, create 20 compositions using HTML and CSS. Your goal is to make these 20 variations as different as possible to each other in style. For the first week, we use only type and simple shapes; in the second week, we add movement and transitions to the mix; and in the third and last iteration of this assignment, we add basic interactivity to your 20 compositions.

Due 9/16, 9/26, 10/3

Assignment 4: Iterative Composition

Using a combination of HTML, CSS and Javascript, create a composition (a webpage) that is connected to a live data feed. In successive iterations, we will study the random function as a method to create visuals; we will explore user inputs, variables and and data types; we will incorporate non-linear interactivity through loops and control flows, and finally we will connect our composition to a live data feed using publicly available APIs.

Due 10/10, 10/17, 10/24, 10/31, 11/7

Final Project

Using the tools and techniques you have learned in class, design and develop a digital multimedia experience which tells a story in a non-linear. You can use, as a starting point, an

existing text (e.g. an article from the New Yorker), a personal experience (e.g. a long walk through Central Park), a dataset, a song, etc. etc., or something original. Consider how you can bring your unique perspective to the story, framing or recontextualizing the narrative for the web. In the first week, you will develop 5 proposals in the form of screen-based sketches to explore and illustrate your narrative; in subsequent weeks, you will refine and build upon the final creative direction you choose.

Due 11/14, 12/12

Final Grade Calculation

In-class and Take-home Assignments	50%
Attendance and Participation	30%
Final Project	20%
TOTAL	100%

Course Outline

<i>Session</i>	<i>Topic</i>	<i>Assignment</i>
W1	8/29 What is creative computing? Instruction and describing behavior.	Do what?
W2	9/5 What is a server? What is a client? Mechanics of the internet and what's up with all the acronyms: HTML, CSS, JS.	Your class homepage
W3	9/12 What is relative positioning? Describing visuals and objects	20 compositions: fonts, shapes, and images
W4	9/19 Describing action	20 compositions: animation and transition
W5	9/26 What is hover? Describing reaction	20 compositions: interactivity
W6	10/3 More visuals: Random and other generators	Iterative composition: randomness
W7	10/10 More actions: Variables, Input/Output <i>Mid-term feedback</i>	Iterative composition: dynamism
W8	10/17 More actions: Loops	Iterative composition: repetition

W9	10/24	More reactions: Conditionals	Iterative composition: logic
W10	10/31	Describing the real world: Data	Iterative composition: text and numerical data
W11	11/7	More real world: APIs	Final project: ideas
W12	11/14	More tools: p5.js and drawing libraries	Final project: first draft
—	11/21	<i>No class</i>	—
W13	11/28	In-progress critique	Final project: second draft
W14	12/5	Work session	Final project: presentation
W15	12/12	Final critique	Final documentation

Readings

There are no textbooks for this course; instead, I will occasionally assign readings to be discussed in class the following week. Readings will be posted to the class website as a link or in PDF format.

Materials and Supplies

Students are required to obtain a free account at [GitHub](#) and bring a laptop to class each week.

Resources

Some online resources we'll visit in this class, in alphabetical order:

- A List Apart: <http://www.alistapart.com>
- CSS Layout: <http://learnlayout.com>
- Cloud9: <http://c9.io>
- Codecademy: <http://codecademy.com>
- Codrops CSS Reference: http://tympanus.net/codrops/css_reference
- Dash: <http://dash.generalassemb.ly>
- Discover Devtools: <http://discover-devtools.codeschool.com>
- GitHub: <http://github.com>
- HTML5 Boilerplate: <http://html5boilerplate.com>
- JSBin: <http://jsbin.com>
- jQuery: <http://jquery.com>

- p5.js: <http://p5js.org>
- Paper.js <http://paperjs.org>
- Stack Overflow: <http://stackoverflow.com>
- Sublime Text: <http://sublimetext.com>
- W3Schools: <http://w3schools.com>

Additional resources will be added to the course website as relevant each week.

University Resources

The university provides many resources to help students achieve academic and artistic excellence. These resources include:

- The University (and associated) Libraries: <http://library.newschool.edu>
- The University Learning Center: <http://www.newschool.edu/learning-center>
- University Disabilities Service: www.newschool.edu/student-disability-services/

In keeping with the university's policy of providing equal access for students with disabilities, any student with a disability who needs academic accommodations is welcome to meet with me privately. All conversations will be kept confidential. Students requesting any accommodations will also need to contact Student Disability Service (SDS). SDS will conduct an intake and, if appropriate, the Director will provide an academic accommodation notification letter for you to bring to me. At that point, I will review the letter with you and discuss these accommodations in relation to this course.

Grading Standards

A student's final grades and GPA are calculated using a 4.0 scale. Please note that while both are listed here, the 4.0 scale does not align mathematically with the numeric scale based on percentages of 100 points.

A [4.0; 95 – 100%]

Work of exceptional quality, which often goes beyond the stated goals of the course

A- [3.7; 90 – <95%]

Work of very high quality

B+ [3.3; 87 – <90%]

Work of high quality that indicates higher than average abilities

B [3.0; 83 – <87%]

Very good work that satisfies the goals of the course

B- [2.7; 80 – <83%]

Good work

C+ [2.3; 77 – <80%]

Above-average work

C [2.0; 73 – <77%]

Average work that indicates an understanding of the course material; passable
Satisfactory completion of a course is considered to be a grade of C or higher.

