

IAT 106: Spatial Thinking and Communicating

Week 5 - Pre-Lab Assignment

Due at the start of Week 5 Lab

Objectives:

To help you solve a real-life (Ok! *Close-to-real-life*) spatial problem with specific design constraints. **DUE:** At the beginning of lab 5.

Intro: In week 05 you will be working in teams of 2. As part of the pre-lab your first task is to find yourself a good teammate. A good teammate **MUST** be a member of the same lab section, you are in.

Design Scenario:

In teams of 2, brainstorm (develop preliminary sketches of) a three-dimensional cube that can hold the much famous; first golf ball that was hit on the moon by Alan Shepard (first man in space) four decades ago. The ball has miraculously landed on Earth quite recently and you as a team are asked to design a fabulous casing for it.

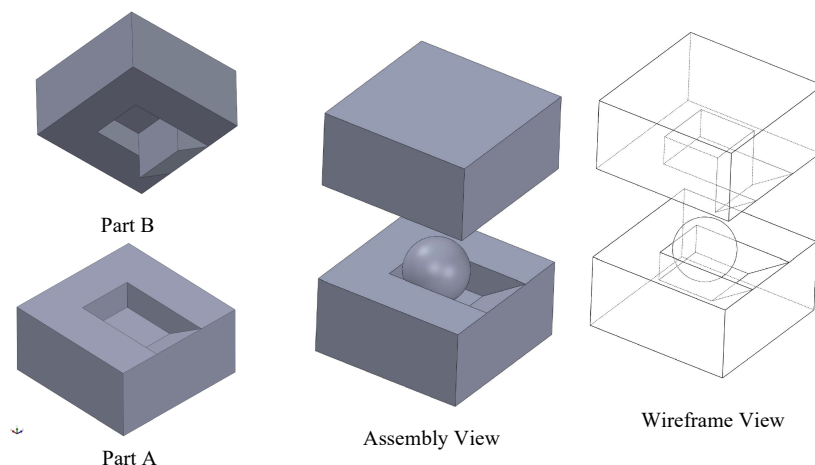
Design Requirement:

1. The final design *must* be a cube of a size 120mm x 120mm x 120mm.
2. Should be taken apart into two halves. The two halves can be of different sizes.
3. The golf ball is 42.7mm diameter, you can round it off to 43mm including the tolerance. The placement of the ball does not have to be central.
4. The two halves *should* lock with each other, such that when the cube is held in hands and rotated around 360 degrees, it should not let the ball drop.
5. The final cube *must* have at least one of its internal surfaces an inclined surface.
6. The material given to develop this design will be single corrugated cardboard sheet.

Marking Criteria:

The final casing will be marked based on the creative design, workmanship and the proportional accuracy. The final case can be anything **EXCEPT** a box with a lid.

Example:



NOTE: your design **CAN NOT** be this one. This example is for demo only.