ART3807C Media Experiments in Technology and Art

Semester: Spring 2015
Course Credit Hours: 3
Instructor: Charlie Cummings (College of Fine Arts), charlie@ufl.edu / 352-359-2015
Instructor: David Cheney (College of Engineering), djcheney@ufl.edu / 352-392-7545
Charlie's Office Hours: Thu 5:30-6:30pm and by appointment
David's office hours by appointment
Office Location: Warphaus (Charlie) NPB 2232 (David)
Class meets T/H 6:30-9:15pm at WARPhaus

This course is a collaborative, interdisciplinary, cutting-edge opportunity for students who want to gain real world engineering experience while learning to think creatively and analytically to create engaging works of art. The goal of META is to stimulate interdisciplinary collaboration and to develop creative methodologies that will enhance the life-long creative practice of both artist and engineers. Students will learn basic electronics and the Arduino prototyping platform and apply this knowledge to create functional sculptures using repurposed and recycled electronics. Teams will be formed based on equal ratios of Engineering and Art students who register for the course. These teams will propose and produce projects that use electronic devices in a functional yet creative way. The teams will produce their projects over the course of the semester with assistance from professors in Engineering and Art. The result of these collaborations will be featured in a gallery exhibition at the end of the semester. Projects will be evaluated based on their functional and creative merits.

OBJECTIVES

- Work collaboratively and brainstorm collectively to develop ideas.
- Develop techniques to visualize concepts and communicate them to others.
- Integrate technical knowledge with artistic vision.
- Develop proficiency with electronics and the Arduino prototyping platform.
- Learn how to troubleshoot a system by analyzing key components.
- Apply research and methodologies from other content areas to art making.

REQUIRED MATERIALS

- Arduino, Protoshield kit, tiny breadboard, breadboard wires, and USB cable (standard A-B)
- Laptop computer (we will assess and accommodate as needed).
- Various electronics tools.
- A sketchbook.
- Dropbox – Charlie will send you an invitation to your folder.

ART&ENGINEERING LINKS

Links and resources will be posted at: www.charliecummings.com

PARTICIPATION & READINGS

Participation, support, and respect in all phases of this course are imperative. The class dynamic depends on your energy, initiative, attitude, productivity, and willingness to be fully involved in group discussion and critiques. Students expectations:

- Participate in a responsive manner during critique and discussion.
- Complete all assigned readings and take notes so you can contribute to the discussion in class.
- Make safe and considerate choices with equipment and facilities.
- Do your part to keep the lab clean.
- Refrain from phone use, texting, chat, e-mail, and non-course related web surfing during class time.
- Ask questions and contribute answers.
- Offer constructive feedback during group discussions, class workdays, and critiques.
- Reflect on the comments you receive, to gauge the effectiveness of your work.
- Examine the way your ideas change, evolve, and influence formal and conceptual choices in your work.

Development as an artist often hinges on your ability to make effective choices, express ideas clearly, and have fun.

GRADING AND EVALUATION

Grades are meant to reflect effort, ideas, and execution. Your overall grade will be based on participation and projects (including creativity, critical thinking, engagement with course information, research, presentation, technical proficiency with hardware and software, aesthetic application of technologies, and problem solving). Expectations will be explained in detail for each project when it is assigned. If anything seems unclear, you are responsible for asking the instructor for clarification far in advance of the due date. The most successful projects will exhibit close connections between their conceptual, technical, and material dimensions. UF grading policies website: https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

Final grades are based on:

- 5% - Arduino Deadline
- 5% - Attendance
- 20% - Collaborative effort
- 10% - Homework/Assignments
- 20% - Proposal
  - 15% Presentation
  - 20% Report
  - 25% Idea/concept
  - 10% Individual task assignment
  - 30% Milestones
- 40% - Final Project
  FAILURE TO EXHIBIT THE FUNCTIONING PROPOSED FINAL PROJECT WILL RESULT IN A FAILING GRADE IN THE COURSE
  - 25% Individual effort (peer evaluation -- collaboration)
  - 15% Studio participation
  - 15% Presentation
  - 20% Concept Realization
  - 10% Craft
  - 10% Technology
  - 10% Final Report

92 to 100 = A
90 to 91 = A-
88 to 89 = B+
82 to 87 = B
80 to 81 = B-
78 to 79 = C+
72 to 77 = C
70 to 71 = C-
68 to 69 = D+
62 to 67 = D
60 to 61 = D-
Below 60 = E

ATTENDANCE
This course is a collaborative effort between students of different disciplines, therefore all students are expected to attend **every** class, prepared to participate. Up to two unexcused absences will be overlooked from a grading standpoint. The overall grade is lowered at the instructor's discretion for each unexcused absence thereafter. **Six** or more absences, whether excused or unexcused, will result in a non-passing final grade. Tardiness and/or lack of appropriate class materials are unacceptable and may count as unexcused absences. Projects reflect learning, so you will succeed more easily with perfect attendance. Please refer to UF attendance policies:
https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx

LATE WORK
Grades for late assignments and projects will be penalized at the instructor's discretion (usually 20%). No work will be accepted after two class periods from the due date. Always attend class on project due dates. Even if you are not prepared to turn in your assignment, you still need to participate in discussion.

