Interaction Design Studio - 711

Instructor: Patrick Thornton
Email: pthornt1@umd.edu
Thursday 6-8:45 pm
Location: Pac 1815 - Clarice Smith Performing Arts Center

Course Description

Interaction design is the process of defining products and the broad services built around them. When interacting with systems, people build expectations and mental models of how things work. They learn what they can and cannot achieve. This course is about how to design for interactions that will resonate with your audiences: How the features and functions of a product get translated into something people find usable, useful, and desirable.

Through a series of lectures, discussions, in-class design practice, and projects, students will explore the role of interaction designers. Students will learn how to prototype interactive products, systems, and services, and how to defend their work through the cycle of brainstorming and shared critique. This is a studio class, focusing on production processes that are required to develop public-facing work. The studio is important both as a working space and a space for collaborative reflection. Studio practice also describes a working method. As such, the INST711 classroom will focus on two activities:

- Externalization: You will put your ideas and conceptualizations into tangible materials.
- Critique: You will both give and receive constructive feedback on your own work and the work of other students in class.

Student Learning Outcomes

On the successful completion of this course, students will be able to:

- Explain basic concepts, techniques, and knowledge of interaction design.
- Critically discuss common methods in the interaction design process
- Use visual thinking and communication techniques to develop design concepts
- Build prototypes at varying levels of fidelity and can evaluate them using appropriate methods
- Develop critiquing skills to analyze interaction design artifacts and concept design.
Class Resources

Textbooks & Course Materials
We will use research papers and book chapters from a variety of sources, which will be provided on the course website. There will also be readings from the following texts:


Computer and Software
We will be creating designs during class. You are required to bring a computer with interface design software. You can use whatever tools you want to get the jobs done. Here are your options.

- Sketch
- Adobe Creative Cloud (XD)
- Figma - http://www.figma.com

Physical Materials
A portion of this class will involve you learning to draw effective sketches. You are required to bring the following materials to every class.

- A sketch book (I prefer dot grid for sketching interfaces)
- Loose printer paper for low-fidelity prototyping
- Post-Its
- Black pens for sketching
- 40% gray or pale blue marker, 60% gray marker

Tools for Class Participation
Often, we will have project, homework, and working briefs in class. Here are some questions you should ask when you receive a brief.

1. Do you understand the project’s requirements?
2. How do you think the project’s objectives relate to interaction design?
3. How do the objectives relate to experience design?
4. Do you know of any other websites or applications that might help you investigate this topic?
5. What would you have thought of the topic the week before?
6. How does this fit with the evaluation rubric?
Course Schedule

Note 1: In addition to the assignments noted here, students are expected to complete a 200-500 word reading reflection each week, and to come to class prepared to discuss the readings and lecture with one another. Readings listed below are due at the start of class.

Week 1 - Basics of Interaction Design

Readings
- DoET Chap 1
- ID Chap 3 - Conceptualizing Interaction
- “So You Want to Be an Interaction Designer” by Robert Reimann: [www.cooper.com/journal/2001/06/so_you_want_to_be_an_interacti](http://www.cooper.com/journal/2001/06/so_you_want_to_be_an_interacti)

Lecture: What Is Interaction Design? How do we know when a product is well designed?

Homework: In-depth evaluation using design rules of a digital product.

Week 2 - Brainstorming, Sketching and Critique

Readings
- DoET Chap 6
- ID 2019 Ch. 2 - The Process of Interaction Design
- An Introduction to Design Thinking Process Guide
- Guidelines for constructive and empowering design feedback and critique: [https://uxdesign.cc/guidelines-for-constructive-and-empowering-design-feedback-and-critique-5a2a5c460dc1](https://uxdesign.cc/guidelines-for-constructive-and-empowering-design-feedback-and-critique-5a2a5c460dc1)
- “How to Run a Design Critique” by Scott Berkun: [https://scottberkun.com/essays/23-how-to-run-a-design-critique](https://scottberkun.com/essays/23-how-to-run-a-design-critique)
- Bill Buxton (2007). Sketching User Experiences: Getting the Design Right and the Right Design (1.1, 1.2, 1.3)

Homework: Sketch a mobile design version of a desktop application.

