

Week 10 - Creating Your ABM Parts using OnShape

Description

In Week 9, you sketched all the parts for your ABM in the lab and refined your sketches for homework. Your task for this week is to create the parts for your ABM in OnShape. The ABM you are designing will have several parts and will take a coordinated effort to complete successfully.

In Lab Activities

1. In Lab Demo for 'Sweep', and 'Loft' (20 minutes)

Your TA will show how to create a simple crank using sweep operation in SolidWorks. Follow along with TA.

2. In Lab Tutorials on OnShape

All students are encouraged to be in-charge of their own learning and follow along the following tutorial available online. Please follow this path.

Learn.onshape.com → Learning Pathways → Advanced Parts and Surfacing Design → Advanced Part Design.

Finish this *Advanced Part Design* Tutorial from the start till finish. It isn't part of the grading, however following this tutorial will help you model your ABM parts, that are due the beginning of the next labs.

3. Creating the Parts on OnShape (120 minutes)

Use the part-by-part drawings you made as part of the last week's homework to start creating the parts of your ABM in OnShape. As you create your parts, you may want to have somewhat simplified representations for the components of your moving figure, e.g. omit facial details of a human figure if they move together with the head. Make sure you talk with your TA for such simplifications to get advice on what is sensible.

Please start making the OnShape document directly inside the shared folder on siat.onshape.com called **"Week 10-Week 12 ABM Assemblies"**. **Each student should have only ONE file in this shared folder. Make sure to make all parts in a single file.**

Assessment

Item	Due	Individual or Team	Criteria	Activity Mark	Part Mark	Total
ABM parts	Before next Lab	Individual			80	
			all parts present	40		
			parts match sketches	40		
ABM Preliminary Assembly	During next lab	Individual	Please start working on your ABM	20	20	

	assembly during the labs to receive partial grades	
TOTAL		100

Sketchbook

Sketch. A lot. Use your sketches to solve problems. You must do this as an individual activity, but are free to discuss it with your partner so that you reflect your group’s thinking as you progress through the project. You must show your TA your sketchbook in order to receive a weekly mark. **TIP: Sketch at each step of the project.**