

Product Design

Professor Ashley Marcovitz
OIDD 415/515
MEAM 415
IPD 515

- **Intro**
- **Empathetic Design**
- **User Research**

Class Agenda

- **Intro to class and course policies**
- **Lecture: Empathetic Design**
- **User research activity**
- **Shop Safety Training - Studios @ Venture Labs**
- **Work time on stool project**

Class Policies

- Unless noted, we will meet here in Tangen 708
- My office hours are Weds 2:30-3:30 PM in Studios
 - Registration Issues: Ramon Jones at ramjones@wharton.upenn.edu
- Meet your TA!
- Required textbook: Ulrich, Karl T. and Steven D. Eppinger, *Product Design & Development*
- Required Materials (on Canvas Front Page):
 - Small Sketchbook
 - External computer mouse (ABSOLUTELY NECESSARY)
 - Pencil with eraser
 - OPTIONAL: digital calipers



Class Policies

- Contact us at **productdesignwharton@gmail.com** Make sure to check assignment briefs, class slides, before emailing.
 - **Don't communicate through Canvas!!!**
- **There is zero tolerance for academic dishonesty**, resulting in failing this course. This includes copying others work, submitting work from other courses, signing into attendance while not present (or sharing the sign in code) or downloading CAD models online and submitting it as your own.
- **Abuse of campus resources** (Biomedical Library, Education Commons, FabLab, Studios at Venture Labs) will result in an indefinite ban of these services

Class Policies

- **Laptop Policy:** Laptops are allowed for note taking and CAD (Rhino) work. I will send an Annoucement on days you should bring your laptops for Rhino work. If I catch you working on coursework for another class, I will call you out. **If I have to ask you twice, you'll be asked to leave.**
- Absences are **only excused with a note from your advisor.** Job interviews are not excused absences. Course absence reports from PennInTouch are not accepted. If you have a red pass, email a screenshot and your absence will be excused.
- Masking will be taken seriously! **If I have to ask you twice, you'll be asked to leave.**
- Most assignments can be turned in up to 24 hours late for 25% credit - **there are important exceptions!**

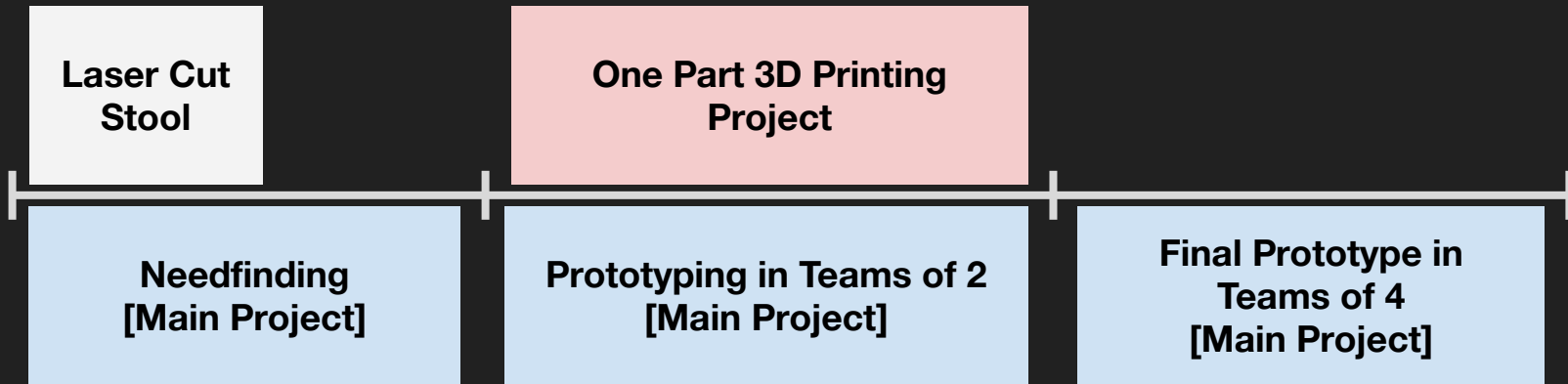
Studio Class

- Lectures, group activities, self-guided work time
- Be prepared with supplies, manage your own time well
- Creativity does not happen in a time crunch! Your best ideas may come when you least expect.



