IA1 - Creative Coding - MICA - Fall 2019

department	Interactive Arts
course	IA 215.01 Creative Coding - Dolphin 240
schedule	Fall 2019, Thursdays 4pm - 10pm
website	https://github.com/abachman/creative-coding-fall-2019

Instructor

name	Adam Bachman
pronouns	he / him
email	abachman@mica.edu
links	github, twitter, personal
office hours	At OpenWorks or on campus by appointment.

Description

```
creative_coding = art + code
```

In this class, students will be introduced to technologies, contexts, histories, and materials relevant to Creative Coding for Interactive Arts.

In the first part of the course, we will use software called **Processing**--a programming language and associated tools built by artists, for artists--and students will learn programming fundamentals while creating original work through in class exercises and personal projects.

In the second part of the course will be an introduction to **Physical Computing** through the use of a microcontroller-based hardware prototyping platform and the **CircuitPython** programming language. We will learn how to communicate with hardware for the sake of interactive art.

Objectives

By the end of the semester, students of this course will:

- Demonstrate an understanding of basic programming concepts.
- Be able to identify the practical or technical limits of code as an interactive component of your work.
- Be capable of reading and writing programs written in Processing and Python which are either responsive or interactive in nature.
- Have developed a core vocabulary which will enable them to seek help or participate in related discussion online.
- Know how to experiment with new ways to connect digital technologies to their own creative practice.
- Be able to professionally finish an artwork for exhibition purposes in a virtual environment.
- Be familiar with the history and current state of creative coding art practices.

Materials

- Computer you can install software on and the following applications:
  - Processing 3 - https://processing.org/download/ (for writing code)
  - GitHub.app - https://desktop.github.com/ (for storing code)
- An account on https://github.com
- Simple sketching and prototyping supplies: paper and writing utensils.
- A CircuitPlayground Express (available at https://www.adafruit.com/product/3333) and micro USB cable (for the hardware unit). Should be around $35.
- All readings will be provided as PDFs or links.

Grading

60% Three major projects and associated documentation.

20% Homework assignments.

20% Weekly attendance and participation.

All projects and homework will be assigned with clear objectives and project specific evaluation methods.

An "A" in this course will require that you far exceed the minimum expectations for both form and content. Your work should show a highly developed understanding of course concepts and techniques, as well as an innovative incorporation of creative coding into your own developed aesthetic.

Deadlines

All projects and homework are to be completed by the start of class on the assigned due date. Unfinished work will not be discussed in class. However, once completed, documentation of late work may be submitted directly to the instructor with a penalty of one letter grade deduction per week.

Schedule

Date	Topic	Project
2019-08-29	Hello world! Setting up. Basic shapes, colors, and geometry	
2019-09-05	Interactive animations: shapes, variables, conditionals	
2019-09-12	Loops and Arrays	
2019-09-19	Functions and Classes	**PROJECT 1 START**
2019-09-26	Exploring Libraries (Computer Vision)	Project 1 work day 1/1
2019-10-03	Exploring Libraries (Sound)	Project 1 work day 2/2

`2019-10-10`	*Critique and decompress*	Project 1 presentations
`2019-10-17`	Working with `DATA`	**PROJECT 2 START**
`2019-10-24`	Physical computing and Python!	Project 2 work day 1/1
`2019-10-31`	*Critique and decompress*	Project 2 presentations
`2019-11-07`	Using sensors (more Python!)	**PROJECT 3 START**
`2019-11-14`	Communicating with devices (Python <-> Processing)	Project 3 work day 1/2
`2019-11-21`	*TBD*	Project 3 work day 2/2
`2019-11-28`	`THANKSGIVING VACATION`	off
`2019-12-05`	*Critique and decompress*	Project 3 presentations
`2019-12-12`	Everything is on the Internet (Javascript)	

Attendance and Participation

As a citizen of the classroom, you are expected to actively participate in class exercises, discussions, and critiques. In addition, this class is intended to function as a peer learning environment. I encourage you to support and talk to one another during class, particularly if you are experiencing any difficulty.

(via Sam Sheffield)

You are expected to be at every class unless you have a valid excuse.

Arriving more than 15 minutes after class starts is counted as an unexcused absence. Two unexcused absences will result in a reduced grade. More than three unexcused absences (missing more than 25% of the course!) generally results in a failing grade.

You are required to attend on project presentation and critique days even if your work is not complete. Critiques are the best method to learn about art-making from a diversity of fellow art-makers.

Cloud Policy

As stated in the attendance policy above, attendance is mandatory.

If you are physically in the classroom but engaged in the network, where are you present?

