Introduction to Human Centered Design
Learning Objectives

At the end of this lecture you should be able to...

1. Explain the benefits of human centered design
2. Identify techniques for interviewing
3. Recognize the difference between a needs oriented approach rather than solution oriented approach
Intro to Human Centered Design
(Vide0)
Steps of the Process

**INSPIRATION**
In this phase, you’ll learn how to better understand people. You’ll observe their lives, hear their hopes and desires, and get smart on your challenge.

**IDEATION**
Here you’ll make sense of everything that you’ve heard, generate tons of ideas, identify opportunities for design, and test and refine your solutions.

**IMPLEMENTATION**
Now is your chance to bring your solution to life. You’ll figure out how to get your idea to market and how to maximize its impact in the world.
Start here

Viable
Business

Desirable
Human

Feasible
Technology
Design Mindsets

1. Empathy
2. Creative confidence
3. Think to build and build to think
4. Learn from failure
5. Embrace ambiguity
6. Optimism
7. Iterate, iterate, iterate
Icebreaker!
What’s this semester going to look like?
Semester Overview

**INSPIRATION**
I have a design challenge.
How do I get started?
How do I conduct an interview?
How do I stay human-centered?

**IDEATION**
I have an opportunity for design.
How do I interpret what I’ve learned?
How do I turn my insights into tangible ideas?
How do I make a prototype?

**IMPLEMENTATION**
I have an innovative solution.
How do I make my concept real?
How do I assess if it’s working?
How do I plan for sustainability?

You are here

Your final CAD model is here
Why this process?

Human centered design focuses on identifying needs in a population in order to create meaningful change in someone's life.

Optimization ≠ innovation
Examining Initial Assumptions
We are NOT starting with solutions.
Examining Initial Assumptions

“Needs outlast solutions”
Making a Project Plan
What do I look at?

What problems am I interested in?

What am I capable of solving?

What do I want to learn how to do?
Research Goals

- Goal should be around the impact you want to create, not the solution you think is right
  - Bad goal: I want to redesign a new toothbrush that cleans mouths better
  - Good goal: I want to improve the oral hygiene experience to reduce cases of gingivitis
- What are your indicators of success?
- What are your constraints?
What solutions already exist?
Analogous Experiences

- Where can you go to have an inspiring experience related to your challenge?
- What are analogous settings or extreme experiences where you might witness similar or relevant behaviors and activities in a different context?
Important Dates

- Week 1: Interviews and Identifying Need
- Week 2: Synthesis
- Week 3: Selecting Opportunity Areas
- Week 4: Creating Designs
- Optional Sessions:
  - Brainstorming/Ideation
  - Evaluations and receiving feedback
  - Iteration
  - Storytelling
Conducting Interviews
“Extreme” Users
Extreme Users
Arc of an Interview
Know Your Strengths

How do you build rapport?

Funny? Quiet? Relatable? Inquisitive?

If you need more prep before interviews take that time!

You don’t have to wing it to be successful

If you think you don’t, you still probably do

Different people have different realities. That’s what makes teams strong.
Before the Interview

- Prepare open ended, neutral questions
  - Seek out stories
- Decide roles during interview
  - Interviewer
  - Note-taker (analogue)
  - Photographer
- Consider different modes of capturing information
  - Sketching, bullet notes, photos, audio recording
- Identify who you want to interview
  - Extreme users
During the Interview

- **Build Rapport**
  - Be human

- **Talk about feelings**
  - “Can you tell me more about...”
  - “Why did you choose to do that?”

- **Write down exactly what they say**
  - Don’t assume to know what they intended

- **Observe context of the setting**
  - What does their room look like? What does this mean?

- **Seek stories**
  - Experiences uncover actionable insights
Interview Tips

1. Always say yes to an offer
2. Treat people like partners in research
3. Leave comfortable silences
4. Take the spotlight off the other person, seek common ground
5. Ask “WHY”
6. Try very intentionally to fall in love with each person (even if it’s just a little bit)
Synthesis and Frameworks
Creating Design Opportunities

- “How might we...” suggests that a solution is possible
- Offers you the chance to answer them in a variety of ways
- A properly framed How Might We doesn’t suggest a particular solution, but gives you the perfect frame for innovative thinking
Creating Design Opportunities

Example Challenge: creating new bathrooms for India

Potential HMWs:

- “HMW redesign public toilets in India?”
  ○ Too broad
- “HMW create a doorknob for Indian toilets that is clean, safe, and invites people in?”
  ○ Too narrow
- “HMW create a sense of safety in public toilets?”
  ○ Just right!
Learning Objectives

At the end of this lecture you should be able to...

1. Explain the benefits of human centered design
2. Identify techniques for interviewing
3. Recognize the difference between a needs oriented approach rather than solution oriented approach