Week 3 - Interfaces, A History

Readings
- ID Chapter 7 - Interfaces
- ID Ch. 4 - Cognitive Aspects
Homework: Using what you know about sketches and interfaces, sketch an app idea.

**Week 4 - Interaction Design Patterns**

**Readings**

- ID Ch. 12 - Design, Prototyping, Construction
- Design Patterns: http://designinginterfaces.com/patterns/

Homework: Change a digital interaction into a physical one.

**Week 5 - Social Interaction**

**Readings**

- ID Ch. 5 - Social Interaction

Homework: Analyze your app ideas for the aesthetic you’re pursuing through your mechanics.

**Week 6 - Low-Fidelity Prototyping**

**Readings**

- ID Ch 11 - Low-Fidelity Prototyping

Homework: ASSIGNMENT #2: Prototype a low-fidelity object that can empathically translate an experience.

**Week 7 - Critique Week**

**Readings**

No readings - complete prototypes to highest possible engagement standard before class.

Following the Lynda tutorial, Design a small library of common interface components in Figma
SPRING BREAK

Week 8 - Corporate Visual Design & Communication

Readings
● ID Ch. 13 - Interaction Design In Practice
● Google’s Material Design (Android Human Interface Guidelines)
  ○ https://developer.android.com/design
  ○ https://design.google/library/expressing-brand-material/
  ○ https://material.io/
● iOS Human Interface Guidelines

Homework: Implement library critiques with an eye to handing off work to peers. Convert to google or ios norms. Pick groups for final assignment, Narrative Video.

Week 9 - Dark Patterns

Readings
● ID Ch. 6 - Emotional Interaction
● Addiction By Design Chapter 1: Interior Design For Interior States.
● Suzanne Scacca (2018): Dark Patterns And Other Design No-Nos for Mobile.
● Dark Patterns: darkpatterns.org

Homework: In groups, design a dark pattern loop for your application in Figma.

Week 10 - Storyboards and Concept Validation

Readings
● Lynda Barry - I Can’t Draw
● https://www.youtube.com/watch?v=Xbpb2cxKhaE
● ID Chap 11, specifically Chap 11.6.1
● Lecture: Wally Wood’s Panels That Always Work

Homework: Storyboard the circumstances in which you can picture a user using your application. Each person in your group must contribute at minimum a four-panel comic.
Week 11 - Data and Narrative

Readings
- ID. Ch. 9 - Data Analysis, Interpretation, and Presentation
- Bring to class everything you need to tell a story about an experience you had over spring break.

Homework: Design a story using only a series of data visualizations.

Week 12 - Machine Learning and Data Science

Readings
- TBD:
  - Natural Language Processing to address user intent
  - Aliexpress data training model
  - Mechanical turk as secret “AI”

Begin work on final project: With groups, receive topic and begin laying out story for final video application.

Week 13 - Evaluation of Design Revisited

Readings
- ID Ch. 14 - Introducing Evaluation

Homework: Refine applications based on in-class critique.

Week 14 - Evaluation Studies

Readings
- ID Ch. 15 - Evaluation Studies: From Controlled to Natural Settings
- Lecture: Student Interest
- In Class: Present full video storyboards and support work to peers. Work on application design based on story cues.

Week 15 - Final Critique

FINAL CRITIQUE
In Class We watch and take notes on group project videos that tell us a complete story, with all relevant applications, of a user going about their day.
Course Evaluation

Projects

Projects — both individual and team — are a major component of your work. We will use in-class time to brainstorm potential project topics, find team members, work on group projects, and get feedback from classmates and the instructor. Each team will consist of 3-4 members.

Pair and individual projects are expected in the early part of the semester, but later work will be evaluated based on your group selections.

Project 1: Individual - Empathic Objects (10%)

Learning objectives include:
- Understanding basic principles of interaction design
- Drawing as a means of visual exploration and ideation
- Ideation and sketching
- The embodiment of empathic sense

Project 2: Team of 2 (20%)

Learning objectives include:
- Practicing component handoff
- Framing and reframing a problematic situation
- Making a pitch
- Ideation with scenarios and storyboards
- UI design patterns

Project 3: Team of 3 (40%)

Learning objectives include:
- Rapid prototyping and iterative design
- Narrative in UX
- Video as a UX design tool

Participation

I will grade participation based on your engagement in the in-class discussion and attendance.

