FALL 2016

LMC 6399: Discovery and Invention in Digital Media

Office: TSRB 316A
Office Hours: Friday 9:00AM–11:00AM and by appointment.
Email: ledantec@gatech.edu

Class Meetings: Tuesday/Thursday, 9:35–10:55AM
Class Location: Skiles 002
Lab Meeting: Friday 11:00AM–12:00PM
Lab Location: Skiles 346

TA: Mariam Mariam Naziripour
TA Email: mjn3732@gmail.com

COURSE DESCRIPTION

The purpose of this course is to introduce you to a suite of design research methods that can be used to discover opportunities for inventive new computational products and services. It complements the design and production skills developed in LMC 6310 and LMC 6313 with applied research skills.

The course is comprised of readings and projects. The readings provide the theoretical background to the design methods that you will explore through the projects.

LEARNING OBJECTIVES

M.S. Objectives

- Devise, design, create, and assess prototypical digital media artifacts, services, or environments and to contextualize them in recognized traditions of practice.
- Explain, give examples of, and defend one’s use of formal digital media design terminology
- Compare, critique, and appraise digital media artifacts, services, and environments using formal terminology
- Summarize your work orally and in written form using formal terminology
- Justify the design choices in your works

Ph.D. Objectives

- Identify and analyze a domain within the field and identify areas for original contribution as well as methods to pursue these contributions
- Explain, give examples of, and defend one’s use of formal digital media design terminology
- Identify and define a suitable research problem in digital media design and apply appropriate disciplinary or interdisciplinary research methods to address it.
- Demonstrate ability to conduct original research in support of designing new genres and forms of digital media

In addition, both MS and PhD students should have three portfolio worthy projects that demonstrate your skills in design research methods for innovation in digital media.

PARTICIPATION & ATTENDANCE

Class attendance and participation is mandatory. Participation in class discussion is imperative because it allows you to explore the readings and themes 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 discussion of the readings and constructive critique of the design assignments and class projects, all of which require full participation and cannot be replicated outside of class. Part of your participation grade will be determined by your application of insights and references from assigned readings to class project critiques.

**GRADING**

If you complete all of the requirements for the assignment 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 must be exceptional across multiple grading factors.

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.

**HONOR CODE STATEMENT**

Students are expected to adhere to the [Georgia Tech Honor Code](https://ledantec.net/teaching/lmc-6399-fall-2016/).  

**ASSIGNMENTS**

The course grade will comprise the following assignments, equally weighted:

- Project 1
- Project 2
- Project 3
- Written Responses
- Research proposal (PhD)

To be extra clear, MS students will have four deliverables, each contributing 25% to the overall grade; PhD students will have 5 deliverables, each contributing 20% to the overall grade.

**COURSE SCHEDULE**

What follows is an outline for the course. As the course progresses, we may adjust dates and materials; however, unless specifically stated in class, you should assume this schedule is current and accurate.

<table>
<thead>
<tr>
<th>Week</th>
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| Week 1 | August 23 | First day of class.  
Administrivia  
Structure, Content, and purpose of the course. |
| | August 25 | Design Research, part 1  
"Rhetoric, Humanism, and Design", Buchanan  
"The Interaction Design Research Triangle of Design Practice, Design Studies, and Design Exploration", Fallman  
"Science and Design: The Implications of Different Forms of Accountability", Gaver |
| | August 30 | Project 1: Hacking, Tinkering, and Opportunistic Design  
Assignment: Construct, deploy, document, and assess the use of a D.I.Y. media system  
PhD Students: Select a domain and develop 1-3 research questions. |
| Week 2 | | Design Research, part 2  
"What is a Research Question", Davis  
"Navigating the Method Mire", Matthews and Brereton |
*Four Cultures of Analysis in Design Research*, Koskinen  
*Prototypes and Prototyping in Design Research*, Wenseveen and Matthews

| Week 3 | September 1 | **Hacking and Tinkering As Method, part 1**  
|        |             | "Epistemological Pluralism: Styles and Voices within the Computer Culture", Turkle and Papert  
|        |             | "At the Seams: DIYbio and Opportunities for HCI", Kuznetsov et al.  
|        |             | "Confronting the Challenges of Participatory Culture", Jenkins

| Week 3 | September 6 | **Hacking and Tinkering As Method, part 2**  
|        |             | "Hacktivism as Design Research Method", Busch  
|        |             | "Hacking, Mashing, Gluing: Understanding Opportunistic Design", Hartmann, Doorley, and Klemm

| Week 4 | September 8 | Studio Day

| Week 4 | September 13 | Project 1, interim presentations

| Week 5 | September 15 | **Annotated Portfolios and Design Notebooks**  
|        |             | "Annotated Portfolios", Gaver and Bowers  
|        |             | "The logic of Annotated Portfolios: Communicating the value of 'research through design', Bower  
|        |             | "Making Spaces: How design notebooks work", Gaver

| Week 5 | September 20 | Portfolio Review

| Week 5 | September 22 | Studio Day

| Week 6 | September 27 | Project 1 Final Presentations

| Week 6 | September 29 | Project 1 Final Presentations

| Week 7 | October 4 | **Design Fiction As Method**  
|        |             | "Design Fiction", Bleecker  
|        |             | "Design Fiction", Stirling  
|        |             | "The Rhetoric of the Image", Barthes  
|        |             | "Speculative Design: Crafting the Speculation", Auger

**PROJECT 2: DESIGN FICTION**  
Assignment: Create a video prototype for a speculative product or service.  
PhD Students: Refine research questions and develop related work.
October 6  
**Design Criticism As Method**

"What is ‘Critical’ about Critical Design?" Bardzell and Bardzell  
"Expanding and Refining Design and Criticality in HCI", Pierce et al  
"Criticism and Function in Critical Design Practice", Malpass

October 11  
**Fall break, no class.**

October 13  
Project 2 interim critique: storyboards

October 18  
Travel: Studio Day

October 20  
Travel: Studio Day

October 25  
**Ethnography and Design**

Writing Ethnographic Fieldnotes, Ch 1, 3, 6  
**PROJECT 3: REFLECTIVE DESIGN**

Assignment: Identify a social practice and propose designs / design guidelines in support of that social practice.

PhD Students: Develop research plan, linking question and method and expected outcomes.

October 27  
Studio Day

November 1  
Project 2 final presentations

November 3  
Project 2 final presentations

November 8  
**Reflective Design as Design Research Method, part 1**

"Strong Concepts", Höök and Löwgren  
"Abductive Thinking and Sensemaking: The Drivers of Design Synthesis", Kolko  
"Investigating the Presence, Form and Behavior of Virtual Possessions in the Context of a Teen Bedroom", Odom et al.  
"Lost in Translation: Understanding the Possession of Digital Things in the Cloud" Odom et al.

November 10  
**Design, Collectives and Assemblages**

"Understanding Design as a Social Creative Process", Warr and O’Neill  
"Design Culture and Dialogic Design", Manzini  
"Decentering the Human in the Design of Collaborative Cities", Forlano

November 15  
Project 3 interim presentations

November 17  
Project 3 interim presentations
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<td>November 24</td>
<td>Thanksgiving Break. No class.</td>
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<td>December 1</td>
<td>Final presentations.</td>
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<td>December 6</td>
<td>Final presentations. Last day of classes.</td>
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<td>Traveling 12/7-15</td>
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<td>December 15</td>
<td>Finals Week. No class</td>
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**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**.