SI 388 Course Overview
Putting the H in HCI

WEEK 1-1 (WED 6 SEP) – COURSE OVERVIEW

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DESIGN RESEARCHER, DUO SECURITY

Today's Agenda

Take attendance on sheet

Instructor introduction

Learning goals

Course logistics / Syllabus walkthrough

First assignment description

Attendance

Please sign attendance sheet

Capacity: 84

Instructor: Mark Thompson-Kolar

Product Design Researcher at Duo Security (Ann Arbor)

Usability Testing, Contextual Inquiry, Heuristic Reviews

Education (all University of Michigan):

MSI in HCI (2011) | MA Journalism (1990) | BA Comm (1989)

Previous:
- Director of Usability Services at ForeSee/Answers (Ann Arbor)
- UX Designer at Fry Interactive/Micros
- Usability Specialist at Cengage Learning
- 18 years Editor, Designer for news organizations (Detroit Free Press, Ann Arbor News, others)
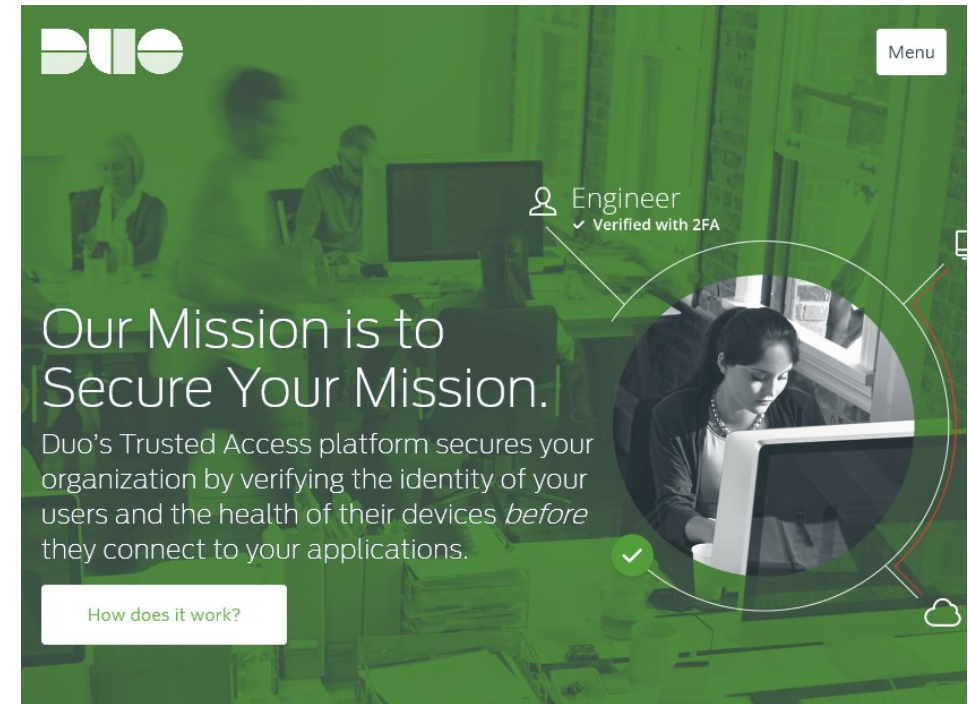
A Little More

❑ UX <u>practitioner</u> – not a programmer or developer

❑ SI688 my favorite class in MSI

❑ Third year teaching it

❑ Instructor for 6 previous UM classes in Psychology & Comm

❑ My regular job is very busy

My Perspective

What is Human-Computer Interaction?

Field that studies the ways in which humans make effective use of computational artifacts, systems and infrastructures. ...

Professional practitioners in HCI are usually designers concerned with the practical application of design methodologies to problems in the world.