C- [1.7; 70 – <73%]

Passing work but below good academic standing

D [1.0; 60 – <70%]

Below-average work that indicates a student does not fully understand the assignments;
Probation level though passing for credit

F [0.0; 0 – <60%]

Failure, no credit

Grade of W

The grade of W may be issued by the Office of the Registrar to a student who officially withdraws from a course within the applicable deadline. There is no academic penalty, but the grade will appear on the student transcript. A grade of W may also be issued by an instructor to a graduate student (except at Parsons and Mannes) who has not completed course requirements nor arranged for an Incomplete.

Grade of Z

The grade of Z is issued by an instructor to a student who has not attended or not completed all required work in a course but did not officially withdraw before the withdrawal deadline. It differs from an “F,” which would indicate that the student technically completed requirements but that the level of work did not qualify for a passing grade.

Grades of Incomplete

The grade of I, or temporary incomplete, may be granted to a student under unusual and extenuating circumstances, such as when the student’s academic life is interrupted by a medical or personal emergency. This mark is not given automatically but only upon the student’s request and at the discretion of the instructor. A Request for Incomplete form must be completed and signed by student and instructor. The time allowed for completion of the work and removal of the “I” mark will be set by the instructor with the following limitations:

Work must be completed no later than the seventh week of the following fall semester for spring or summer term incompletes and no later than the seventh week of the following spring semester for fall term incompletes. Grades of “I” not revised in the prescribed time will be recorded as a final grade of “F” by the Office of the Registrar.

Divisional, Program and Class Policies

Responsibility

Students are responsible for all assignments, even if they are absent. Late assignments, failure to complete the assignments for class discussion and/or critique, and lack of preparedness for

in-class discussions, presentations and/or critiques will jeopardize your successful completion of this course.

Participation

Class participation is an essential part of class and includes: keeping up with reading, assignments, projects, contributing meaningfully to class discussions, active participation in group work, and coming to class regularly and on time.

Attendance

Parsons' attendance guidelines were developed to encourage students' success in all aspects of their academic programs. Full participation is essential to the successful completion of coursework and enhances the quality of the educational experience for all, particularly in courses where group work is integral; thus, Parsons promotes high levels of attendance. Students are expected to attend classes regularly and promptly and in compliance with the standards stated in this course syllabus.

While attendance is just one aspect of active participation, absence from a significant portion of class time may prevent the successful attainment of course objectives. A significant portion of class time is generally defined as the equivalent of three weeks, or 20%, of class time. Lateness or early departure from class may be recorded as one full absence. Students may be asked to withdraw from a course if habitual absenteeism or tardiness has a negative impact on the class environment.

Whether the course is a lecture, seminar or studio, faculty will assess each student's performance against all of the assessment criteria in determining the student's final grade.

Canvas

Use of Canvas may be an important resource for this class. Students should check it for announcements before coming to class each week.

Delays

In rare instances, I may be delayed arriving to class. If I have not arrived by the time class is scheduled to start, you must wait a minimum of thirty minutes for my arrival. In the event that I will miss class entirely, a sign will be posted at the classroom indicating your assignment for the next class meeting.

Electronic Devices

The use of electronic devices (phones, tablets, laptops, cameras, etc.) is permitted when the device is being used in relation to the course's work. All other uses are prohibited in the classroom and devices should be turned off before class starts.

Academic Honesty and Integrity

Compromising your academic integrity may lead to serious consequences, including (but not limited to) one or more of the following: failure of the assignment, failure of the course,

academic warning, disciplinary probation, suspension from the university, or dismissal from the university.

Students are responsible for understanding the University's policy on academic honesty and integrity and must make use of proper citations of sources for writing papers, creating, presenting, and performing their work, taking examinations, and doing research. It is the responsibility of students to learn the procedures specific to their discipline for correctly and appropriately differentiating their own work from that of others. The full text of the policy, including adjudication procedures, is found at <http://www.newschool.edu/policies/#>

Resources regarding what plagiarism is and how to avoid it can be found on the Learning Center's website: <http://www.newschool.edu/university-learning-center/student-resources/>

The New School views "academic honesty and integrity" as the duty of every member of an academic community to claim authorship for his or her own work and only for that work, and to recognize the contributions of others accurately and completely. This obligation is fundamental to the integrity of intellectual debate, and creative and academic pursuits. Academic honesty and integrity includes accurate use of quotations, as well as appropriate and explicit citation of sources in instances of paraphrasing and describing ideas, or reporting on research findings or any aspect of the work of others (including that of faculty members and other students). Academic dishonesty results from infractions of this "accurate use". The standards of academic honesty and integrity, and citation of sources, apply to all forms of academic work, including submissions of drafts of final papers or projects. All members of the University community are expected to conduct themselves in accord with the standards of academic honesty and integrity. Please see the complete policy in the Parsons Catalog.

Intellectual Property Rights: <http://www.newschool.edu/policies/#>

