Interactive Installation Studio

Course #: LMC 8803 BM
Instructor: Brian Magerko
Office: TSRB 319
Email: magerko@gatech.edu
Office hours: by appointment

Class meetings: T/TH: 1:30–2:45PM Skiles 002

This syllabus is a living document subject to change during the term.

This course is a studio-based learning experience in computational expression, in conjunction with the ADAM Lab, under Dr. Brian Magerko. This semester will focus on familiarization with new computational tools, rapid prototyping of expressive computational media, and design research. Future terms will heavily focus on building complete prototypes. Higher quality outputs from this course have the potential to go on to public display in local and international outlets.

M.S. Learning Objectives

- Demonstrate the ability to analyze and critically evaluate existing digital media artifacts, services, and environments using formal knowledge, and to explain and defend one’s critical evaluation.
- Demonstrate the ability to devise, design, create, and assess prototypical digital media artifacts, services, or environments and to contextualize them within recognized traditions of practice.
- Demonstrate use of digital media to create prototypes
- Demonstrate good time management skills
- Develop interactive media artifacts
- Can justify the design choices in their works
- Can formulate and test design hypotheses
- Can communicate, coordinate, and work productively as a team member
- Can serve in a team leadership and / or mentorship role

Ph.D. Learning Objectives

- Students can identify and analyze a domain within the field digital media and identify areas for original contribution as well as methods to pursue these contributions.
• Apply theoretical concepts to specific digital media works
• Students can formulate and explore the answers to critical questions in the domains of Arts & Entertainment, Public & Civic Media, and Knowledge & Creativity as related to new media
• Summarize and paraphrase key theoretical works
• Can serve in a team leadership and / or mentorship role

Attendance & Participation

Class attendance and participation is mandatory. Participation in class discussion is imperative because it allows you to explore the readings, computing concepts, and projects collaboratively, and in the process, discover meanings and issues that you probably would not discover on your own. Participation in class also challenges you to continuously question, refine, and articulate your own ideas and interpretations.

In addition, much of this class is based in critique, which require full participation and cannot be replicated outside of class. Extensive teaching and learning occur through critiques: it is through critiques that you will develop your skills for both making and discussion of the made. Thus, your attendance and participation in critiques is an important and required aspect of this class.

Document your work. If there is a question about your effort in team work, I may ask all members to present their documented contributions to reflect their continued involvement in the work as a responsible team member. This can mean git commits with your username, written notes of yours from meetings or design sessions, etc. This is as much about learning the habits of documentation as it is to make your efforts clearly communicable.

Grading

Grade distribution will be: course discussion & participation (25%, pass/fail), prototype participation (25%, pass/fail) & final design project (50%, letter grade). If you complete all of the requirements for the above reasonably well, you should expect to earn a B. In order to earn an A, you must complete and go “above and beyond” all of the requirements and your work / efforts / contributions must be exceptional.

Absence from more than three classes will result in the loss of 1-letter grade for the course. Tardiness for more than four classes will result in the loss of 1-letter grade for the course.

Information for Students with Disabilities

Please notify the instructor if you have any disabilities with which you need special assistance or consideration. The campus disability assistance program can be contacted through ADAPTS:
Course Communication
Slack will be used as the primary form of communication for collaboration during the course. Please download the Slack app for your computer and phone, register your email account, and join the ADAM lab slack (www.adamlab.slack.com). Once you've joined the ADAM lab slack account, please monitor and join the #adamlab_studio and #general channels.

Honor Code Statement
Students are expected to adhere to the Georgia Tech Honor Code: http://honor.gatech.edu.

Assignments
The course is centered around the progress construction of knowledge through our interactions in the classroom and outside project work. The final project for this term will be a presentation of a design, initial prototype, and documentation of the creation process for the team.

Course Schedule
The course schedule is below. The course topics and papers will be heavily determined by student participation and interest. We will discuss and decide on topics of interest early on in the term. Students will take sign up for turns ushering papers and leading discussion during class.

Note: Plan on being at the finals presentation; absence because of travel will not be permitted.

<table>
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<tr>
<th>Date</th>
<th>Class activity</th>
<th>Reading topic</th>
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<th>Papers</th>
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<td>1/9</td>
<td>Introduction and errata</td>
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<tr>
<td>1/11</td>
<td>Reading discussion; paper signups</td>
<td>Digital media</td>
<td>Magerko</td>
<td>Manovich: New Media from HTML to Borges; Murray: Inventing the Medium; Investigating Design and Evaluation Guidelines for Interactive Presentation of Visual Art</td>
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<td>1/23</td>
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<td>A Concise Taxonomy for Describing Data as an Art Material</td>
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<td>Project brainstorming &amp;</td>
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<td>1/30</td>
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<td>Conclusion presentations during final</td>
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Topics:

- **Data & the senses**
  - 1) Viz vs. art (Henry, Catherine)
  - Multi-sensory experience (Bruno, Sanjana)
    - Accessibility?
    - Non-sound / image?
- **Evaluation**
- **Installation case studies**
- **Critical design theory (Kamryn)**
- **Designing for publics**
- **Atmospherics & engagement**
  - Honeypot model
  - Business / ad world view
  - 9/11 memorial
- **Interaction design**
  - Breadth & depth?
  - Wittingness (awareness of being in the performance frame)
  - Agency & perceived agency
  - Authenticity
  - Aesthetics & interaction
  - (Edmonds & Candy)

**Lagniappe**

You are required to get IRB training. It is a simple online process that takes about an hour to complete. Go here ([http://researchintegrity.gatech.edu/about-irb/irb-required-training/](http://researchintegrity.gatech.edu/about-irb/irb-required-training/)) for the training and test site.

