

LMC 6313: Principles of Interaction Design

Meetings: Monday: Discussions/Critiques, 10am-12pm, Skiles 002.
Wednesday: Discussions/Critiques, 10am-12pm, Skiles 002.
Friday: Lab, 11am-12pm, Skiles 346.

Instructor: Janet H. Murray (jmurray@gatech.edu)
Office Hours: Monday 4-6pm, TSRB 320A or email to schedule alternate time.

TA: Mariam Asad (missasad@gatech.edu)
Office Hours: TBA, TSRB 323 or email to schedule alternate time.

Students are strongly encouraged to take advantage of office hours for exploration and refinement of project ideas and more detailed feedback on assignments.

Course Objectives

- To articulate goals and methods, that will remain valid through long periods of technical innovation, for the design of coherent and meaningful digital artifacts.
- To prepare students for professional employment with projects that integrate immediately useful technical methods with enduring design considerations
- To situate the design of digital artifacts as part of the larger collective, cultural task of inventing media formats and genres that expand human expressivity and connectedness.

Learning Outcomes

- Use coherent and focused design language to critique digital artifacts.
- Apply principles of information/interaction design to create a complete, demonstrable prototype.
- Develop familiarity and fluency in relevant programming environments: HTML5, CSS, jQuery, Javascript.
- Develop familiarity and fluency in visual design principles and relevant design software: Photoshop, Illustrator.
- Present design choices orally and visually in a focused, persuasive, and insightful manner.

General Policies

Students are expected to indicate the source and authorship of any work not original to them.

Students are expected to come to class prepared and actively respond to presentations by the instructor and fellow students. Students are encouraged to bring their laptops to class, and are always welcome to look up information related to the discussion during class.

All students will have access to the DM Lab in Skiles 346 and are expected to abide by the rules of that lab, including never propping open doors or leaving the room unlocked. Students are expected to refrain from distracting and disruptive behaviors in class and in the shared lab, and to treat one another with professional respect and courtesy.

There is zero tolerance for discrimination or harassment on any basis, including but not limited to race, color, religion, sex, national origin, age, disability, sexual orientation, gender identity, or veteran status. Georgia Tech is committed to providing its staff, faculty, and students the opportunity to pursue excellence in their academic and professional endeavors. This opportunity can exist only when each member of our community is assured an atmosphere of mutual respect. Georgia Tech's full anti-harassment policy is online here: <http://>

www.policylibrary.gatech.edu/anti-harassment-policy

Students in need of Learning Accommodations: Any student who feels that they may need an accommodation for any sort of disability, please speak to me after class or come see me in my office hours so we can discuss alternative strategies. Georgia Tech support services are available through the Office of Disability Services of the Dean of Students Office, as described here: <http://disabilityservices.gatech.edu>

Required Texts

Janet H. Murray *Inventing the Medium: Principles of Interaction Design as a Cultural Process*, MIT Press 2012. (available on electronic reserve, and in shared copy in 346 as well as in bookstores) Referred to in Syllabus as *ITM*.

Recommended Resources

- <http://lynda.com> tutorials, available for free with your GT login
- www.codecademy.com
- Sublime Text (<http://www.sublimetext.com/>)
- Lupton, Ellen. *Graphic Design: The New Basics* (some content available online: gdbasics.com)

Requirements

5 Design Notes

30 points [6 points per note]

No more than 250 words, accompanied by one or more labeled and annotated images that illustrate a specific design observation of an artifact not discussed in class or in the readings. Due (i.e uploaded to T-Square) on **10am Monday** of the week assigned.

Interaction Design Semester Project

50 points

Choose one of two options (info design, explanatory simulation) to build and implement as a functional, interactive application.

3 Lab Exercises

15 points [5 points per exercise]

Exercise 1: Personal online portfolio with HTML/CSS/use of grid

Exercise 2: Demonstration of JQUERY/API essentials

Exercise 3: Author content for a Javascript interactive decision system

Class Participation

5 points

Including presentation and discussion of short design notes, in-class assignments, and constructive mutual critique.