https://en.wikipedia.org/wiki/Human-computer_interaction

Term not used much in industry
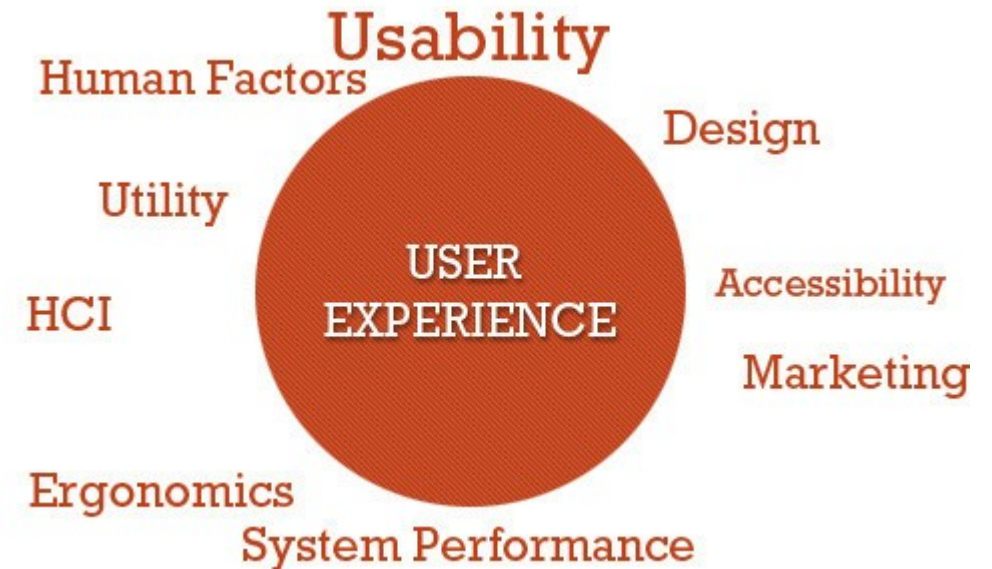
Acts/reacts

Acts/reacts

"behavior" = patterns of action
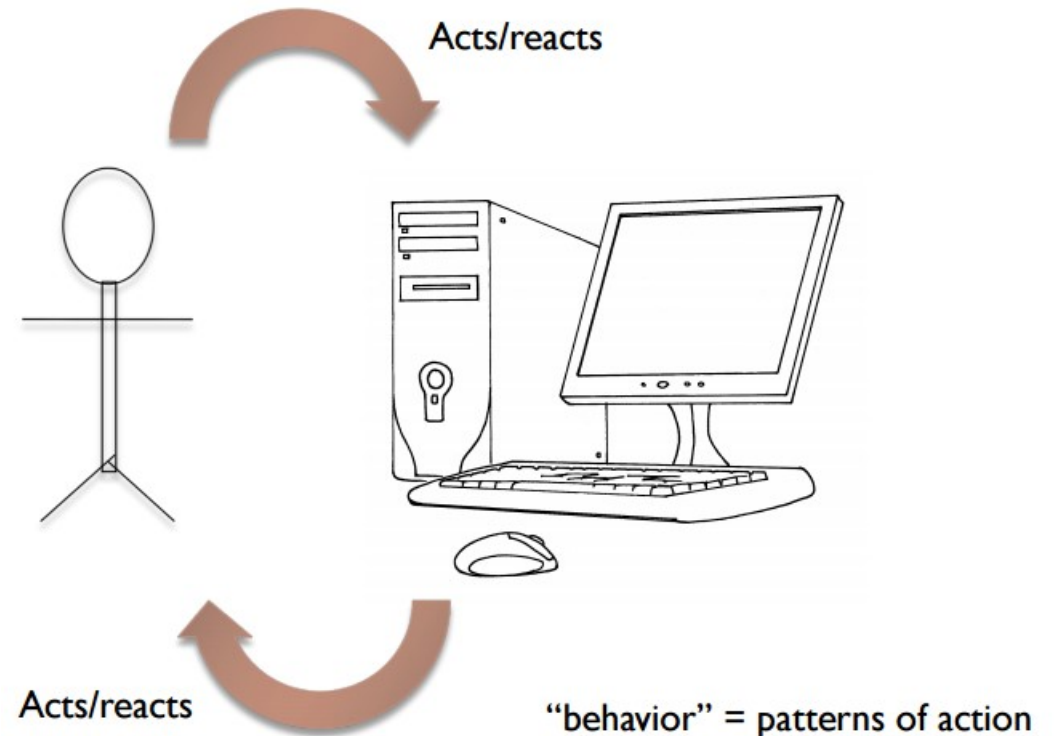
User Experience Design (and Research)

Process of enhancing user satisfaction by improving the usability, accessibility, and pleasure provided in the interaction between the user and the product.

