LMC 6310 Syllabus

Computer as Expressive Media, HCI + HCI1, 3 credit hours

Fall term 2026

Instructor Information

Instructor: Michael Nitsche

Email: michael.nitsche@gatech.edu

General Course Information

Description

This course asks: How can we express ourselves through computers? To explore this challenge, it invites students to approach computers and digital media as creative environments that offer their own opportunities and limitations. We will tackle the kind of computational creativity they allow. The focus is on a media-driven exploration and experimentation. This requires us to gain basic computational literacy and more importantly a critical perspective to digital practices. The course provides a critical making approach to digital media studies and should speak specifically to HCI students interested in media design.

This version of the course follows a media-centric approach. We will cover narrative, procedural, and performative media in multiple steps: First, we get an introduction to these media's specific elements. Then, we will question them and discuss how computation affects and challenges these qualities. We will conduct hands-on projects for each of these three domains, which will consist of various prototypes implemented for each stage of the course. The projects will inherently include forms of interaction design but the focus will remain on the media qualities and their adaptation.

Students will read selected foundational texts for specific media formats, present examples, engage in critical reflections, discuss the challenges at hand, 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 technologies like P5.js, Touchdesigner, and Arduino. Projects will require some purchases.

Course Learning Outcomes

The projected learning outcomes of this course are:

- Gain familiarity with seminal readings and works in the fields of interactive narrative, generative art/coding, and interaction design.
- Demonstrate comprehension, application, and justifications of theoretical knowledge when creating digital media artifacts.

- Demonstrate the ability to design, create, and assess digital media artifacts and contextualize them within theoretical frameworks, combining humanities and computation to "make with meaning."

Required Course Materials

There is no single textbook/ all readings are online. One book worth exploring might be:

- Bogers, Loes, and Letizia Chiappini, eds. 2019. *The Critical Makers Reader. (Un)Learning Technology*. Amsterdam, NL: Institute of Network Cultures. (available online)

Grading Policy:

Grading of individual pieces will be in percentage and then converted to points.

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

Grade breakdown:

100-90% = A

89-80% = B

79-70% = C

69- = D

Assignments

	Percentage/ points
Participation	20%
Example Presentation	15%
Narrative Media Project	15%
Visual Media Project	15%
Performative project	35%

Description of Graded Components

Critical analysis: Example presentation: (15 points) students will present a sample project from the field; the goal is to present a particular digital media piece that lives in one of the three core domains we cover in the class; apply at least 2 critical texts from the class or beyond to the analysis; clarify the background, the design, the impact and experience interacting with it (if possible: demo key moments or use video), the technology, and importantly: bring up critical

questions for the class to discuss to stimulate and guide a discussion; share your thoughts with the whole class in a ppt presentation

Delivery format: presentations will be in class; each group member should present a part; length: ~ 15 min + q&a

You hand in: in-class presentation + upload the ppt on Canvas

Making: Narrative Media: (15 points) each student will develop individually a PS5.js project; inspiration: pick an existing short (!) text like a short story, a poem, a song or the beginning of a longer piece; think about what narrative intervention or change could happen to that text (e.g. what would happen to this text if the antagonist would narrate it? What would happen if this text would be told 100 years earlier or later? What would happen if the location changes? The time? The roles? The language? The genre?); based on this intervention you will develop your own interactive intervention onto the text; use only text-based means; explore the technology (P5) and experiment with its effects on the piece; the goal is to show critical engagement through prototyping; provide a blog post that describes your idea, its development, and the final result

Delivery format: presentation in class; blog post; code

You hand in: project/ code on Canvas

Making: Visual Media: (15 points) each student will develop individually a P5.js or Touchdesign project; inspiration: make an interactive poster (technically: an program running on a computer that looks like a poster); the interactive access and procedural operation should reflect the logic of what the poster is about; Is this a poster that tries to sell something – then how could the interaction support that more? Is it a poster for a musical event – what kind of interaction would allow for that specific to come forth? Is the poster political, an announcement, a threat …? The computational operation should relate to the rhetoric of the source; the goal is to show critical engagement through prototyping; provide a blog post that describes your idea, its development, and the final result

