

# **EE-100 Engineering Laboratory Module2: CAD**

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Office Hours: Room 9-245A

Tuesday (1000-1100)

Thursday (1000-1100)

# CAD Module

**Learning Objective 1:** Create and interpret mechanical drawings

**Learning Objective 2:** Recall and demonstrate workshop/industrial safety practices.

- Week 1
  - Introduction to the course and its contents
  - Design methodology for scientists and engineers
  - Introduction to Engineering Drawing
  - Engineering Drawings
    - Standards, Types, Projections
  - Workshop / Industrial Safety Practices
  - **Lab Tasks:** Sketch orthographic projections of solid objects
  - **Lab Visit:** Overview of workshop facilities
- Week 2
  - Computer Aided Modeling
    - Intro to PTC Creo and its features
    - 2D sketching
    - Basics of 3D object modeling
  - **Lab Tasks:** 3D part modeling.
- Week 3
  - Advanced features of PTC Creo Parametric 2.0:
  - **Lab Tasks:** 3D part modeling
- **Week 4**
  - Assembly
  - **Lab Task:** Assembly task
- Week 5
  - **Lab Task 9:** Create parts and assembly drawings for a robotic hand (gripper)

# Creo Assembly:

Required Parts:-

Bracket

Yoke\_male\_pro

Yoke\_female\_pro

Blue\_pin

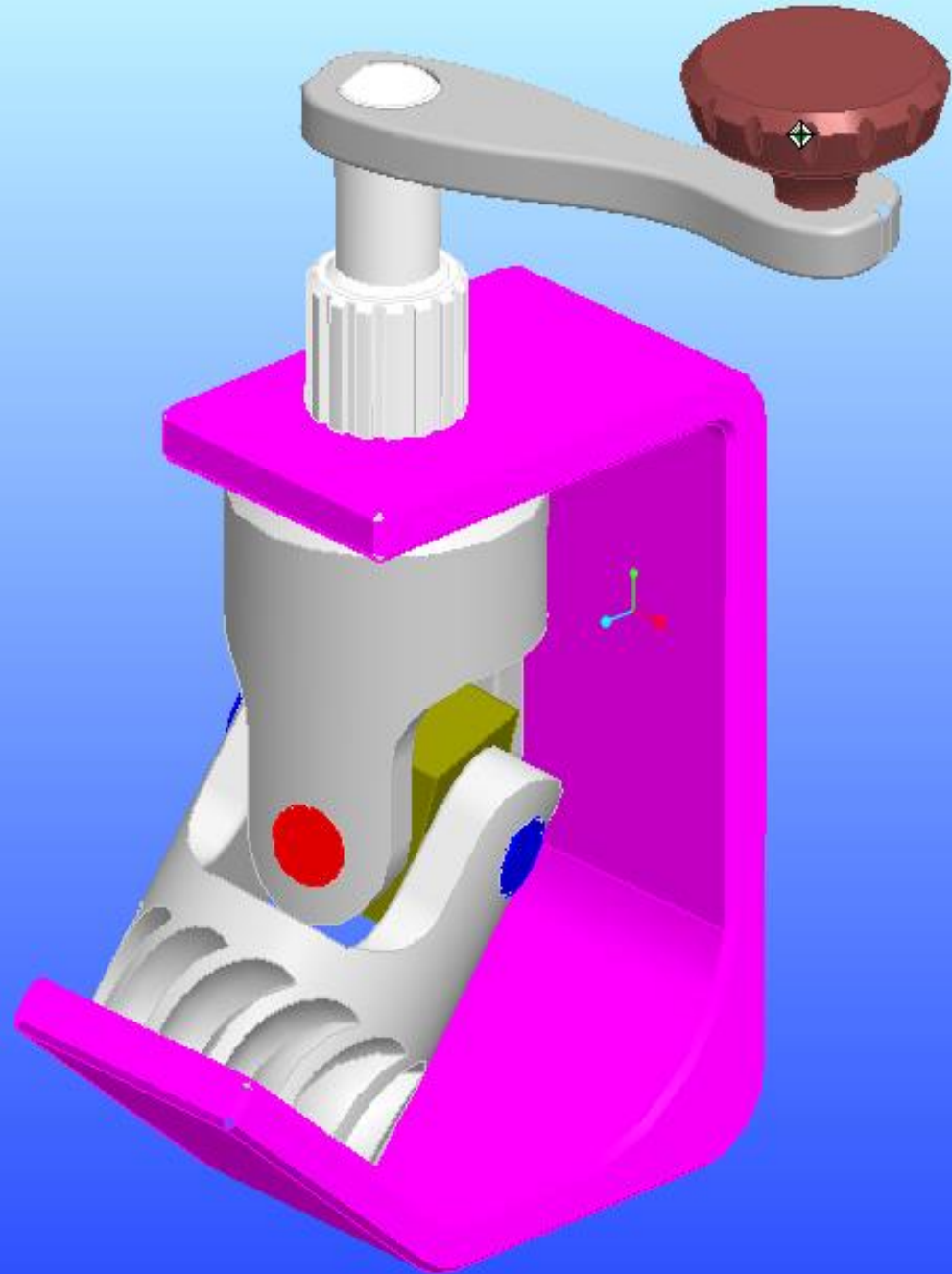
Red\_Pin

Fastener

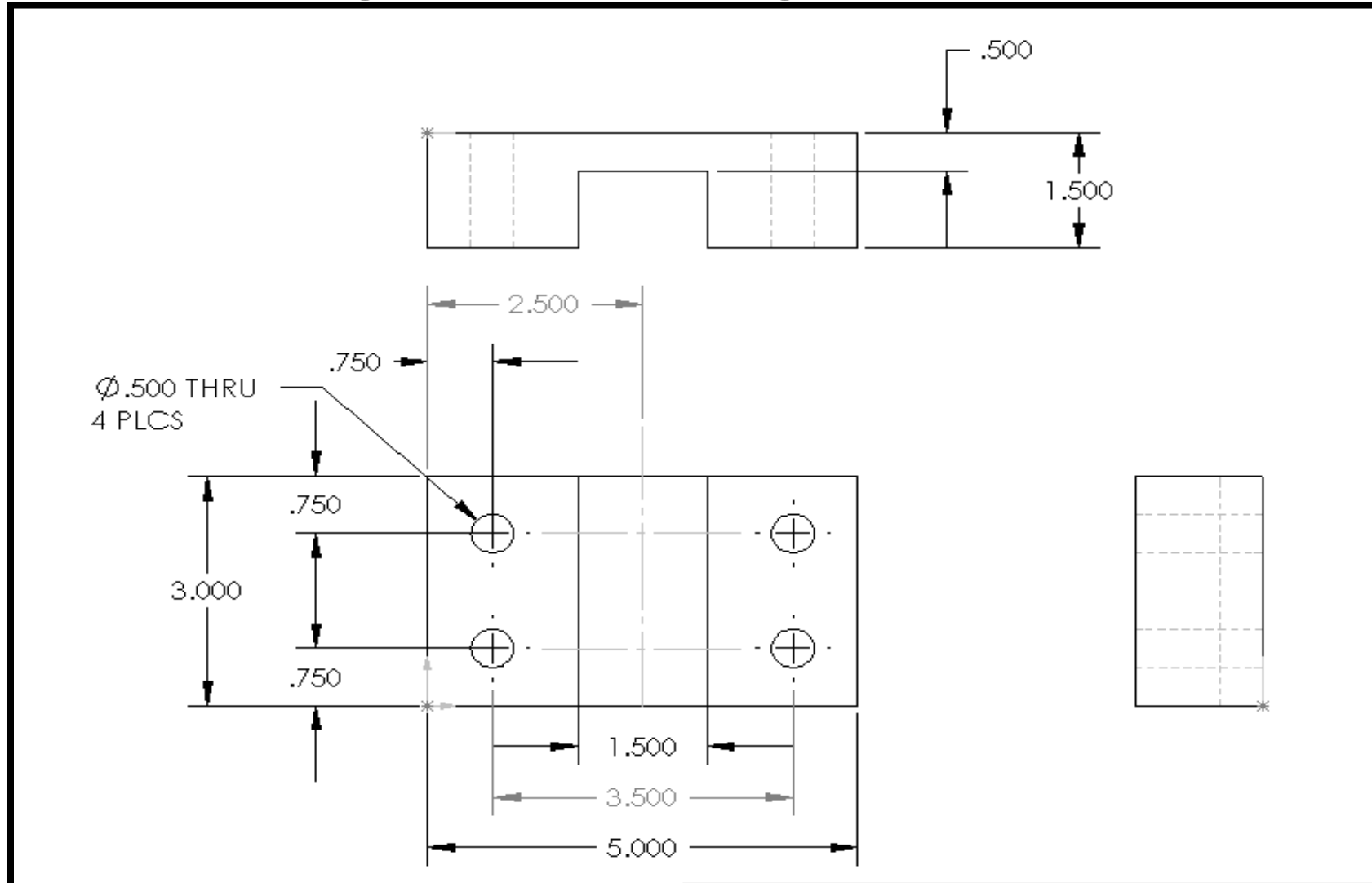
Handle\_assembly\_pro

Red\_pin

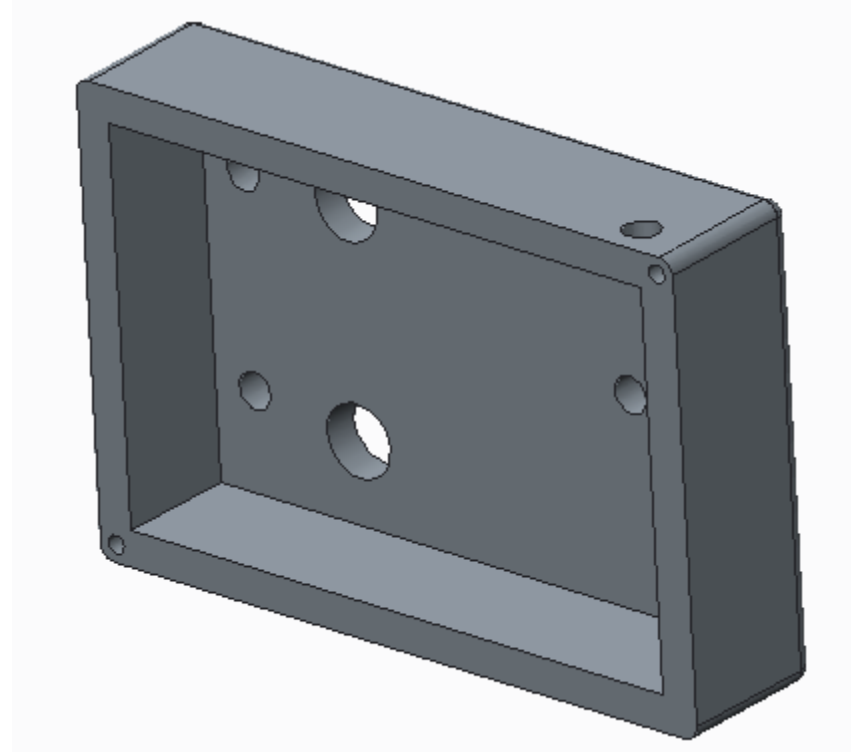