HCI is a core aspect of this discipline.

https://en.wikipedia.org/wiki/User_experience_design

Usability
Human Factors
Utility
HCI
USER EXPERIENCE
Design
Accessibility
Marketing
Ergonomics
System Performance

http://www.smashingmagazine.com/2010/10/what-is-user-experience-design-overview-tools-and-resources/

Why Offer a 300-level HCI Class?

Designing effective interactive systems means understanding how users "tick"

- ❑ Examine human capabilities + behaviors
- ❑ Relate them to the design of interactive systems
- ❑ Subject is a **huge positive differentiator**
- ❑ Build your career library (including textbooks)

How 388 "works"

- ❑ Is survey course = broad and not too deep
- ❑ Assorted theories and findings from the social and biological sciences
- ❑ No emphasis on <u>physical</u> aspects of brain → use descriptive models instead

Way to Think about HCI Principles

You're ready to design an app. *Where do you begin?*

What's easiest to program? Not ideal

Follow your own likes? Definitely not ideal

Ask users? Maybe, but not all

Use HCI principles – human capabilities and needs!

Why Designers Should Know HCI

❑**Reduce errors.** Help users succeed the first time.
Save lives, save money, prevent data loss/leakage

❑**Reduce user frustration.** Where users are forced to use poor systems, they may sabotage them.
Save money, retain people, keep them happy

❑**Avoid expense.** Training, errors, support, etc. outweigh costs of getting it right the first time. **Reduce maintenance costs**

❑**Better products.** Build better products from a technical perspective for same cost as mediocre/bad ones. **Save money, better products**

❑**Market choice** **Better products=HUGE competitive advantage**

Heuristics / Design Rules / Patterns

Takes human perception, cognition, behavior, limitations into account … Design rules/best practices/heuristics

- ❑ Have existed for decades, still very relevant (SI422, 622)
- ❑ Several to choose from
  - ❑ Ben Schneiderman's Eight Golden Rules
  - ❑ U.S. Health and Human Services   http://guidelines.usability.gov/
  - ❑ Private firms (Xerox 230 guidelines, ForeSee' 1300)
  - ❑ Jim Johnson's Nine GUI Principles (Your book's author)
  - ❑ Jakob Nielsen's Ten Heuristics (1994)

But Pros & Cons to Heuristic Guidelines
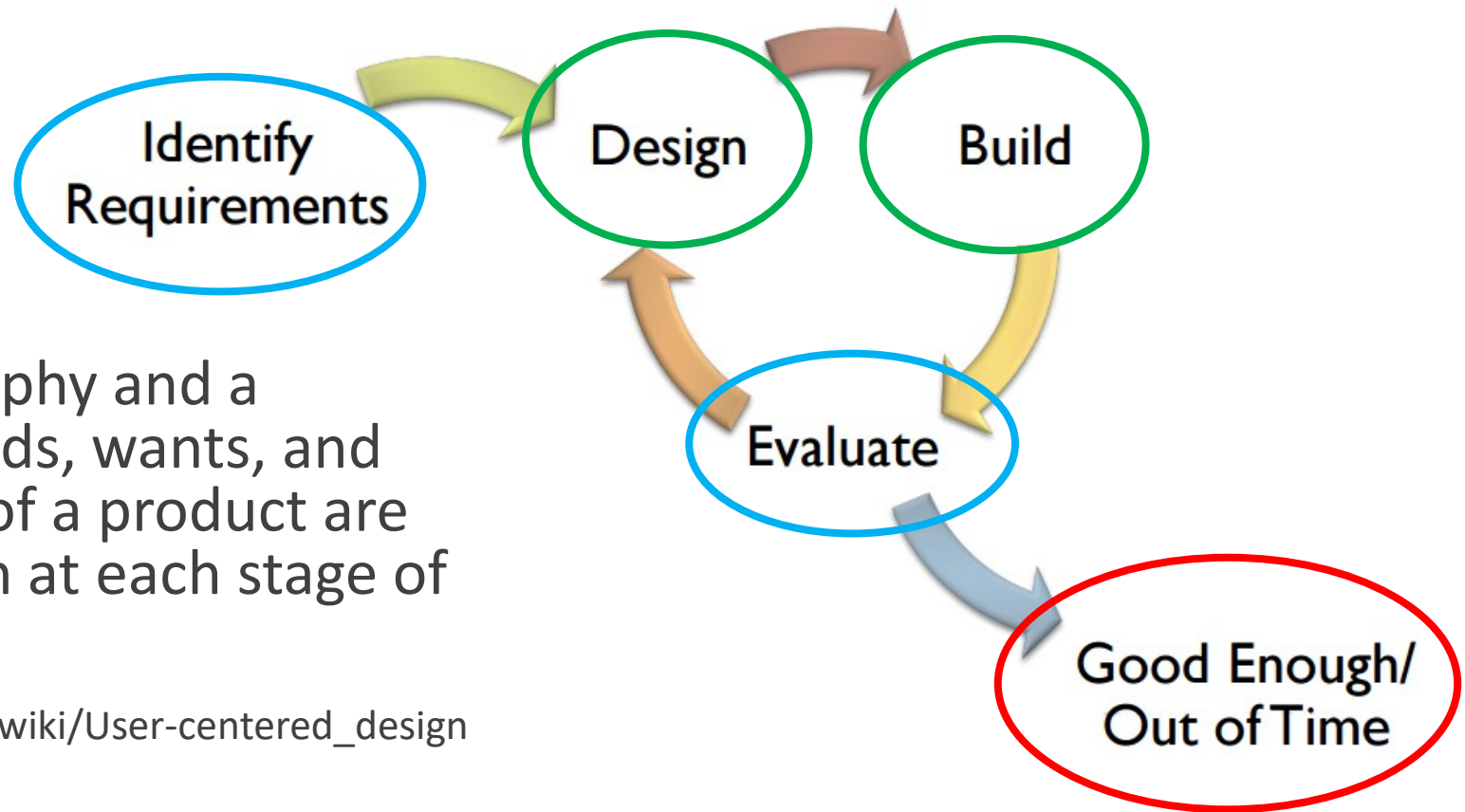
❑ Pro: Less learning, consistent