Delivery format: presentation in class; blog post; code

You hand in: project/ code on Canvas

Making: Performative Media: (35 points) individual students will develop an Arduino project (that can also integrate the other technologies explored in the class); theme: create "objects of tomorrow"; that entails: 1) identify a key problem that needs to be resolved in the future; 2) design a speculative object that highlights an expressive and dramatic response to that problem; 3) implement and 4) perform the object; the technical focus here is on building on embodied interaction in relation to the physical and digital parts; how does your design combine physical and digital media to turn the object into a performative and expressive one? How does this expression emphasize the solution it deals with? Does it engage us as participating audiences? You can combine different technologies here if it is feasible but they should include an Arduino; the thematic focus is on a dramatized "futuring"; What is a challenging problem that needs to be

addressed in the future? How the response/ complication look? How to make it most performative and dramatic?

provide a substantial blog post that describes your idea, its development, and the final result; you also should create a short video that describes you project and the results as well as 10 or more images of process and 10 images or more of the result

Delivery format: presentation in class; blog post; code

You hand in: project/ code/ images/ video on Canvas

Participation: (20 points) regular attendance (see also attendance policy) and punctuality; (note that attendance is crucial but does not equal participation); participation in class; contributions to discussions; engaging the opening discussions of theory sessions; teamwork! Help your fellow students, come up with suggestions in the design discussions, assist whenever somebody is stuck; one measure of attendance will be your contributions to direct questions (often posed at the beginning of the sessions)

Delivery format: participation in class; participation in online discussion, response to prompts

you hand in: nothing to hand in; participation will be assessed over time

Course Policies

Attendance and/or Participation

Class attendance is required. If a student needs to miss a class due to an approved absence (see https://catalog.gatech.edu/rules/4/), contact the instructor 24 hours in advance. If Institute Approved Absences collide with class times please contact the instructor in advance to make sure the workload can be distributed. If a student has four excused absences, they need to meet with the instructor to assess whether completion of the course is still possible.

Depending on the impact, each unexcused absence will affect your end of semester final grade. Four unexcused absences (or more) lead to a fail for the class. Any exam or class presentation missed due to an unexcused absence will be recorded as a zero.

Attendance performance will impact the participation grade.

Academic Integrity

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. Review Georgia Tech's Honor Code and the student Code of Conduct.

Any student suspected of cheating or plagiarism on a quiz, exam, or assignment will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.

Accommodations for Students with Disabilities

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services (404-894-2563) as soon as possible to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs.

Student-Faculty Expectations Agreement

In this class, we strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and students. A basic breakdown of these expectations is here: The Student-Faculty Expectations.

Pre- &/or Co-Requisites

none

Collaboration, Group Work, and Use of Generative AI

Individual assignment need to be developed and presented by each individual students. Group assignments will require collaboration and teamwork.

The use of AI for background research is allowed but students must be able to understand, critically interrogate, and explain any material. AI is not permitted in the generation of any final deliverable (text, presentation, media, code) unless specifically allowed by the instructor.

Extensions, Late Assignments, & Re-Scheduled/Missed Exams

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.

Extensions and make-up assignments are given for illness, approved Institute activities or religious observances (see https://catalog.gatech.edu/rules/4/).

Student Use of Mobile Devices in the Classroom

No use of cell phones (including texting) or headphones in class unless it is for coursework or approved by the instructor.

Additional Course Policies

Students should not record class sessions unless permitted by the instructor.

Resources for Students

Student Well-Being:

Your health is more important than this class. Sometimes it is difficult for the instructor to have enough personal contact to see how you are. But you should know that your health and wellbeing are much more important than any grade or coursework. Let us help if any situation develops – the earlier the better. Again, please inform the instructor of any issues or challenges and do not hesitate to reach out.

Coursework can be demanding and everybody can encounter challenges sometimes. There are many reasons, such as an illness or a family emergencies, that might affect focus and studying conditions. If this happens to you, come and see the instructor about it as soon as possible to make alternative arrangements for work that has been missed, and continue coming to class.

If you encounter more pressing difficulties, anxieties, or mental health challenges, then please let the instructor know but also turn to the support we have in place at the Institute. This includes the Counseling Center (https://counseling.gatech.edu/).

A comprehensive list of wellness related resources has been compiled and maintained by the Office of the Vice President for Student Engagement and Well-being (student-resource-guide (gatech.edu)

Additional Syllabus Components

Please be aware that your work might be accessible to others in future classes or in other academic presentations. This regards your code, presentations in class, as well as the videos and other deliverables. Unless you explicitly state that you do not want your work shared, it is implied that you give permission for sharing work with others in the class, with future students, and possibly wider general audiences. If you are not comfortable with this, please let the instructor know. Unless you inform the instructor in writing (email) that you do not want your work shared with others in the context of current and future versions of this course, it is assumed that it is available.