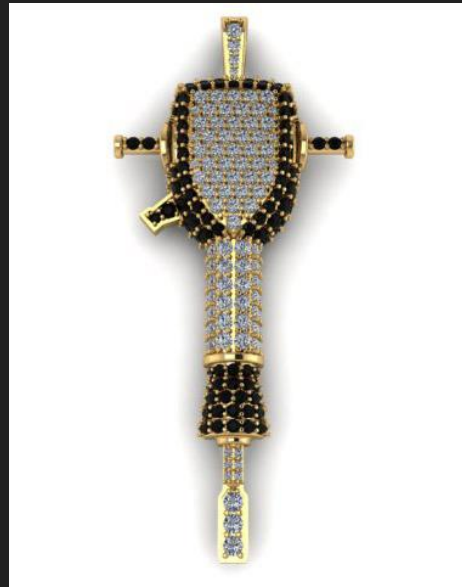
Timeline

3 Project Structure



???'s

Prof. Ashley



What is *Product Design?*

What is *Product Design?*

Product design is conceiving and giving form to artifacts that solve problems, taking into consideration the production of an artifact to be used by many people.

design thinking

human centered design

iterative development

empathy mindset

design research

empathy

**the action of understanding and vicariously
experiencing the feelings, thoughts, and
experiences of another**

**“Design for the extremes and the
rest will take care of itself.”**



OXO Good Grips Vegetable Peeler Evolution (1990)

A woman with blonde hair, wearing a grey cardigan over a white top, is speaking and gesturing with her hands. A man with light brown hair, wearing a beige sweater, stands behind her, holding a pair of red-handled pliers. They are in a workshop or studio with a large window in the background and a whiteboard on the wall.

Agnete Enga
Senior Industrial Designer
Smart Design

empathy

Can be developed with an interview.

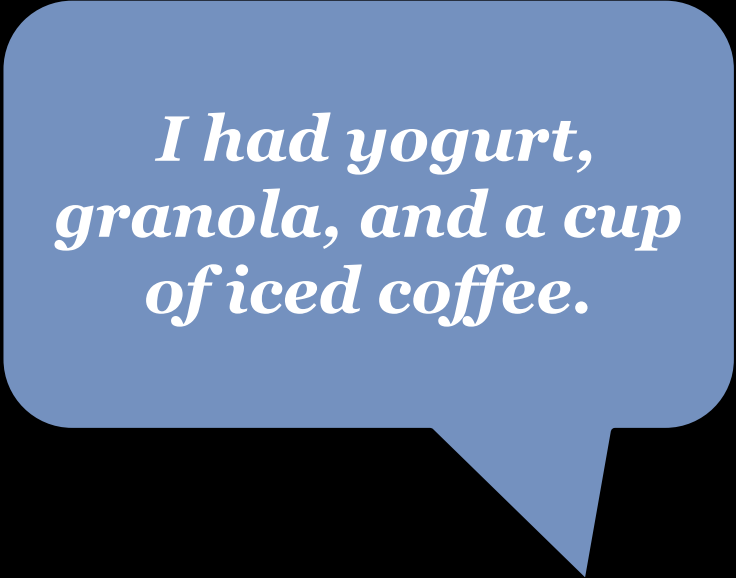
An *ethnographic interview* is an informal interview consisting of open-ended questions.

**It is not mean to solicit answers
that you want to hear!**

Aim to answer a few big questions rather than a series of small short answers.



*What did you eat for
breakfast?*



*I had yogurt,
granola, and a cup
of iced coffee.*

Tell me about your morning....

First, I grab one of my designated “yogurt” bowls (they’re nice and deep), and dish out some yogurt from the tub after pouring out the excess liquid on top. Then I grab the box of granola and bring it to the table with me since I keep adding more granola as I eat! You can never have too much granola. Then on my way to work I stop and get an iced coffee from the cafe around the corner, though I’m trying to make my own cold brew at home to save money.