Spider\_hinge



# Engineering Drawing

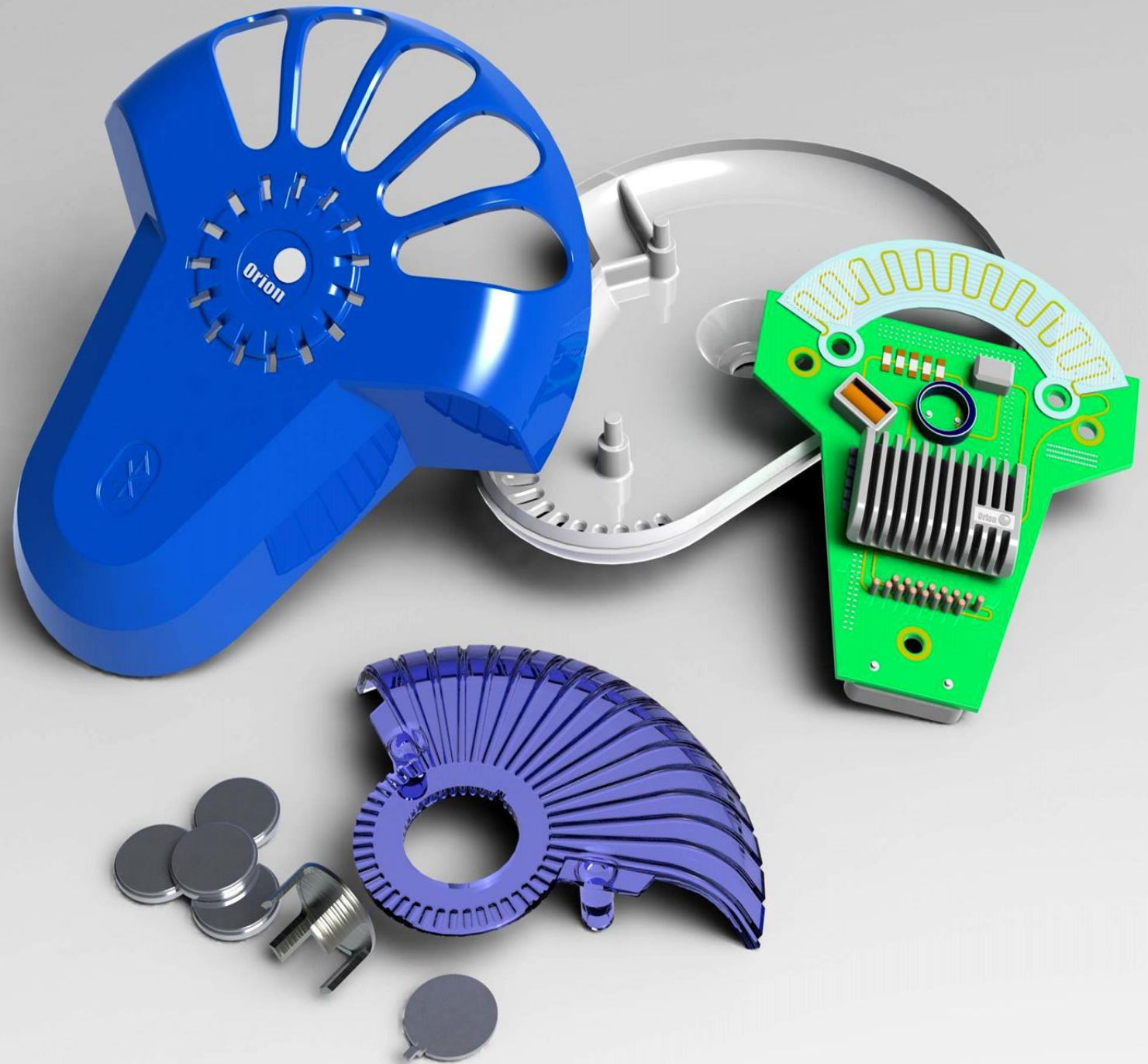


# Demostration 4



# Lab Task 8:

All the components are given for the assembly product. You are advised to devise the relationship between all these part and Upload it to LMS



ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	L4 REAR BEZEL	
2	1	L4 PC Board	
3	1	L4 FRONT BEZEL	
4	4	Battery Cell	
5	1	Connector	
6	1	LIGHT FRAME	
7	1	Battery Shield	