ADAM Lab door access (TSRB 325) is for lab and studio members only. Please coordinate with Mr. Terrell for door access.

Please do not remove any equipment from the lab without permission & signing it out. There is a [signup document](http://pop3.infomus.org/pub/AestheticsPapers/Creativity-Sawyer2009.pdf) for games, books, etc. Some equipment can be purchased in support of your projects; speak to Dr. Magerko about what is needed. The DILAC Lab is the official first place to check for equipment to be trained on, check out, etc., on the third floor of Skiles.

**Reading Resources**

- **Collaboration**
    - Note: How to cross disciplines in creative collaboration
- **Designing for Creative Collaboration**
  - https://www.researchgate.net/profile/Thomas_Herrmann4/publication/224373001_Design_Heuristics_for_Computer_Supported_Collaborative_Creativity/links/00b7d5fa9b1b5e4c0000000.pdf
  - Note: Helping to think about how to facilitate a collaboration and intentionally design human interactions and processes for facilitating quality collaboration (i.e. applying computational design principles to people processes)

- Technology Principles for Creative Interactions
  - https://scholar.google.com/scholar?hl=en&q=co-creative+agents+enactive+model&btnG=&as_sdt=1%2C11&as_sdtp=

- Practice-Based Research Strategies

- History of Interactive Art

- New Media Technology Research Examples
  - http://dl.acm.org/citation.cfm?id=2767691


Interactive Artists & Materials

- So you want to build a generator...Kate Compton (casual creators) tutorial
- [Imogen Heap](http://galaxykate0.tumblr.com/post/139774965871/so-you-want-to-build-a-generator)
  - Video:
    - 4 min description on vimeo: [https://vimeo.com/90252137](https://vimeo.com/90252137)
    - 20 min wired performance [https://www.youtube.com/watch?v=6btFObRRD9k](https://www.youtube.com/watch?v=6btFObRRD9k)
- [Laurie Anderson](http://channel.louisiana.dk/video/laurie-anderson-advice-young)
  - Video
    - 5 min Interview: Advice to young artists [http://channel.louisiana.dk/video/laurie-anderson-advice-young](http://channel.louisiana.dk/video/laurie-anderson-advice-young)
    - 25 min Interview: A Life of Storytelling [http://channel.louisiana.dk/video/laurie-anderson-advice-young](http://channel.louisiana.dk/video/laurie-anderson-advice-young)
  - Everything is a remix
    - 35 min video [https://www.patreon.com/kirbyferguson](https://www.patreon.com/kirbyferguson)
- [Cubist Mirror](http://thecreatorsproject.vice.com/blog/cubist-neural-network-mirror)
- Augmented reality sandbox with realtime water flow simulation
  - [https://www.youtube.com/watch?v=j9IXTj0mzE](https://www.youtube.com/watch?v=j9IXTj0mzE)
- Information is beautiful
  - [http://www.informationisbeautiful.net/](http://www.informationisbeautiful.net/)
- Creative Applications.NET
  - [http://www.creativeapplications.net/](http://www.creativeapplications.net/)
- A study of Generative Algorithms
  - [http://inconvergent.net/](http://inconvergent.net/)
- Context free art - procedurally generated art examples & downloadable kit to create your own
  - [http://www.contextfreeart.org/](http://www.contextfreeart.org/)

**Artistic Tech Examples:**
- Terrifying animatronic doll stares at you as it gyrates
- SandyStation the interactive sandbox
  - [https://www.youtube.com/watch?v=E9aL3HjZbcw](https://www.youtube.com/watch?v=E9aL3HjZbcw)
- New Media art and dance
- AquaTop - An Interactive Water Surface
  - [http://sngymn.github.io/aquatopdisplay/](http://sngymn.github.io/aquatopdisplay/)
- Pyro Board: 2D Rubens Tube
  - [https://www.youtube.com/watch?v=2awbKQ2DLRE](https://www.youtube.com/watch?v=2awbKQ2DLRE)
- The crystal universe actually exists, LED responding to movement
Visualizing smog - Clothing that visualizes smog

100 Dancing drones set world record

3D printed light based zozetrope

First virtual reality exhibit with tilt brush

Virtual reality expo
- [http://www.virtualrealityla.com/](http://www.virtualrealityla.com/)

### Interesting Art Exhibitions
- Creative traditional art
- Best of 2015 Top 10 works of internet art
- Art goes interactive: 14 stunning digital exhibitions

### New Media Companies
- Second Story
- Meow Wolf - Immersive art experiences production company
  - [https://meowwolf.com/](https://meowwolf.com/)

### Interactive Sonification:
- [The Allosphere](http://www.secondstory.com/projects/browse/featured-work)

### Topic paper suggestions from class:
- the place of brand
• creating empathy
• point-of-use behavior change
• social impact / critical design
• everything analog
• ambient technologies
• digital objects
• analog interactive exhibits (Exploratorium; Launchpad in London)