

Art 406: Artist's Machine / Syllabus

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Office Hours by appointment only.

Course Description

Exploration of artist-constructed machines (i.e. micro-electronics, robotics, kinetic sculpture and interactive installation) as media for artistic expression. Balance of theory and practice with specific emphasis on making of electronic objects and positioning these in various contexts. No prior knowledge of electronics required.

Learning Objectives

- prepare, construct and present materials for critique, exhibiting basic knowledge of electronics and electricity.
- demonstrate an understanding of micro-controllers and physical computing technologies.
- exhibit an understanding of the value of active experimentation to discover new forms of analog and digital technologies.
- compare and contrast new media and technological artworks as they affect one's culture and society.

Required Materials

You must have these materials prior to the first day of class:

Power Supply	https://www.amazon.com/Belker-Universal-Adapter-Supply-Speaker/dp/B07N18XN84/ref=sr_1_8?dchild=1&keywords=9+volt+power+supply&qid=1597692759&sr=8-8
5mm hubs	https://www.amazon.com/Magic-Coupling-Hardness-Accessory-Connector/dp/B07FLWTFN8/ref=pd_sim_201_5/139-6863560-5034621?_encoding=UTF8&pd_rd_i=B07FLWTFN8&pd_rd_r=ad3f56a2-cbb8-4bc5-b49b-8559fdc4c827&pd_rd_w=adYir&pd_rd_wg=XG5bX&pf_rd_p=64e5d61b-7067-445e-bd1c-f84491d96b7e&pf_rd_r=5QDY6DTCPYZHKXT5TA1B&psc=1&refRID=5QDY6DTCPYZHKXT5TA1B
Wire Strippers	https://www.amazon.com/WISE-GRIP-Stripping-Cutter-8-Inch-2078309/dp/B000JNNWQ2/
Multimeter	https://www.amazon.com/gp/product/B01ISAMUA6/
Arduino Kit	https://www.amazon.com/ELEGOO-Project-Tutorial-Controller-Projects/dp/B01D8KOZF4/

The following Additional Materials will be provided to you at no cost:

Solid Core Wire
popsicle sticks
Additional Servo
Glue Sticks
Steel Wire
Push Button
M3 bolts for shaft hub

Assignments

More information will be provided about all of these via assignment sheets distributed on canvas. Assignments will be turned in for grading as videos, uploaded to an associated Shared Google Drive folder.

1. Introduction to Components
Assigned: T 9/1
Due: T 9/1 (in-person or during class period)
2. Hello World (25 pts)
Assigned: T 9/1
Due: T 9/8
3. Dimmer (25 pts)
Assigned: T 9/8
Due: Th 9/10
4. RGB LED / Joystick Light Show (25 pts)
Assigned: Th 9/10
Due: T 9/15
5. WalkBot (2 weeks) (50 pts)
Assigned: T 9/15
Due: T 9/29
6. Kinetic Sculpture (Puppet Show) (2 weeks) (50 pts)

Assigned: T 9/29

Due: T 10/13

7. Boo! (2 weeks) (75 pts)

Assigned: T 10/13

Due: Th 10/29

8. Final Project (6 weeks) (150 pts)

Assigned: Th 10/29

(11/3 Election Day)

Individual Meeting: Th 11/5 (order parts)

Follow Up Meeting: Th 11/12

1st Prototype Due: Th 11/19 (Full Class Crit)

(Thanksgiving break)

2nd Prototype Due: T 12/1 (Full Class Crit)

Final Due (Last Day of class, turned in on google drive): Th 12/10

Point Total: 400

Attendance

Due to the atypical format of this class relating to the Covid-19 pandemic, attendance of in-person meetings is not required. However, there will be some required attendance for virtual meetings through Zoom, as stated in the assignment sheets. These "Zoom Meetings" will require you to be prepared, actively participate and have your video (camera) working and turned on.

The Safety of Our Learning Environment

Student learning can only occur when students and their instructors feel safe, respected, and supported by each other. On the first in-person class session of the semester you will select your seat/desk. This will become your assigned seat for the entire semester. To ensure that our learning environment is as safe as possible, and in keeping with CDC guidelines to slow the transmission of COVID-19, our in-person class sessions will adhere to the practice of physical distancing. This means that you:

- Should avoid congregating in groups outside of the classroom before and after class
- Return to your assigned a seat for the entirety of the semester

- Upon entering the classroom, wipe down your seat and desk area
- May not move your chairs/desks from their designated positions at any time
- Must remain at least 6 feet apart from your classmates, Teaching Assistants, and instructors at all times
- Must wear a cloth mask that covers your nose and mouth

As necessary, the University may announce modifications to these practices. In that event, these guidelines will be updated to reflect those modifications. If you do not adhere to these guidelines, you will be asked to leave the classroom and building immediately. Public health is not a political issue.

Academic Honesty

<http://www.udel.edu/stuguide/10-11/code.html#honesty>

It is the official policy of the University of Delaware that all acts or attempted acts of alleged student academic dishonesty be reported to the Office of Judicial Affairs. At the faculty member's discretion and with the concurrence of the student or students involved, some cases, though reported to the Office of Judicial Affairs, may be resolved within the confines of the course. All others will be adjudicated within the Undergraduate Student Judicial System.

Grade Evaluation

All assignments include making a video as documentation of your successful completion of the assignment and uploading this to the Shared Google Drive in the corresponding folder before the due date and time listed in the assignment sheet. Videos uploaded (assignments turned in) late will reduce the final grade by 25%.

Assignments will each have an assessment rubric, however the following is a general guide to grade evaluation:

- A = Exceeds Minimum Conceptually and Functionally
- B = Exceeds Minimum Functionally (Weak Conceptually)
- C = Meets Minimum Functionally and Conceptually
- D = Obvious lack of attention to project
- F = Failure to complete assignment

Final letter grades for the course will be determined according to the University of Delaware's Official Grade Scale, as a culmination of the total points earned for each assignment.

If you are not clear about the criteria or what you will be graded on, please ask. I encourage you to discuss your grades with me at any time. Federal law prohibits me from discussing your academic standing (including grades) with anyone except you. I am also prohibited from sending email with personal information, such as grades and academic standing.