

Part Modeling and Synthesis

ME 170 CADLAB#3 and TEAMPROJ#2

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UIUC

Fall 2022



A reminder:

- Office Hours (MEL 1009):
 - Tuesday Noon-1PM (Before Lab)
 - Wednesday 9-10AM
- CADLAB#3
- Monday - TEAMPROJ#1
- Tuesday - TEAMPROJ#2



- CADLAB#1
- CADLAB#2 – Intro to Part Modeling (Due 9/14 Wednesday)
(Monday sections 9/18 Sunday)
- CADLAB#3 – Multi-Step Part Modeling (Due 9/21 Wednesday -
Everyone!)
- CADLAB#4 – Loft & Sweep Features (Due 9/28 Wednesday (?))



- TEAMPROJ#1 – Interviews (Due 9/14 Wednesday)(Monday sections 9/18 Sunday)
 - Monday - Starting this week.
- TEAMPROJ#2 – Synthesis (Due 9/21 Wednesday)(Monday ?)
 - Tuesday - Starting this week.
 - Monday - Start next week.
- TEAMPROJ#3 - HMW questions



CADLAB#3: Multi-Step Part Modeling



This week's CADLAB continues with sketching and adding more complexity to your designs. You will learn about:

- Making more complex sketches
- Adding more constraints
- Creating revolutions



- Pay close attention to the constraint marks. Your sketch should have similar constraints. They get more complex in this lab.
- Part 7 can be tricky. Look closely at the drawing and the constraints. If you create a egg shape like you did in CADLAB#2, you will end up completely trimming out the top arc.



TEAMPROJ#1: Understand Space



- This week you will be conducting interviews for your Team Project
- I will briefly overview the slides.
- You will conduct "User Research Simulation" activities with your teammates.
- Please ask questions if you need help!



Team Project Requirements

Please note the following requirements:

- Design a new mechanical or electro-mechanical consumer product (i.e. mass-produced for the consuming public)
- The product should have moving parts (i.e. a mechanism).
- The product should be designed predominantly utilizing sheet metal stampings and plastic molded parts.
- The product should be your own design and should have something new or different about it.

See the [Full Canvas Text](#) for all the requirements.



TEAMPROJ#1 Submissions

You will submit the following:

- One "User Research Simulation" document for each team member. Inside those documents:
 - Each team member needs to complete their own interview and note taking session. It is okay if your notes are for another team mate.
 - Each team member needs to complete the **individual** "Exploring Project Focus".
 - As a **group** you should complete the "Exploring Project Focus" and write a paragraph for the "Document Project Focus". I only need one copy of these among the 3 or 4 submissions.
- You will also submit your interview packet - one per team.
- When you go to submit this, it will only let you submit for the group - i.e. it will not be an individual submission like the CADLAB, but Canvas will know what group you are in and link the submission to all of you.



TEAMPROJ#2: Synthesis Space



- This week you will be conducting Synthesis portion of your Team Project
- I will briefly overview the slides.
- You will conduct activities with your teammates.
- Please ask questions if you need help!



- CADLAB#2 is due September 14 at 11:59PM (Monday sections 9/18 Sunday)
- CADLAB#3 is due September 21 at 11:59PM
- TEAMPROJ#1 is due September 14 at 11:59PM (Monday sections 9/18 Sunday)
- TEAMPROJ#2 is due September 21 at 11:59PM (Monday sections ?)
- Start preparing for CADLAB#4
- Start preparing for TEAMPROJ#3



- Ben Walt - walt@illinois.edu
- Graders:
 - Monday 1-2:50PM (AB1) - Aryan Shroff - aryans4@illinois.edu
 - Monday 3-4:50PM (AB2) - Patrick Li - pyli2@illinois.edu
 - Tuesday 1-2:50PM (AB3) - Nishesh Arora - nishesh2@illinois.edu
- Office Hours (MEL 1009):
 - Tuesday Noon-1PM (Before Lab)
 - Wednesday 9-10AM