ACADEMIC HONESTY
Please do your own work, or you will fail. Students are expected to abide by the UF Academic Honesty Policy, which defines an academic honesty offense as "the act of lying, cheating, or stealing academic information so that one gains academic advantage." Familiarize yourself with the academic honesty guidelines set forth by the University of Florida: http://www.dso.ufl.edu/sccr/honorcodes/honorcode.php

ACCOMODATION FOR STUDENTS
Students requesting classroom accommodation must first register with the Dean of Students office. The Dean of Students will provide documentation to the student who will then provide this to the instructor when requesting accommodation. The ADA office is located in Room 232 Stadium. Phone: (352) 392-7056 TDD: (352) 846-1046
http://www.ada.ufl.edu

UF STUDENT GUIDE
This resource covers important policies and procedures for students:
http://ufstudentguide.com

UF COUNSELING AND WELLNESS CENTER
3190 Radio Rd.
PO Box 112662
Gainesville, FL 32611-2662 Phone: 352.392.1575
http://www.counseling.ufl.edu/cwc/

HEALTH AND SAFETY
Please familiarize yourself with the UF SA+AH Health and Safety Handbook, available online: http://saahhealthandsafety.weebly.com/handbook.html. Sign and return the waiver distributed on the first day of class. You are responsible for helping maintain the safety of the labs, especially by keeping them clean and free of trash and debris. Pick up after

yourself, or your final grade will be lowered at the instructor's discretion. Michael Christopher (mchristo@ufl.edu) is the area contact for health and safety issues. The following is an overview of the health and safety information specific to digital media art classes.

SA+AH CONTAINER POLICY

There are 2 types of labels used in the SA+AH-- Yellow and White. Both labels are found at the red MSDS box and are supplied by the SA+AH. Each is used for a different purpose.

White:

All new and or used products in containers (hazardous or what might be perceived as hazardous -i.e. watered down gesso, graphite solutions, satellite containers of solvents, powders, spray paints, fixatives, oils, solvents, etc…) must be labeled within the SA+AH to identify their contents. Labels can be found at the MSDS box in each studio and work area. All containers must be marked with your name, contents and date opened. All secondary/satellite containers for hazardous materials must be marked with content, your name and the date opened. All unmarked containers will be disposed of with no notice.

Yellow:

WHEN HAZARDOUS ITEMS ARE DESIGNATED AS TRASH. All containers must have a yellow label identifying the contents that are designated as trash for weekly EHS pick up.

- Flammable solid containers (red flip top) must have a yellow hazardous waste label on the outside (top).
- 5 gallon jugs must have a yellow hazardous waste label on the outside.
- Fibrous containers must have a yellow hazardous waste label on the outside (top).
- Each item in the blue bin must have a yellow hazardous waste label.

Note: Hazardous Waste labels should include all constituents in the waste mixture as well as an approximate percentage of the total for that item and must add up to 100%. Labels should also include the Bldg. and room number of the shop generating the waste along with the Waste Manager for your area, this is located on the SWMA sign posted at the sink or at the Waste Management Area.

TENTATIVE SCHEDULE

Jan 6• Intro
What's going on in contemporary art/eng
Previous MEAT projects
☺**Assignment:** Order kits (Arduino, Protoshield, tools)
Complete contact info and survey for skills/strengths

Jan 8• Brainstorming in teams.

Jan 13• Take things apart (everyone should bring in something to take apart, toys, robots, printers, we will scavenge for parts).
More examples art/eng.

Jan 15• Intro to 3-D printing / 3-D capture technology
More examples art/eng.
☺**Assignment:** Download and install Arduino software.

Jan 20• Arduino purchase deadline – **must bring to class** (5% of grade)!
Arduino demonstrations
More examples art/eng.
☺**Assignment:** Arduino tutorials 1-3

Jan 22• Groups assigned: begin discussing project ideas.
More examples art/eng.

Jan 27• Demonstrate Arduino tutorials 1-3
Project idea discussion in groups
More examples art/eng.
☺**Assignment:** Arduino tutorials 4-6

Jan 29• Class discussion: what are your project ideas so far?
More examples art/eng.

Feb 3• Demonstrate Arduino tutorials 4-6
Circuits 101.
Soldering workshop.
☺**Assignment:** Arduino tutorials 7-10

Feb 5• Proposal presentation to class with group discussion .
formal report, abstract, sketches, functional sketch/description.

Feb 10• Demonstrate Arduino tutorials 7-10.
Studio work day: Proposal detail development.
☺**Assignment:** Arduino tutorials 11-13

Feb 12• Proposal presentation to class with group discussion
code example, parts list and budget, milestones.

Feb 17• Demonstrate Arduino tutorials 11-13.
Studio work day.

----- Begin studio workdays. **Policy: Everyone is present for Studio days!** -----
----- Progress reports at the beginning of class on Tuesdays. -----

Feb 19• Studio work day.

Feb 24• Demonstrate milestone #1
Studio work day.

Feb 26• Studio work day.

Mar 3, 5• No Classes, Spring Break!!!

Mar 10, 12• Studio work day.

Mar 17• Demonstrate milestone #2
Studio work day.

Mar 19, 24, 26, 31• Studio work day.

Apr 2• Demonstrate milestone #3
Studio work day.

Apr 7, 9, 14• Studio work day.

Apr 16• PROJECTS COMPLETE!
Studio work day.

Apr 21• GROUP PROJECT FINAL PRESENTATION.

Apr 22• Last day of classes.

Apr 24• Public Exhibit at WARPhaus