LMC 6310 Computer as Expressive Media

The Computer Expressive - 92852 - LMC 6310 - B
Fall 2026

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Where? Skiles 346
When? Monday + Wednesday 3:30 – 4:45 + Fr 9:30-12:15 (Corner Lab TSRB 3##)
Biggs office hours: by appointment
Pait office hours: Lab or by request

Course Overview:

This course asks: How can we express ourselves through computers? In this class, students will gain a general familiarity with different modalities that computers are used to make meaning and be expressive and how we can approach critical making.

The goal of this course is to give an overview of the lineage of computing as expressive, as well as build skills and proclivities for constructing one's own computationally driven expressions.

Students will read and present on selected foundational texts for specific themes we will discuss, collect and present examples to enrich discussion, engage in critical reflections, and experiment with their own responses to them through the assignments.

No coding or hardware experience is required to take the course, but you will be introduced to digital fabrication, P5.js, and Arduino. We will have basic Arduino sets for you, but in the end, you mya need to purchase some sensors that we don't have available.

There is no single textbook, and all readings will be online. We will use online tools to support collaboration as effectively as possible as this is a course that builds on active discussion and critical reflection.

The theme of the course will be 'ecological thinking' and will cover thinking beyond human centered design, technological mediation, personal/environmental data, and embodied interaction to name a few things.

Important Links

SCHEDULE
Reading Presentation Sign Up
Teams

Goals

The projected learning outcomes of this course are:

- (Subject Matter Competency) Introduction to various modalities of expressive computing through seminal readings and exemplars.
- (Critical and Generative Thinking) Demonstrate comprehension, application, and justifications of theoretical knowledge when creating digital media artifacts.
- (Skills) Craft aesthetic and expressive artifacts demonstrating technical skills that will translate to future work and research.
- (Personal Research Trajectory) Students begin to establish their own research and theory interests and critical making practices.

Course Materials

- Arduino stuff – you might want to get some additional Arduino stuff at some point in time. We will have some loaners to learn with.
- No Textbook, all readings will be online.

Labs and Technology

Friday sessions are lab sessions hosted by TA Supratim Pait. They will provide introductions to the main technologies used in this course: digital fabrication, P5.js, and Arduino. Students will be expected to install the necessary software and purchase the necessary hardware.

We will use a blog to support discussion and create an evolving debate on our topics. While this blog is only within the Tech firewall, it is possible that future students and other people can see these posts. Please be aware of that.
Feel free to post anonymously, use pseudonyms, or – if you want to stay within Canvas: post on the Discussion board there. This will not affect any grade. We want to protect your privacy while we also try to make your work as accessible to fellow students as reasonable.

Likewise, please let the instructors know if you would prefer your contributions and projects to be excluded from future references (e.g. as examples for students in future classes or as examples in scholarly events such as workshops or talks).

Main modes of learning in the class are reading and discussing theory, making projects, giving and receiving critique, and writing reflections on the making process.

Grading

Grade breakdown:
100-90% = A
89-80% = B
79-70% = C
69- = D

Main Assignments (150 MS / 170 PhD points total)

Reading Responses (5 x 5 points = 25)

- Respond to reading – summary, opinion, example on canvas discussion.

Discussion leadership / reading presentation in a group (25 pts)

Projects

- **P1 (15 points): Make a postcard that tells a story visually and narratively.**
- **P1 (25 points) : Story of a Landscape: Interactive Environment (p5.js)**
    - Construct relationships between elements of the environment that tell a story of life there.
    - Goals: craft an interactive digital narrative and explore visual, procedural, speculative, narrative forms of expressive computation.

  P2 (25 points) : Environmental Data: Fabrication of Personal/Environmental Data
    - Data physicalization (digital fabrication) making a set of data physical using some fabrication techniques
    - Goals: Think about the materiality and medium of data. Get comfortable with maker space.
- **P3 (35 points): Permeable: Embodied, Tangible, and Entangled (arduino +)**
    - Construct a speculative design, expressive design, or fabulation that highlights an entanglement between the environment and the body.
    - Goals: Use Arduino, explore technological mediation of critical relations between body and environment.
    - **For PhD students:** Write a 5-6k scholarly reflection on final project (+20 points)

For each project, there will be small milestones and final reflections.

Final Reflections:

1. Write a short 500-word blog post reflecting on
    a. Concept: relationship between concepts in the micro-project
    b. Process
    c. Stumbling blocks
    d. Break throughs
    e. What you learned
2. Give a short, 5 minute presentation of the blog post.

Grading of individual pieces will be in percentage
Late submissions lead to automatic reductions of the grade unless a valid excuse is provided. Any 1 day delay, meaning anything after 5pm of the due day, will have 10% reduced from the grade; any 2 day delay will have 20% reduced, 3 day delays will not be accepted.

The Honor Code of Georgia Tech applies (see http://www.honor.gatech.edu/).

Attendance Policy

I will not track attendance, but a great deal of the class is graded through presenting and sharing work. If you cannot be present to present and share your work, please email me in advance and we can work out alternatives. If you miss class without an explanation and can't present your work, your assignment will be counted late.

PLEASE DON'T COME TO CLASS SICK. I will make sure that you are not penalized for missing class and for being sick. Other acceptable reasons for missing class are educational or professional conflicts, family emergencies, health issues. Etc. Discuss with me ahead of time and we will find a way. But please don't abuse this policy.

Accommodations

Please refer to the Office of Disability Services for information on how to request accommodations. The instructor and TA are committed to working with you to accommodate your needs. Communicating with us about your needs will assist us in best accommodating your needs.

Technology use

Bring a computer to class every day. No use of cell phones (including texting) in class.

Inclusivity Statement

The Ivan Allen College of Liberal Arts is committed to creating a campus free of discrimination on the basis of race, color, religion, sex, national origin, age, disability, sexual orientation, gender identity, or veteran status. We further affirm the importance of cultivating an intellectual climate that allows us to better understand the similarities and differences of those in our community, as well as the necessity of working against inequalities that may also manifest here as they do in the broader society.

Workload

Students are expected to work not only in class but also outside of class sessions on assignments and projects. For every one hour of class time, expect 3 hours of out of class time. If you are experiencing more than this, feel free to discuss with Dr. Biggs and we can craft some strategies for work life balance.

Mental Health

Your mental and physical health are more important than this class, and there are SO MANY ways to work towards taking care of yourself and not disregarding your education. If you are experiencing anxiety or depression or a medical, personal, or family crisis, or if you just feel overwhelmed, please do not hesitate to reach out for help. Everybody needs help sometimes, and grad school can be a personally challenging time. You are not alone, and many of us are available to be sympathetic listeners and to share our own strategies for coping with stressful situations. In addition, professional counselors and medical practitioners have expertise that can be very helpful.

If you are struggling with any level of mental health issues, there are resources available on campus. Between 9 a.m. and 5 p.m. you can walk into Smithgate Hall 238, or there are services available by phone 24/7 if you call 404-894-2575. More information is at: https://mentalhealth.gatech.edu/

Student Resources

The Dean of Students has a list of services (see https://studentlife.gatech.edu/content/get-help-now Links to an external site.).

Additional Resources

If you are the victim of sexual misconduct or harassment, resources are listed at: https://diversity.gatech.edu/equitycompliance/reporting-options/i-want-report-incident)
VOICE Advocates also serve as confidential resources for victim-survivors (speaking to them does not trigger an official reporting process): https://wellnesscenter.gatech.edu/voice