



Valid Models Only LLC.
BME 350: Introduction to BME Design
1620 BBBB

Solidworks 1 (50 points) - Due February 6th, 2026, at 11:59PM

For your final project design, you will be asked to create Solidworks designs of your device. Before being able to do this, you are being asked to practice building drawings in Solidworks. In class, you will be given time to complete the Solidworks tutorial 1. For this assignment, please submit 7 total files including: the Solidworks files for each part for tasks 1-4 (this includes 5 of 7 files - parts 1-3, 4a, and 4b, as ".sldprt"s), the drawing for task 1 as a ".slldrw" file, and the assembly for task 4 as a ".sldasm" file. Each part should be able to be opened in Solidworks, be **fully defined**, and have correct dimensions and materials. The drawing should have all key dimensions marked (as shown in the Task 1 tutorial). The assembly should include the necessary mates for the cover to fit perfectly on the well plate.

Note: This is NOT a group assignment. Each student needs to work on this assignment independently. **WARNING:** In Solidworks, there is a way to see who created the part, which we will check to make sure that each student is submitting their own part. Submitting other students' Solidworks files is an Honor Code violation.

Course learning objectives addressed by Solidworks 1:

2.) Translate real life items and ideas into 2D and 3D models accurately

Specific assignment objectives:

1. Create parts, sketches, and drawings using the Solidworks interface
2. Draw lines, circles, and rectangles using the Solidworks interface
3. Select the correct relations, dimensions, and materials for sketches and parts
4. Extrude two-dimensional shapes into three-dimensions
5. Filet edges of three-dimensional parts
6. Examine your parts for being 'fully defined'
7. Add 'drill holes' of select type and size using the Hole Wizard function
8. Connect multiple different parts into a single assembly using the mate function

Please see the next page for the Grading Checklist.

Grading Checklist:

For ALL Tasks

Each incorrect dimension will result in a 2.5 point deduction

Any under (or over) defined sketch within a part will result in a 2.5 point deduction for that part

Task 1 (15 total):

- Part file - 5 points
- Drawing file - 10 points
 - ◆ Each missing dimension label in drawing will result in a 1.5 point deduction
 - ◆ Everything must fit nicely on the page. Overlapping will result in a point deduction of 1.5 points

Task 2 (5 total):

- Part file - 5 points

Task 3 (10 total):

- Part file - 10 points

Task 4 (20 total):

- Part files - 5 points each
- Assembly - 10 points
 - ◆ Any incorrect mates will result in a 2.5 point deduction (HINT: there should be no movement of the parts when selecting with your mouse and dragging across the screen)