

Principles of Interaction Design

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Office Location: Skiles #302

Class Times: MW 3:00 pm–4:15 pm

Office Hours: Wednesdays 4:15-5:15

INTRODUCTION

Interaction design is concerned with the invention of useful and beautiful products that mediate and facilitate everyday actions and interactions of individuals and groups. The need for effective interaction design is evident once we consider the wide presence and impact of digital and non-digital products in our activities and experiences of everyday. Examples span a wide range: from waiting rooms to banking services, political campaigns to interactive games. The purpose of this course is to lay a foundation for interaction design practice and criticism.

To this end, we will begin with a brief introduction to the problems of interaction design and its immediate and ultimate purpose. We will also explore the key issues of interaction design including the nature of interaction, experience, and products. This introduction leads to the study of the basic building blocks of interaction or what we may refer to as the grammar of interaction, followed by a study of generative research, prototyping and evaluation methods. We will discuss how these methods might be used to create products that are useful, usable, and desirable. We will wrap up with a discussion of what is meant by good design, touching on issues related to the role of design in culture including the ethics and politics of design.

Class discussions and lectures are accompanied with a number of individual short assignments and group projects designed to put the principles and methods of interaction design into practice.

Learning Outcomes

- Understanding the plural philosophical interpretations of the concept of *interaction*.
- Understand basic theoretical foundations of interaction design.
- Understand interaction design artifacts as reasoned and persuasive arguments that are audience specific and situated.
- Use the theories and topics presented in this course to identify the problems and analyze the issues of interaction design
- Effectively manage and strategize interaction design projects through various stages of ideation, selection, organization and form-giving, and evaluation
- Develop a deep understanding of the history, audience, and context of interaction design practices.
- Ability to work effectively in teams to accomplish a common goal

CLASS POLICIES

Evaluation

This course consists of discussions of selected readings, studio/critique sessions, and a set of projects.

Grades will be determined based on the following:

Project 1: 25%

Project 2: 35%

Readings and discussion: 20%

Short assignments: 20%

Extra 5%: active sketchbook; blog posts; and other individual explorations and contributions to class

* Also, see note on attendance

Attendance

Due to a significant amount of in-class material and work, prompt attendance and active participation in class discussions and group critiques is required. Three absences are allowed. After that, your grade will drop by one letter grade with every two absences. You will only earn a failing grade if you are absent for 6 sessions or more.

Short Assignments

Short assignments are introduced orally in class on a weekly basis. They are due the following Sunday at 5pm on the blog section of t-square unless otherwise instructed.

Readings

As you can see under grading section, I put a great emphasis on your preparation and participation in class. All of you are required to read the assigned papers/book sections and be ready to discuss them in class.

Critiques

Critiques are a central part of design practice. Critiques help you think critically about what you see and how you experience design artifacts and to learn about how others are receiving your work. Basic principles are important to highlight:

- Critiques are not personal. They are about the work and ultimately help you design better.
- In critique sessions it is important to always highlight positive aspects of the work as well as what you find confusing or suggestions for improvements.
- The critiques you receive may also be conflicting. It is ultimately up to you to use the feedback you receive to improve the work.
- You should not expect to get personal feedback on your work every time but we will strive for an even distribution of time/feedback across the semester.

In Class Instructions

As part of this class you are learning to pay attention to and follow oral instructions. The short assignments, for instance, will have no written instructions and I ask you to carefully follow and remember/write down instructions given in class.

Group Activities

Group projects are designed to help you communicate your ideas and work effectively as a group. You will be learning skills such as planning and managing time, giving and receiving feedback, challenging assumptions, and developing your understanding through discussion and conversation. Thus it is important for you to work as a group and not to delegate or divide tasks. For example, when you are tasked with coming up with 10 design iterations as a group, the idea is that you collectively brainstorm and collect/curate the best of your concepts as opposed to each of you individually coming up with 3-4 concepts.

Communication

Email is used as means of communication for this course. It is your responsibility to check email often to obtain information related to the course. T-square is also used

heavily for communication in class. Make sure to update the settings on your t-square page so you will receive **automatic emails** about announcements, readings, and assignments. **You are responsible for all announcements made in class, via email or t-square.**

Office Hours

Wednesdays after class. You can always request a meeting by email.

Information for Students with Disabilities

I would do anything I can to help you succeed in this class. Please notify me 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

***NO* Laptops in Class**

Please do not use laptops, iphones, ipads, or any other electronic devices in the classroom unless instructed to do so.

READINGS

Required

Hanington, Bruce, and Bella Martin. *Universal methods of design: 100 ways to research complex problems, develop innovative ideas, and design effective solutions.* Rockport Publishers, 2012.

All other required readings will be distributed to the class via t-square.

Recommended Readings

Lupton, Ellen. *Thinking with Type: A Critical Guide for Designers, Writers, Editors, & Students (Design Briefs).* New York, NY: Princeton Architectural Press, 2004.

Moggridge, Bill, and Bill Atkinson. *Designing Interactions.* Cambridge, MA: MIT press, 2007.

Pratt, Andy, and Jason Nunes. *Interactive design: An introduction to the theory and application of user-centered design.* Rockport Pub, 2012.

SOFTWARE & SUPPLIES

Software

We will be doing most of the early work using paper and pencil as well as Adobe Suite and Flash. Later in the course, we will use mapping and visualization software as appropriate for specific group projects. While most of the software are available at Georgia Tech library, the students are responsible for accessing the software and not the course. It is also important to note that this is not a class on the software. I recommend that you consult the software help files, available books, or online material if you need more help using the software.

