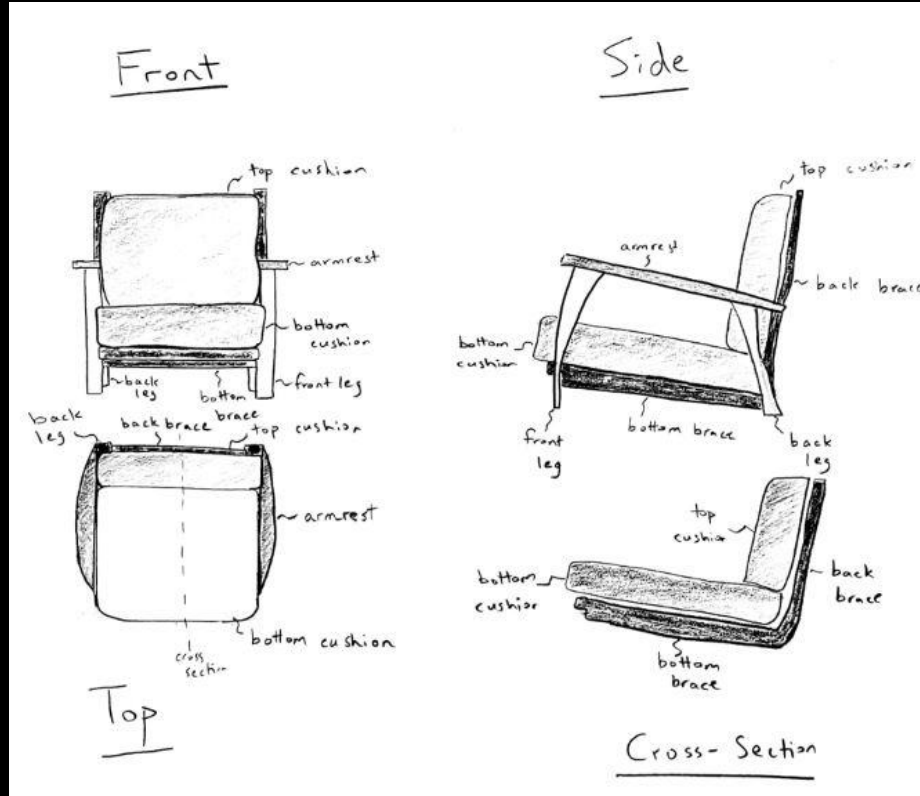


Product Design

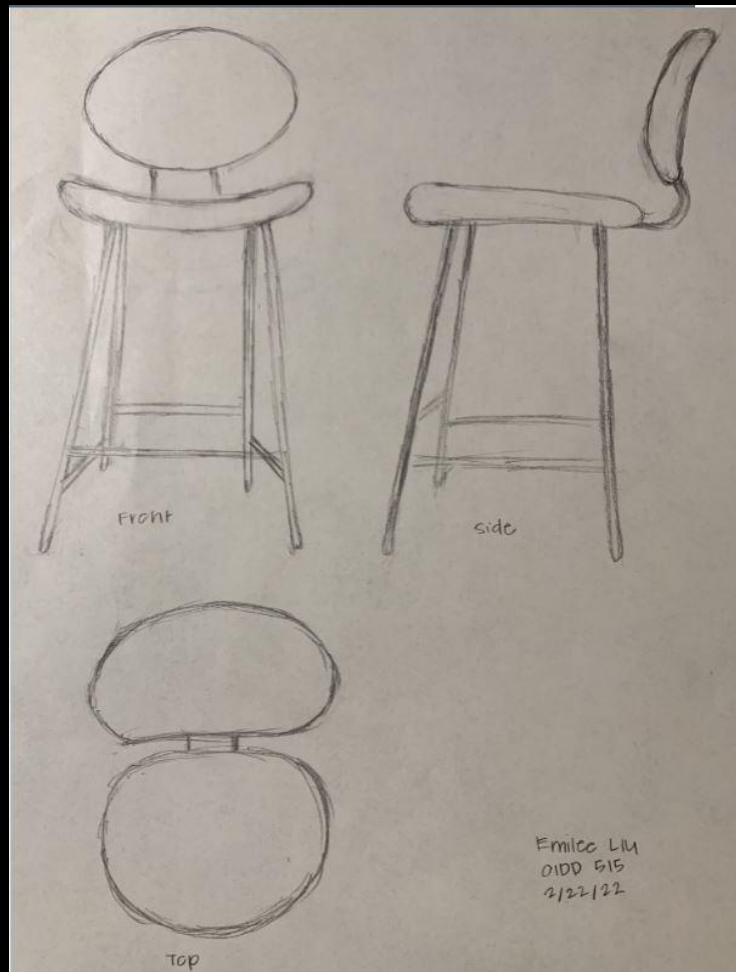
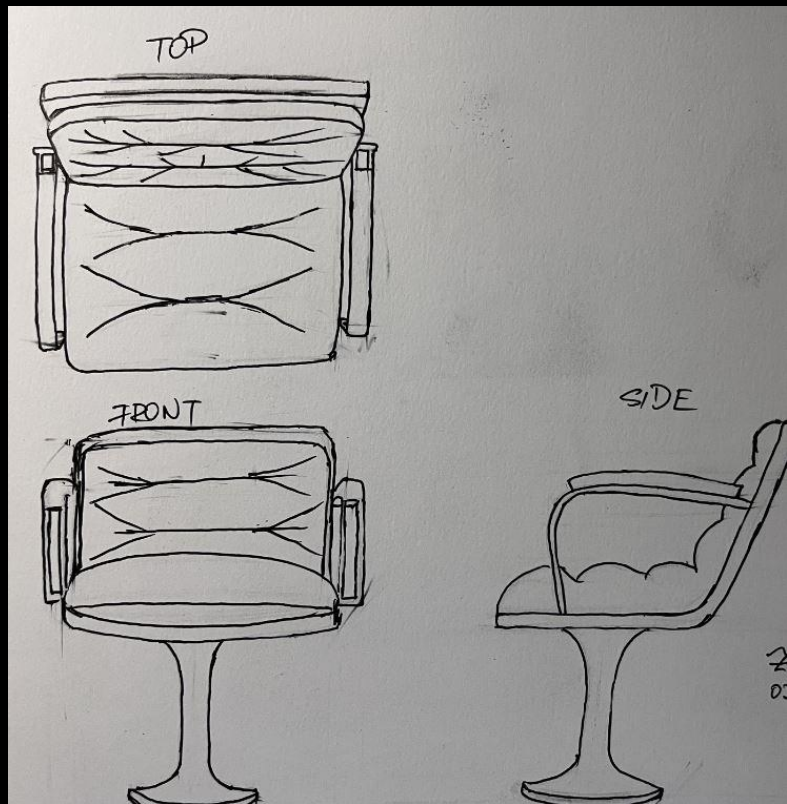
OIDD 415/515
MEAM 415
IPD 515

