

Electronic Arts & Crafts

What	MUSI 3559 (New Course in Music/Studio Art)
When	Tuesday & Thursday from 3:30 to 6:00pm
Where	Wilson Hall Maker Space
Instructor	Peter Bussigel peterb@virginia.edu
Office Hours	Tuesday & Thursday from 1 to 3 (Wilson 110)

Description

Computer controlled production tools, conductive fabric, desktop milling machines, micro-controllers, and DIY networks are bringing electronic production techniques to individuals. This course explores the possibilities that these tools afford artists and craftspeople and the ideas that emerge from these semi-automated modes of making. Tuesday workshops introduce techniques through short projects working with light, sound, motion, and physical materials. Thursdays are kept open -- studio time where you can expand on workshop projects, try your own designs, and collaborate with other students -- a crafting group. There are no prerequisites and this course is open to everyone.

Objectives

- hands-on, practical experience working with electrons
- familiarity with various digital fabrication practices
- your own set of wonderfully functional (or functionally wonderful) electronic pieces
- a critical yet generative lens for thinking about digital fabrication tools

Materials & Costs

Students have access to the Wilson Maker Space, home to a variety of tools for working with physical materials and electronics. Some general components and materials will be freely available, but consumable materials for projects—things like wood, batteries, and specialized electronic components—will need to be purchased by students.

Everyone is required to get an Arduino starter kit costing around \$80 that includes a microcontroller and various electronic components. Some projects will have other associated costs, but in general, projects can be done quite cheaply, especially if you give old stuff new life. Expect to spend an additional \$100-200 over the course of the semester.

Assessment

Attendance and participation are important in building a crafting community. You are expected to be present and prepared for every session, however, two unexcused absences are permitted without penalty. **Each unexcused absence over two will result in a lowered letter grade.**

Short process **documentation on your own blog (20 points)**. Video, audio, words, and/or images for each project should be posted weekly. The format of your archive is up to you. Any posting/ blogging platform—Wordpress, basic html page, Tumblr, even YouTube channel—all acceptable. Part of this documentation should be about the process. Take photos, short videos, notes, recordings while you work.

In groups of two or three, you will **lead your own workshop (20 points)**. Design a workshop that will guide us in producing something using well-thought-out steps and a clear set of materials. Meet with me the week before to go through your plans.

There will be x workshop projects over the course of the semester. Successful completion of **each project is worth $40/x$ points. (40 points total)**

The **Final Project (20 points)** must be significant in scope with a clear exploratory trajectory—iterations! You must present your project for the public at the end of the semester and produce a comprehensive process write-up on your blog (around 1000 words + media)

Course Policies

Please speak with me if you have a disability or another condition that might require modification of the course procedures or exercises. For information see the Student Disability Access Center

The shop has potentially dangerous tools—follow directions and ask questions. Wear appropriate clothing: Closed toed shoes (no sandals or heels), tie your hair back, wear safety goggles when operating power tools, and be attentive while in the lab. Even when working safely, accidents happen. Report all injuries to me, no matter how small. Know how to use the first-aid kit and the fire extinguisher in the room.

I am committed to providing a safe and equitable learning environment for all students. In a course like this, it is important that we build a strong and supportive community. Any type of violence (physical or verbal) will not be tolerated.

I expect you to follow the Honor Code. Production courses often call into question traditional notions of fair use, copyright, and plagiarism. If you have questions about a specific project, talk with me during office hours.

I will make every effort to reply to emails within 24 hours. If I don't reply within 24 hours, please email me again.

This is a new course, expect that the syllabus and schedule will change as we move through the semester.

Schedule

01.21 | Introduction & Overview

01.26 | Safety, Electronics, & Soldering

01.28 | Components, Materials, and Techniques

02.02 | Workshop 1: Digital Fabrication

02.04 | Open Studio

02.09 | Workshop 2: Make a Light

02.11 | Open Studio

02.16 | Workshop 3: Synthesizer, part 1

02.18 | Open Studio

02.23 | Workshop 4: Synthesizer, part 2

02.25 | Open Studio

03.01 | Workshop 5: Introduction to Microcontrollers

03.03 | Peter is away

03.08 | Spring Recess

03.10 | Spring Recess

03.15 | Workshop 6: Motors and Movement

03.17 | Open Studio

03.22 | Workshop 7: Controlling Your Computer

03.24 | Open Studio

03.29 | Workshop 8: TBA

03.31 | Open Studio

04.05 | Workshop 9: TBA

04.07 | Open Studio

04.12 | Workshop 10: TBA

04.14 | Open Studio

04.19 | Workshop 11: TBA

04.21 | Open Studio

04.26 | Workshop 12: TBA

04.28 | Open Studio

05.03 | Open Studio

05.?? | Pubic Show & Tell