Total Grade:

100 points

Bonus Points: up to 5 points for helpfulness to other students and/or exceptional class participation

Semester Project (choose one)

Info Design Focus: An application that meaningfully combines information in multiple media types from multiple sources into one resource that is more useful or expressive than the individual components (e.g. a guide to skateboarding sites that includes user ratings, photographs, videos, and maps; an analysis of a political issue drawing on text and video news sources, partisan websites and blogs, and authoritative statistical resource). This project must run in a browser, using SQL and PHP.

Explanatory Simulation Focus: An interactive model of a complex system (e.g. a lemonade stand, a biological ecosystem) using javascript and HTML5 that affords replay and helps the

interactor to understand a scenario with multiple parameters and multiple significant potential outcomes.

Components of Final Project Grade:

Topic Presentation / Conceptualization	10 points
Template for PPT presentation including critique of existing ****	
Mockup Building and Testing	10 points ***
Final Running Project	15 points ***
Final Documentation and Oral Presentation	15 points ***

Criteria for Short Design Notes:

- Choice of artifact, and inclusion of links as appropriate
- Specific design language appropriately applied
- Specificity of design observation
- Use of appropriate, readable illustration(s), annotated as appropriate
- Concise and clear writing with appropriate tone, no hype
- Deductions for typos, spelling errors, grammatical errors
- Late submissions (after 10 am on due date) not accepted

Fall 2015 Schedule

We ek	Day	Date	Topic	Due	ITM Reading :	Key Concepts
1	M, W	8/17 8/19	Discussion: Medium; affordances	—	Intro, Ch 1, Ch 2 (for Wed)	Medium, Affordances, Agency, Immersion, Transparency, Visibility, Scripting the Interactor
1	F	8/21	Lab	Design note Ch 1,2 (due by beginning of lab)	—	
2	M, W	8/24 , 8/26	Discussion: Info design, library model	Design note Ch 7	Ch 7	Aggregation, Collocation, Containers, Intellectual access, Classification, Labeling, Nesting
2	F	8/28	Lab	—	—	
3	M, W	8/31 , 9/2, 9/4	Info Design: Database model	Design note Ch 8	Ch 8	Semantic Segmentation, Information Chunking, Templates, Multiple Granularities
3	F	9/4	Lab	—	—	
4	M	9/7	Holiday	—	—	

4	W, F	9/9, 9/11	Lab Week	Lab Project 1 (due by beginning of lab)	—	
5	M	9/14 ,9/1 6	Info Design: Structured Document Model	Design note Ch 9	Ch 9	Tagging, Metadata, Semantic Web
5	F	9/18	Lab	—	—	
6	M, W	9/21 ,9/2 3	Simulation	Design note Ch 4, 5	Ch 4,5	Encapsulation, Modularity, Variables, Parameters, State, WInstantiation, Resource Allocation, Time Step
6	F	9/25	Lab	—	—	
7	M, W	9/28 , 9/30	Simulation	Design note Ch 13	Ch 13	Scenario, Replay, Game Mechanics,
7	F	10/2	Lab	—	—	
8	M, W, F	10/5 , 10/7 , 10/9	Lab Week	Lab Project 2 (due by beginning of lab)		
9	M	10/1 2	Holiday	—	—	
9	W, F	10/1 4 10/1 6	Lab Week	—	—	
10	M, W, F	10/1 910/ 2110 /23	Lab Week	Lab Project 3 (due by beginning of lab)	—	
11	M, W, F	10/2 610/ 28 10/3 0	Present Topic	Project Topic (due 10/26)	—	
12	M, W, F	11/2, 11/4, 11/6	Lab Week	—	—	

13	M, W, F	11/9, 11/1 1, 11/1 3	Mockup Testing (Meet in Lab!)	Mockup/Testing	—	Think-aloud Protocol
14	M, W, F	11/1 611/ 18 11/2 0	Lab Week	—	—	
15	M	11/2 3	Thanksgiving	—	—	
15	W, F	11/2 511/ 27	Open lab (by appointment only)	—	—	
16	M, W, F	11/3 012/ 2 12/4	Final Project Presentations	FINAL Projects		
Fin als We ek		12/7 -12/ 11		Running Projects and Online Documentation		