If you are on you iPhone, laptop, or embedded nano circuits, where exactly are you, and what are you getting from your time there? What does it mean to be ON your phone, how about IN the classroom? What are your rights as a human user in the technosphere? How has the extension of your body changed with the advent of second brains in the shape of cell phones? Will you turn off your electronic devices at the beginning of class, will you promise me "no glow" until we have our classroom moment together? If not, why? What do you gain or lose from cutting off access to your networked prosthetics?

Throughout the course we will discuss these issues and invent new questions. In the meantime, be respectful. Avoid deductions in your class participation grade by abstaining from online activities not related to course content.

(via Jessica Ann)

MICA Notices

Academic Disability Accommodations

MICA makes reasonable academic accommodations for qualified students with disabilities. All academic accommodations must be approved through the Learning Resource Center (LRC). Students requesting accommodation should schedule an appointment at the LRC (410-225-2416 or e-mail LRC@mica.edu), located in Bunting 110. It is the student's responsibility to make an accommodation request in a timely manner. Academic accommodations are not retroactive.

Environmental Health and Safety (EHS)

Students are responsible to follow health and safety guidelines relevant to their individual activities, processes, and to review MICA's Emergency Operations Plan and attend EHS training. Students are required to purchase personal protection equipment appropriate for their major or class. Those students who do not have the proper personal protection equipment will not be permitted to attend class until safe measures and personal protection are in place.

Plagiarism

Each discipline within the arts has specific and appropriate means for students to cite or acknowledge sources and the ideas and material of others used in their own work. Students have the responsibility to become familiar with such processes and to carefully follow their use in developing original work.

Policy

MICA will not tolerate plagiarism, which is defined as claiming authorship of, or using someone else's ideas or work without proper acknowledgement. Without proper attribution, a student may NOT replicate another's work, paraphrase another's ideas, or appropriate images in a manner that violates the specific rules against plagiarism in the student's department. In addition, students may not submit the same work for credit in more than one course without the explicit approval of all of the instructors of the courses involved.

Consequences

When an instructor has evidence that a student has plagiarized work submitted for course credit, the instructor will confront the student and impose penalties that may include failing the course. In the case of a serious violation or repeated infractions from the same student, the instructor will report the infractions to the department chair or program director. Depending on the circumstances of the case, the department chair or program director may then report the student to the appropriate dean or provost, who may choose to impose further penalties, including expulsion.

Appeal Process

Students who are penalized by an instructor or department for committing plagiarism have the right to appeal the charge and penalties that ensue. Within three weeks of institutional action, the student must submit a letter of appeal to the department chairperson or program director, or relevant dean or provost related to

the course for which actions were taken. The academic officer will assign three members of the relevant department/division to serve on a review panel. The panel will meet with the student and the instructor of record and will review all relevant and available materials. The panel will determine whether or not to confirm the charge and penalties. The findings of the panel are final. The panel will notify the instructor, the chairperson, division, the student, and the Office of Academic Affairs of their findings and any recommendations for change in penalties.

Title IX Notification

Maryland Institute College of Art seeks to provide an educational environment based on mutual respect that is free from discrimination and harassment. There are multiple ways to report sexual harassment/misconduct/assault and reports are encouraged (www.mica.edu/equal_opportunity). Students requiring academic adjustments due to an incident involving sexual harassment or discrimination should contact Student Affairs at 410.225.2422 or Human Resources at 410.225.2363. Keeping with institutional commitments to equity and to comply with Title IX of the Education Amendments of 1972 and guidance from the Office for Civil Rights, faculty and staff members are required to report disclosures of gender based discrimination made to them by students. However, nothing in this policy shall abridge academic freedom or MICA's educational mission. Prohibitions against discrimination and discriminatory harassment do not extend to actions, statements or written materials that are relevant and appropriately related to course subject matter or academic discussion.

Students with Extended Illness or Absence

In the case of extended illness or other absences that may keep the student from attending a class for more than three meetings, undergraduate students must contact the Student Development Specialist in the Division of Student Affairs or have an official disability accommodation letter issued by the Learning Resource Center that specifically addresses class absences. For students who have not been approved for academic disability accommodations, the Student Development Specialist will work with the student to determine the cause and appropriateness of the absences and subsequently notify instructors as necessary. Graduate students must contact the instructor, program director, and the Office of Graduate Studies. Students in professional studies programs must contact the Associate Dean for

Open Studies. The appropriate administrator will facilitate a conversation with relevant faculty to determine whether the student can achieve satisfactory academic progress, which is ultimately at the sole discretion of the faculty member.