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

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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 LM 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 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 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 pr
all of which require full participation and cannot be replicated outside of class. Part of your participation grade will be determined by y
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
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 r
in the loss of 1-letter grade for the course.

HONOR CODE STATEMENT

Students are expected to adhere to the **Georgia Tech Honor Code**.

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 s
in class, you should assume this schedule is current and accurate.

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
		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	August 30	**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

	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 Opportunites 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 "Grassroots Mapping: Creating a participatory map-making process centered on discourse" by Public Laboratory for Open Technology and Science, Dosemagen, Warren, and Wylie, http://www.joaap.org/issue8/GrassrootsMapping.htm "Hacking, Mashing, Gluing: Understanding Opportunistic Design", Hartmann, Doorley, and Klemm
	September 8	Studio Day
Week 4	September 13	Project 1, interim presentations
	September 15	**Annotated Portfolios and Design Notebooks** "Annotated Portfolios", Gaver and Bowers "The logic of Annotated Portfolios: Communicating the value of 'research through design", Bowers "Making Spaces: How design notebooks work", Gaver
Week 5	September 20	Portfolio Review
	September 22	Studio Day
Week 6	September 27	Project 1 Final Presentations
	September 29	Project 1 Final Presentations
Week 7	October 4	**Design Fiction As Method** "Design Fiction", Bleeker "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
Week 8	October 11	**Fall break, no class.**
	October 13	Project 2 interim critique: storyboards
Week 9	October 18	Travel: Studio Day
	October 20	Travel: Studio Day
Week 10	October 25	**Ethnography and Design**
		Writing Ethnographic Fieldnotes, Ch 1, 3, 6
		PROJECT 3: REFLECTIVE DESIGN Assignment: Identify and a social practice and propose designs / design guidelines in support of social practice.
		PhD Students: Develop research plan, linking question and method and expected outcomes.
	October 27	Studio Day
Week 11	November 1	Project 2 final presentations
	November 3	Project 2 final presentations
Week 12	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
Week 13	November 15	Project 3 interim presentations
	November 17	Project 3 interim presentations

Week 14	November 22	Studio day
	November 24	Thanksgiving Break. No class.
Week 15	November 29	Studio day.
	December 1	Final presentations.
Week 16	December 6	Final presentations. Last day of classes. Traveling 12/7-15
Week 17	December 15	Finals Week. No class

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**.