Assessment
Grade is based on the following breakdown:

<table>
<thead>
<tr>
<th>Component</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>15%</td>
</tr>
</tbody>
</table>
Critique Participation 10%
Project #1 - Object 20%
Project #2 - Library/App 25%
Project #3 - Narrative 30%
Total 100%

**Syllabus Change Policy**
This syllabus is a guide for the course and is subject to change with advance notice.

**Academic Integrity**

**What is academic dishonesty?**
Academic dishonesty is a corrosive force in the academic life of a university. It jeopardizes the quality of education and depreciates the genuine achievements of others. Apathy or acquiescence in the presence of academic dishonesty is not a neutral act. All members of the University Community - students, faculty, and staff - share the responsibility to challenge and make known acts of apparent academic dishonesty.

Students have a responsibility to familiarize themselves with violations of the Code of Academic Integrity. Among these include:

- **Cheating:** “Intentionally using or attempting to use unauthorized materials, information, or study aids in any academic exercise.”
- **Fabrication:** “Intentional and unauthorized falsification or invention of any information or citation in an academic exercise.”
- **Facilitating Academic Dishonesty:** “Intentionally or knowingly helping or attempting to help another to commit an act of academic dishonesty.”
- **Plagiarism:** “Intentionally or knowingly representing the words or ideas of another as one’s own in an academic exercise.”

For further clarification or information on the Code of Academic Integrity:
http://www.studenthonorcouncil.umd.edu/code.html

**Students with Disabilities**
The University is legally obligated to provide appropriate accommodations for students with disabilities. The campus’ Disability Support Services Office (DSS) works with students and faculty to address a variety of issues ranging from test anxiety to physical and psychological disabilities. If a student or instructor believes that the student may have a disability, they should consult with DSS (4-7682, email Dissup@umd.edu). Note that to receive accommodations, students must first have their disabilities documented by DSS. The office then prepares an Accommodation Letter for course instructors regarding needed accommodations. Students are responsible for presenting this letter to their instructors.
Classroom Environment

You are expected to support your classmates and help each other become better designers. You are expected to empower each other and provide a safe learning environment. Design is a team environment. You need to work together.

You will be challenged in this class. You will be pushed to your limits as a designer. The professor is here to support you and help you each higher heights.

Always come prepared. We cannot have a successful studio class if students don’t bring necessary materials.

Attendance Policy

University policy excuses the absences of students for illness, religious observances, participation in University activities at the request of university authorities and compelling circumstances beyond the student’s control. Students who miss a single class for a medical reason are not required to provide medical documentation, but students who are absent more than once are responsible for providing various forms of documentation, depending on the nature of the absence. Course syllabi should specify the nature of the in-class participation expected and the effects of absences on students’ grades. For more information, see University Policy V-1.00G on Medically Necessary Absence.

Extensions

- Late work is not acceptable except in the case of a documented illness or extraordinary circumstances. All late work will be assessed a minimum penalty of 20% per week.
- Even with prior permission, no late work will be accepted more than 7 days after the initial due date. Students may not re-submit previously graded work or work produced for other courses for evaluation.

Emergency Preparedness

http://www.umd.edu/emergencypreparedness/

CourseEvalUM

Course evaluations are a part of the process by which the University of Maryland seeks to improve teaching and learning. The University Senate approved the implementation of a standard, online, University-wide course evaluation instrument. Each course evaluation contains a set of universal questions, and some are supplemented by questions from specific colleges. Across the University, course evaluations are being administered through a web-based system dubbed CourseEvalUM. Students who leave no “Pending” evaluations in their Evaluation Dashboard each semester can view the aggregate results of a sub-set of universal items online.

Across the University, course evaluations are being administered through a web-based system dubbed CourseEvalUM. All information submitted to the Evaluation System is confidential. Instructors and academic administrators can only view summarized evaluation results after final grades have been submitted. Instructors and academic administrators cannot identify which submissions belong to which
students. This standardized set of evaluation results provides the University with useful information on teaching and student learning across the campus.

For additional info see Student Fast Facts at: https://www.irpa.umd.edu/Assessment/CourseEval/stdt_faq.shtml