CNC Final Project

Project overview:

Students will be working in teams and apply their knowledge gained in MET 237 class to design and manufacture a prototype product. The prototype should meet the following requirements:

- The dimensions of the final product should not exceed $60 \times 60 \times 100$ millimeters.
- Maximum allowed depth should not exceed 19 millimeters.
- Apply facing to all sides.
- Apply chamfer/fillet to sharp edges.
- Write a word address program for the required operations.
- Choose the appropriate CNC tooling, operations and submit the CNC tool and operations sheet.
- Sketch your design using SOLIDWORKS, AutoCAD, Onshape, Fusion 360, or any other CAD software and include all necessary dimensions.
- Submit a final report. The final report should include:
    1. CAD drawing of your design with all necessary dimensions.
    2. The CNC tool and operation sheet.
    3. The G-codes.

Examples of possible products:

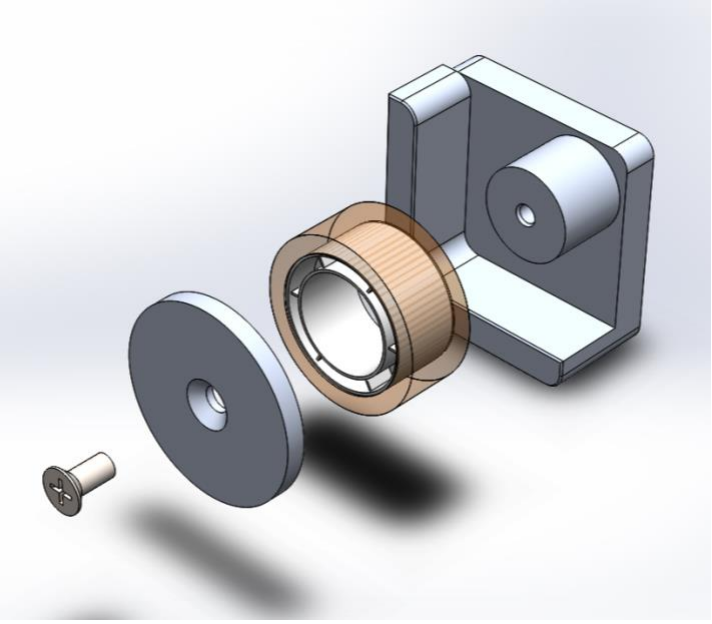

Figure 2 Tape dispenser

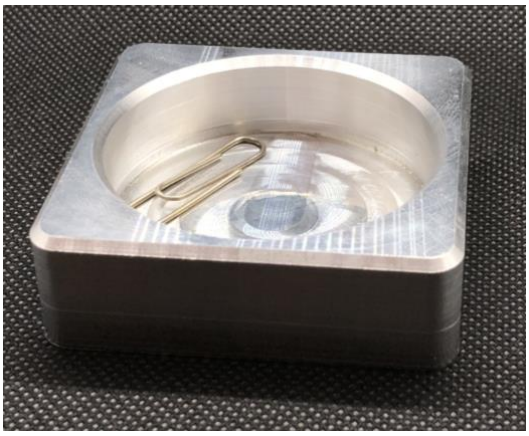

Figure 1 Paper clip holder

Figure 3 Business card and pen holder

Time table:

Task	Due date
1- CAD drawing of possible product design. Note, each team member should submit one page that include his idea.	3/03/2020
2- CNC tool and operations sheet submitted by each team member. Each team member should submit one page that include the tool and operations needed to produce his design.	3/03/2020
3- CAD drawing of the final product with dimensions	5/04/2020
4- G-codes, CNC tool and operations sheet	5/04/2020
5- Final report and final product	28/04/2020

Students are assessed according to the attainment of the following indicators:

- Research and gather information.
- Fulfill duties of team role.
- Share work equally.
- Listen to teammates.
- Use computer-based and other resources effectively in assignments and projects.
- Select appropriate techniques and tools for a specific engineering technology task and compares results with results from alternative tools or techniques.
- Identify the quality requirements associated with an engineering technology problem/need.
- Able to develop plans to achieve project due dates.
- Able to evaluate and use test results to improve a product.