❑ Cons:
  - o So many possibilities!
  - o Often misapplied through lack of understanding
  - o Typically negative: Failure but not clear how to fix

❑ Better approach: **HCI concepts: understand human limitations and capabilities**

❑ This course: concepts, theories, findings from social sciences re: **human behavior**

Where is HCl in User-Centered Design?

(UCD) is a design philosophy and a *process* in which the needs, wants, and limitations of end users of a product are given extensive attention at each stage of the design process.

http://en.wikipedia.org/wiki/User-centered_design

Identify Requirements → Design → Build → Evaluate → Good Enough/ Out of Time

Some Goals

Course Learning Goals

❑Identify key features, constraints and characteristics of human perception, cognition and behavior.

❑Describe the impact of these features, constraints and characteristics on the design of interactive systems.

❑Critique and be able to design interactive systems on the basis of knowledge of human capabilities and behavior.

💥 **Key point:** Understand <u>why</u> a design works or it doesn't – and how to improve it

You and Your Goals

Send me an email before next Monday's class answering these questions:

❑**Name**

❑**Year in school**

❑**Major/minors**

❑**Where home is**

❑**Your favorite college course so far + why**

❑**Plans for early career ("*not sure" is OK!*)**

mdmtk@umich.edu

Include **SI388** *in Subject line*

Course Logistics

Course Structure

The course will be a hybrid lecture format

❑Lecture at the beginning of most sessions

❑Many in-class small-group exercises and student presentations

❑**Lecture presentation decks**

I don't provide the decks before class, best practice is to provide them after the class. (Notetaking → "elaborative processing")

❑Slide numbers are intentionally large for note-taking

Syllabus Walkthrough

❑Syllabus may change a bit as the class evolves.

❑Your continued enrollment = agreement to the terms of the syllabus.

(Be sure to read it yourself outside of class)

Walkthrough now

Schedule Overview

❑Schedule also will change some as class evolves.

❑I will alert you to changes.

Overview now

Wrap up for Today

Attendance

❑ Make sure you signed the sheet.

❑ Anybody **not** sign it?

Teach-a-Chapter Presentation Assignment

❑Check Canvas Assignments for prompt (contains book suggestions).

❑Check Canvas Files for the Teach-a-Chapter Groups list. Groups of 4 or Solo.
  o Names of students assigned in group + Group number

❑Get book approved by **Mon, Sept. 11.** *Email to me is fastest.*

❑Coming up fast. See Schedule doc in Canvas Files for presentations dates.

  o Groups 1, 2 present on Mon, Sept. 25
  o Groups 3, 4 present on Wed, Sept. 27

2017 SEPTEMBER						
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1	2
3	4	5	6 Today	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30