- **One Part Challenge**
- **Prototyping**
- **Coming Up**

Great Work!



Great Work!



One Part Challenge

Design and 3D print a product that is only one part.

The 3D printed prototype must function to complete a task. It can't just be decorative.

You MUST use Rhino to model your object.

One Part Project



Constraints

- Ask yourself “*is it one part?*” Your product can attach/clip onto an existing object, but the product itself (what you would purchase) can only be a single, 3D printed part. You should not attach anything to the 3D print beyond gluing on a magnet.
- Smallest: 25 x 25 x 25mm
- Largest: 75 x 75 x 75mm
- Has to have a utility or function (no cups, bowls or vases - these are too easy!)
- Designed in Rhino

Things to Keep in Mind:

- **An individual assignment separate from main semester team project!**
- **We are looking to see your creativity!** Try to design a product that is *new to the world* in function and/or aesthetics. A phone stand is a boring choice!
- **We do not expect you to go through the whole Design Thinking process for this challenge.** However, your product should be functional and solve a need.
 - The need can also be very specific, for example: If you have a favorite mug, you can design a holder specifically for that mug to hold your favorite tea bag.

One Part Challenge

- Sketch due week of March 14
- Final project due week of March 28



Proof of Concept

Prototype

Empathize



Define



Ideate



Prototype



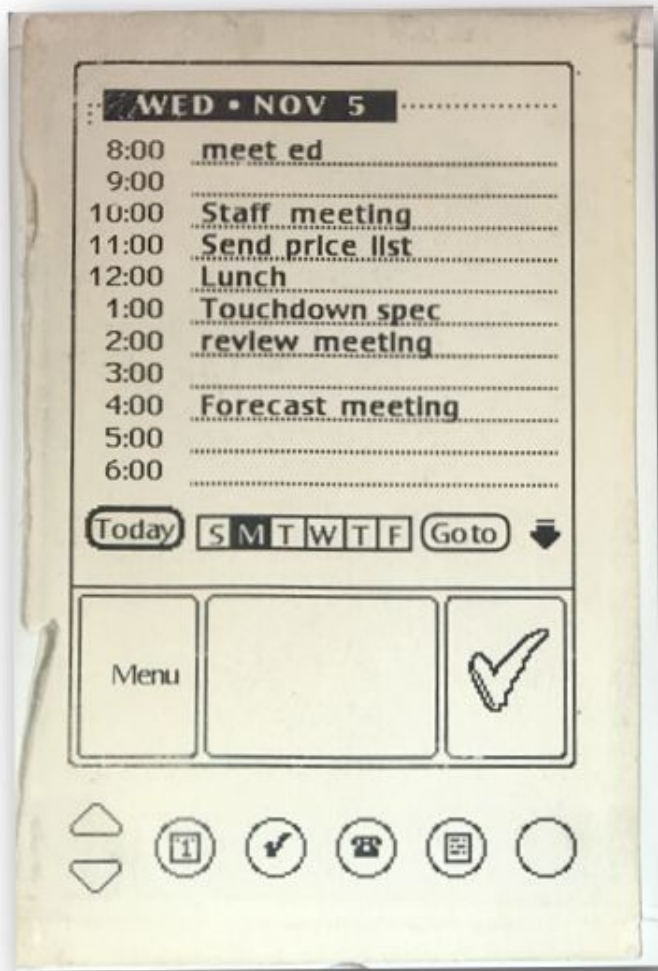
Test



*Prototyping is taking
your idea(s) and making
them visible, tangible,
and testable....*

