

LMC 6399: DISCOVERY AND INVENTION IN DIGITAL MEDIA

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Class Meetings: Mondays and Wednesdays, 10:05 – 11:55 am, Skiles 002
Fridays, 110:05 – 11:55 DM Lab, Skiles
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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 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.

MS Learning Objectives

Devise, design, create, and assess prototypical digital media artifacts, services, or environments and to contextualize them within 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

PhD Learning 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.

Attendance & Participation

Class attendance and participation is mandatory. Participation in class discussion is imperative because it allows you to explore the readings, projects, 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 critiques, 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. 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.

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: <http://www.adapts.gatech.edu>

Honor Code Statement

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

Assignments and Their Value

Project 1:	100 points
Project 2:	100 points
Project 3:	100 points
Reading Critiques	100 points
Research paper (PhD)	100 points

COURSE OUTLINE

January 6 Introduction to the Course

Structure, content, and purpose of the course, general assignments, etc.

January 8 What is Design Research?

“Rhetoric, Humanism, and Design”, Buchanan

“The Interaction Design Research Triangle of Design Practice, Design Studies, and Design Exploration”, Fallman

“What Can We Expect from Design Research?”, Gaver

DESIGN RESEARCH METHOD 1: HACKING, TINKERING, AND OPPORTUNISTIC DESIGN

Assignment: Construct, deploy, document, and assess the use of a D.I.Y. media system

January 13 Hacking and Tinkering As Method, part 1

“Epistemological Pluralism: Styles and Voices within the Computer Culture”, Turkle and Papert

“Critical Making: Conceptual and Material Studies in Technology and Social Life”, Ratto

“Confronting the Challenges of Participatory Culture”, Jenkins (optional)

January 15 Hacking and Tinkering As Method, part 2

“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 Klemmer

January 20 No Class – Georgia Tech Holiday

January 22 TBD

January 27 Interim Project Presentations

January 29 Interim Project Presentations

February 3 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

February 5 TBD

February 10 No Class for MS Students – Interactivity

Design Research discussion for PhD students (time and location tbd)

February 12 Final Project Presentations

February 17 Final Project Presentations

February 19 TBD

DESIGN RESEARCH METHOD 2: DESIGN FICTION

Assignment: Design and document a prototype interface for a speculative product or service.

February 24 Design Fiction As Method, part 1

“Design Fiction”, Bleeker

“Design Fiction”, Stirling

“Speculative Design: Crafting the Speculation”, Auger

February 26 Design Fiction As Method, part 2

“The Rhetoric of the Image”, Barthes

“The Future is Now: Diegetic Prototypes & the Role of Popular Films in Generating Real-World Technological Development”, Kirby

March 3 Interim Project Presentations

March 5 Interim Project Presentations

March 10 Final Project Presentations

March 12 Final Project Presentations

March 17 **No Class – Georgia Tech Spring Break**

March 19 **No Class – Georgia Tech Spring Break**

DESIGN RESEARCH METHOD 3: REFLECTIVE DESIGN

Assignment: Identify and study a creative practice and propose designs / design guidelines in support of that creative practice

March 24 **Reflective Design as Design Research Method, Part 1**

“Reflective Design”, Sengers, Boehner, David, and Kaye

“Autobiographical Design in HCI”, Nuestaedter and Sengers

March 26 **Reflective Fiction as Design Research Method, Part 2**

“Understanding Repair as a Creative Process of Everyday Design”, Maestri and Wakkary

“Spyn: Augmenting the creative and communicative potential of craft”, Rosner and Ryokai

“Reflections on Craft: Probing the process of everyday knitters”, Rosner and Ryokai

March 31 **Observational Practices**

In-class activity

April 2 **Prototyping Practices**

In-class activity

April 7 **Interim Project Presentations**

April 9 **Interim Project Presentations**

April 14 **TBD**

April 16 **What’s Next for Design Research?; Course Reflection; CIOS**

April 21 **Final Project Presentations**

April 23 **Final Project Presentations**