

Experimental Media

LCC 4730 / LCC 6318 / LCC 8803
Spring 2007

Introductions

Instructor:

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Teaching Assistants:

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Students!

Logistics

Class Meets:

Thursdays 1:30-4:30pm

Skiles 006 unless otherwise announced

Some sessions will be held TSRB and/or COA

Skiles 006 Door Code: 4451

Materials

Required: (From Georgia Tech bookstore)

Igoe & O'Sullivan, *Physical Computing*

Wiring I/O board

Power adapter

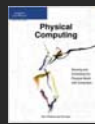
Breadboard

USB cable, type A - type B (retractable!)

Optional:

Horowitz & Hill, *The Art of Electronics*

Mims, *Getting Started in Electronics*



Online Materials

Course webpage:

www.lcc.gatech.edu/~mazalek/courses/spring07/lcc6318/

Username: 6318, Password: student (for protected areas)

Swiki:

thistle.skiles.gatech.edu/xmedia-sp07

Username: xmedia, Password: experimental

Mailing list:

lcc6318-spring07@lists.gatech.edu

Software (to get a head start, try installing these)

Wiring: wiring.org.co/

Processing: www.processing.org/

Broad Course Overview

This is a project based class!

Part 1: (Jan & Feb)

- Intro TUI lecture
- Next week: present a nifty thing!
- Acquire basic skills in electronics and fabrication
- In class exercises and tutorials
- Begin large class project development in teams

Part 2: (Mar & Apr)

- Team work on class project
- Maybe some special tutorials based on need

Expectations

(see syllabus handout)

Tutorials, exercises, class participation, nifty thing	20%
Initial project design and presentation	20%
Midterm prototype demo and presentation	20%
Final installation, presentation and demo day	40%

Project Overview

Goal: develop a large-scale tangible media and real-time performance installation piece based on the theme: "the garden as performance space"

The project/class comprises three factions:

- GA Tech Undergrad & Grad Experimental Media classes
- NYU Grad UI design class

From the GA Tech side, the project comprises the following two parts:

1. Remote-controlled physical performance space (Grads)
2. Remote-controlled real-time video capture of performance (Undergrads)

Project Goals

From the GA Tech side, the project comprises the following two parts:

1. Remote controlled physical performance space (Grads)

Develop a physical/digital performance space that can interact with the audience in real-time and can also be controlled via remote graphical interfaces (designed by NYU students)

2. Remote controlled real-time video capture of performance (Undergrads)

Develop the means to capture a performance unfolding in the garden space in real-time via remote-controlled webcams in the space, and stream the video for display in online communities

Project Timeline

[Jan 9 - Feb 5]	Stage 1 - initial design
[Feb 6/8]	Design presentation
[Feb 9 - Mar 12]	Stage 2 - iterative development
[Mar 13/15]	Prototype demo presentation
[Mar 16 - Apr 23]	Stage 3 - Finalization of piece
[Apr 24/26]	Final presentation
[May 2]	Spring demo day presentation!

Hand-ins

The final installation piece

A choreographed example performance

A project webpage with thorough documentation

- Design sketches, production photos, final photos
- Demo video
- Documentation of physical fabrication, hardware design and software design (including demo instructions)

Team Forming

Please take a moment to complete the skills and background form. We will use this to break the class into working teams covering different aspects of the project:

- Physical fabrication of garden (grad team)
- Hardware in garden (grad team)
- Software and remote communication (grad team)
- Interaction, aesthetic design and website (grad team)
- Video capture: hardware, software, comm (undergrads)

Of course, you will have opportunities to try your hands at all of these in the class tutorials...

Lab Equipment Usage Policies

Electronics workbench: (Skiles 006)

2 soldering stations, 2 multimeters, 2 variable power supplies, 1 oscilloscope, wire cutters, pliers, hot-glue gun, helping-hands, test leads, etc. for use by anyone in this class. I will make a sign-up sheet if necessary.

Parts for use in tutorials:

Sensors, actuators, small parts, etc. Please do not take from lab, we have limited supplies!!

Parts and materials for project development:

You'll need to purchase these! (But you can test with whatever is available in the lab at first)

Good idea to come up with a purchasing strategy for the project: e.g. 1 person from each team handles the purchases, find total for project at end of semester, divide by number of people, even it all out.

<http://www.lcc.gatech.edu/~mazalek/courses/spring07/lcc6318/resources.php>

Schedule

A more detailed look at the coming weeks...

<http://www.lcc.gatech.edu/~mazalek/courses/spring07/lcc6318/schedule.php>

Next Week

Project team forming and initial brainstorming and discussion about the piece.

We'll try to narrow down the project idea next week

But first, to get some inspiration... present a nifty thing!

What to do:

Find a nifty piece of physical computing (e.g. media arts installation, tangible interface, emerging technology) that is in some way relevant to the project theme "the garden as performance space"

Present the nifty piece to the class using visual media such as photos, videos or physical artifacts

To give you some ideas of what kinds of things to look for, let's look at the realm of tangible computing

I'll show some example works that are particularly relevant to the class project near the end...