Supplies

A sketchbook & pencil, Steel ruler, 8.5"x11" paper, Black mounting board, Spray Mount Adhesive, X-acto knife + **Always bring tape, magnets, and other tools you need for putting work up on the walls prior to the start of the class.**

COURSE SCHEDULE

Part I. Introduction to Interaction Design and Its Key Methods

Week 1

Course Overview

Monday, Jan 8:

Cancelled.

Wednesday, Jan 10:

What is interaction design and why does it matter?

Short Assignment 1: Design a personal name tag to wear in class next Wednesday

Week 2

What is Interaction Design?

Monday, Jan 15:

OFFICIAL SCHOOL HOLIDAY

Wednesday, Jan 17:

Readings:

Buchanan, "Good Design in the Digital Age"

Pratt, Andy, and Jason Nunes. Interactive design: An introduction to the theory and application of user-centered design. *Chapter 1*. Available online.

Jon Kolko, "Design Thinking Comes of Age," Harvard Business Review, September 2015, <https://hbr.org/2015/09/design-thinking-comes-of-age>. [Online]

Short Assignment 2: Write a 500 word reflection on what is interaction design, due at Noon.

In Class:

Discussion of Interaction Design

Drawing Lines

Project 1, Part 1 Introduced (Find and Share an Informational Artifact, In Groups of 6, following class instructions)

Week 3

Observation and Iteration

Monday, Jan 22:

Short Assignment 3: Upside-down Drawing (Bring to Class)

Method of Observation, Video

After: Finish in class viewings

Wednesday, Jan 24:

Read: Selections from Hanington and Martin

Short Assignment 4: Find 100 uses for a paper clip, due at noon

Short Assignment 5: Observe and document the use of a non-digital vending machine, 500 words report + Images, Due Noon

In Class:

Discussion: Observation, Vending Machine Class Activity and Reflection

Week 4

Selection, Composition, and Hierarchy

Monday, Jan 29:

Before:

Read: Chapters 3 and 4. An Introduction to Information Design by Coates and Ellison.

Project 1, Part 1 Due. Find and Share an Informational Artifact, (In Groups of 6,

following class instructions)

Short assignment 6. Submit a 500 word crit of the informational artefact. Due at noon.

In Class:

Critique and discussion of selected informational artifacts.

Discussion of Selection and Hierarchy

Wednesday, Jan 31:

No Class.

Highly Recommended: Attend Steven Heller talk at MODA.

Short Assignment 7: Find 3 ways to organize the content of your backpack and discuss them with images in 500 words.

The Five Hat Racks, in Richard Saul Wurman, *Information Anxiety*.

Week 5

Identifying and Understanding Your Audience

Monday Feb 5:

Project 1, Part 1 (warm-up), 5 Digital Sketches Due

Organize a backpack class exercise

Wednesday Feb 7:

Read: Chapters 2. An Introduction to Information Design by Coates and Ellison.

+ Selections from Universal Methods of Design

Recommended: Pruitt, John, and Jonathan Grudin. "Personas: practice and theory." In Proceedings of the 2003 conference on Designing for user experiences, pp. 1-15. ACM, 2003. (Available Online)

Short Assignment 8. 350-500 word Reading Reflection Due at Noon.

Week 6

Documenting the Design Process

Monday, Feb 12:

Project 1, Part 2. 10 Digital Sketches Due

Wednesday, Feb 14:

Discuss design process, documentation and presentation content

Gaver, Bill, and John Bowers. "Annotated portfolios." *interactions* 19, no. 4 (2012):

40-49. (Available Online)

350-500 word Reading Reflection Due at Noon.

Week 7

Documenting the Design Process

Monday Feb 19:

Project 1, Part 3, 5 Refined Sketches Due

Wednesday, Feb 21:

Work in Class + Group Meetings and Feedback

Sign up for Method Presentation Due on Feb. 28

Week 8

Ethnographic and Participatory Methods

Monday Feb 26:

Project 1 Final and Process Book Due + Reflection

Wednesday, Feb 28:

Short assignment 9: Student Presentations on Methods

Week 9

Prototyping Techniques

Monday March 5:

Project 2, Part 1.

Wednesday March 7:

Reading: TBD

Week 10

Evaluative Methods

Monday March 12

Project 2, Part 2.

Wednesday, March 14:

Reading: TBD

Week 11

SPRING BREAK

Part II. Design Philosophy :: An Overview

Week 12

Affordances, Transactions, and Experiences

Monday, March 26

Project 2, Part 3.

Wednesday, March 28:

Readings: TBD

Week 13

What is criticism?

Monday, April 2:

Project 2, Part 4.

Wednesday, April 4:

Reading: Booth, Wayne C. "The Peculiar 'Logic' of Evaluative Criticism." The Company We Keep: an Ethics of Fiction.

Week 14

Design as Ethics and Politics

Monday, April 9:

Project 2, Part 5.

Wednesday, April 11:

Readings:

"Human Dignity and Human Rights," Richanrd Buchanan

"The Siyazama Project: A Traditional Beadwork and AIDS Intervention," Kate Wells.

Week 15

Project 2 Presentation

Monday, April 16:

Project 2, Part 6.

Wednesday, April 18:

Project 2, Final Presentations

Week 16

Final Reflection and Wrap-up

Final Presentations Continued

Reflection and Wrap-up