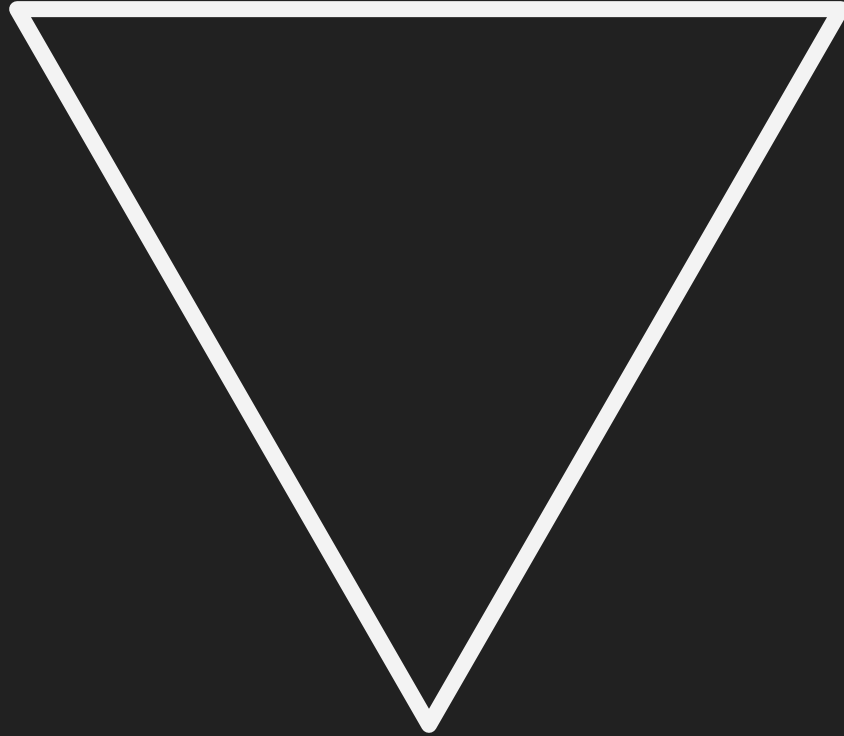
*What did you eat for
breakfast?*



*Tell me about
your
morning....*



“What are you studying?” “What’s your typical day like?”



“What’s the most annoying part of accessing your PennCard?”

In What Way Might We...

- In what way might we make it easier for you to put the bed sheets on beds that are pushed against the wall? - Isabel
- In what way might we make organizing sink space more efficient when sharing with multiple people? - Ruby
- In what way might we create a simple, inexpensive way to soundproof a small room? - Frances
- In what way might we make it easier for people go to cramped public restrooms (especially in winter) with a lot of stuff in their hand to find a way to hang them. - Yuhan

???'s

5 minutes for question generation

(but first some tips!)

**Don't jump to
solutions!**

**Don't worry about
what/how you're
going to make a
prototype.**

5 minutes for question generation

1. Draft a series of 5-7 open ended questions; get your interviewee to tell stories.
2. Don't focus too much specifics, but more on their daily habits.
3. Create flexible follow up questions
4. Suspend your bias about what you already know or feel about the topic



User Research

“speed dating”

Things to keep in mind:

- Make sure to write down exactly what the person says, not what you think they might mean. This process is all about hearing exactly what people are saying.
- Try to develop **empathy** with your interviewee.

8 minutes total per “date”

4 minutes per interview



- Start by interviewing the person sitting across from you.
- After 8 minutes is up, listen carefully to directions for switching seats.

Due Dates:

- **Stool files due Weds at midnight!!**
 - **Rhino file (.3dm)**
 - **Rhino screenshot**
 - **Adobe Illustrator (.ai) file**
- **Lecture: Opportunity Identification and the VIDE model**
- **Apply for Venture Labs Membership**
 - **<https://bit.ly/3nQS31W>**
- **DESIGN FAIR WEDS 4/27 6:30 - 8:30 PM**