School of Visual Arts
Products of Design
PDG-5080-A Making Studio
Fall 2018
Time: Wednesdays 10am to 12:50pm
Location: Visible Futures Lab 7th floor 132 West 21 Street (east side)
Class blog: http://makingstudio.blog

Instructor: Becky Stern
SVA email: rstern4@sva.edu

Course Description
As the impacts and consequences of mass production become better understood, designers are finding great attraction in the re-emergent fields of making, hacking, modding, and DIY. This course exposes students to techniques, tools, and resources for expanding what we can make ourselves. In-class workshops, field trips, and guest instructors will inform individual and group assignments around the creation of a small-scale handmade product line. Students will combine traditional and novel techniques and materials in electronics, computation, crafts, fabrication, entrepreneurship, and other do-it-yourself areas. The course will provide great emphasis on participating in online communities about making, and through the instructor, students will have opportunities for online exposure and access to a stellar network of innovators, hackers, hobbyists, and crafters producing DIY projects.

Course Objectives
Makers today have all the resources available to them to fully develop a product idea into a small business. Methods of fabrication like laser cutting, CNC milling, and 3D printing— once only available to large corporations— have recently become easily accessible for just about anyone. Likewise craft techniques like sewing and knitting can be simple to learn and open up a wide new ability to express creative ideas. This course will offer an introduction to many kinds of making, including electronics/physical computing with Arduino, and will give the student the confidence to move well beyond ideation and concepts to creating products of design that are fully realized and fully functional.

Course Outline
Schedule may change to accommodate visiting instructors and field trips. Unless stated otherwise, assignments are due via class blog post by 8pm the night before class.

Week 1	Sept 5	Intros, syllabus & class blog overview, Project 1 assigned (Teardown)
Week 2	Sept 12	Arduino workshop, Project 1 discussion
Week 3	Sept 19	Sewing/soldering workshop, introduction to Project 2 (plush night light)
Week 4	Sept 26	In progress critique
Week 5	Oct 3	Project 2 presentations, introduction of Project 3 (Halloween costume)
Week 6	Oct 10	Arduino workshop
Week 7	Oct 17	In class work time
Week 8	Oct 24	In progress critique - midterm dossiers due
Week 9	Oct 31	Project 3 presentations
Week 10	Nov 7	Video documentation presentation, Final Project discussion
Week 11	Nov 14	Arduino workshop, work time
Week 12	Nov 21	Final Project in-progress critiques
Week 13	Nov 28	Peer-supported writing workshop/1-1 meetings
Week 14	Dec 5	Final Project presentations
Week 15	Dec 12	Final Project presentations
Wednesday	Dec 19	Final dossiers due (required for passing grade)

Learning Outcomes

- Experience new methods of making
- Develop knowledge and hands-on skills in basic electronics and physical computing
- Develop hands-on skills in student-selected crafts: sewing, soft circuits, knitting, jewelry, laser cutting, 3D printing
- Create portfolio-building products and projects
- Engage with a huge online maker community through sharing projects, groups, blogs, and events
- Document projects through photography, video, and writing
- Release tutorials online
- Experience publishing projects as how-to manuals
- Learn to self-promote online
- Cultivate resources and confidence for creating a business around independent making

Required Reading

The course Arduino exercises will loosely follow the Instructables Arduino Class and Internet of Things Class.

The course book is *Getting Started with Arduino*. Use it to look up Arduino terms and questions, and read the background chapters at your own pace— you will not be explicitly assigned readings from the book, yet are expected to read the entire book during the course.

Students are encouraged to use an RSS reader to research DIY and maker-related blogs.

Some texts may also be assigned. They will be handed out in class or sent out by e-mail for discussion in future class meetings.

Materials and Supplies
You will need access to a digital still and video camera for this course. Access to lighting equipment, microphone, and tripod are highly recommended. The computer(s) you use for this course must be capable of internet access, photo manipulation, and video editing. Use of platform-agnostic and open source technologies are highly encouraged. Materials and supplies will vary based on each student or team project's needs and may be available directly through the VFL. However, in the case of a workshop, supply acquisition may be organized by the instructor for convenience.

For our Arduino workshops, the department has prepurchased your electronics components.

Some resources for further shopping/downloads/services:
Supplies/materials
adafruit.com
sparkfun.com
lessEMF.com
digikey.com
jameco.com
mcmaster.com
polytek.com

Services
thingiverse.com

Instructables.com
shapeways.com
ponoko.com

Software
Arduino.cc
Tinkercad.com
Autodesk Fusion 360
gimp.org
inkscape.org
Openscad.org
Cura

Criteria for Evaluation
Participation and communication: Your participation in class will be evaluated not just in the classroom through discussions and group project work, but also online through the class blog and other sharing outlets including photo, video, tutorial, and social media sites. Plentiful, frequent, high-quality, and well-organized contributions to class and the web are essential.

Individual and group assignments: You will be evaluated on your production of four projects over the course of the semester. Your projects will be evaluated based on cultural merit (benefit/relevance to target community), writing, photography, videography, and documentation online.

Project Dossiers
In addition to other requirements for the course, a passing grade will require the submission of a project dossier one week after the final class. (For courses that are a full 15 weeks in duration, an additional midterm dossier is required on week 8.) You will not receive a passing grade unless you provide the dossier on time. The precise date and time of the dossier submission deadline will appear on your student calendar.

Instructor Addendum
Schedule office hours with me anytime you want to chat (in person or by email)— I can meet with you at SVA or via Skype/Google+ Hangout. Please let me know in as far advance as possible if you must miss a class or will be late (by email or text message if necessary).