*...as well as further
testing our assumptions
and thereby mitigating
risk.*







Proof of Concept Prototype

Expectations for Proof of Concept Prototype...

- Generally made by hand utilizing easily available materials or found objects.
- **Prototyping isn't about making just a model of your idea, but creating an object that is testable in some way.**



Expectations for Proof of Concept Prototype...

- Obviously your prototype may not have all the details, aesthetics, and functionality that you envision
- Ask yourself - “What is the core ‘job to be done’”? and build that.
- “Minimum Viable Product” (MVP): allows a team to collect the maximum amount of validated learning about customers with the least effort
- Create a hypothesis to test and build the simplest prototype that allows you to test the hypothesis

SaniStation

Keep your homes clean with this all-in-one cleaning & unpacking station

\$30

Built-in wipes

Allows you to wipe down the external objects that enter your home. This is found inside the drawer and is refillable.

Drawer feature

Allows you to put regular items needed for unpacking needs: scissors, tape, wipes, etc.

Disposable, refillable plastic sheets

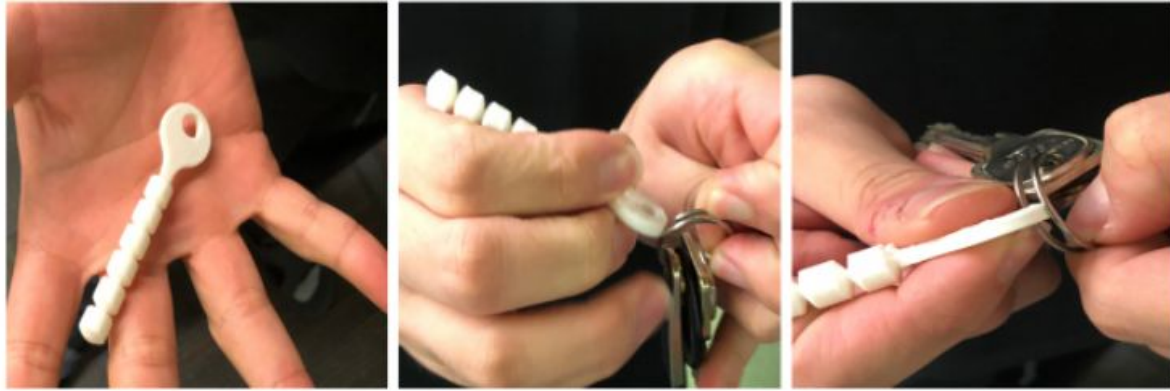
Allows you to compile all external waste alongside the plastic sheets for one fast disposal

Foldable legs

With space-saving, collapsible legs, this handy table won't take up any space in the house

Why SaniStation?

- Separates all surfaces in the household from contact to external objects i.e. groceries, shipping package
- Speeds up time to unpack and disinfect external objects since all necessities are in the SaniStation
- Protects surfaces i.e. wood from getting ruined by the disinfectant



Safe: Our presser is made of several attached segments. After one pressing you can remove` the top segment that may have virus attached to. The presser itself will always stay clean. You do not need to worry about putting a contaminated object in your pocket.



Soap Dye Checker

Product Information:

Make sure you're washing your hands for the proper 30 seconds with Soap Dye Checker! With this dual pump system, you will get soap and dye that disappears after a thorough 30 second wash. Our process, materials, and parts are all meant to be completed with household items.



Retail price

\$5 per bottle of soap on average

\$2 per tube of food dye

Connector is made from household materials

Digital Prototyping



Concept Pitch Next Class!

- 2 minutes to present
- 2 slides maximum
- Photo of your prototype and show off the physical prototype
- All team members names on all slides
- Tell a story
 - Demonstrate your prototype during your pitch!
 - Core user needs
 - Pain points addressed
- No financial projections, manufacturing costs, etc.

Due for Next Class

- Concept Pitch slides- due 10 AM day of your section!
 - MBA Opportunity Week
- Proof of concept prototype (photo)
- Curves from Surfaces Rhino video
- Lecture: Careers in Product Design
- *Due later: One Part sketch - due week of March 14th*

Studio Time

- **Be respectful!**
- **Bulk of time is spent on prototype**
- **If you think you are done, work on user testing or plan your pitch**
- **Make good use of this time!**