

**Carnegie Mellon University**  
**Department of Mechanical Engineering**

**24-632 and 39-601 Additive Manufacturing Process and Product Development**

**Fall Semester 2022**

**Team Design Project**

**Project Part 3 of 3: Final Product Due Friday December 9, 2022:**

For this part of the project, design teams will create a final CAD model and a final 3-D printed prototype of their best product idea, building on Parts 1 and 2 of the project. Each team will write a short report on their findings, to be handed in on the due date above.

The **5 page** maximum report (1.5 line spacing, times 12 point font) including figures will consist of final sections:

- 1) Final Product Choice:** 1) Identify the final product design that your team is proposing.  
2) Describe how this final product has evolved from what you created in parts 1 and 2 of the project. 3) Briefly describe your final products features, potential market appeal, etc.  
4) Provide a CAD rendition (3-D image) of your final product
  
- 2) Printed Primary Product:** 1) Provide detailed images of a 3-D printed version of your final product. These images will not count toward the 5 page report limit. 2) If there are any issues with printing of your product then note them in the report. 3) Hand in a print-out of your part.
  
- 3) Analysis Summary, Retrospective:**  
Sum up your findings from this entire project (Parts 1-3) by specifically answering the following questions (this part is important, so give complete, introspective responses):
  - 1) Do you think your product is a successful one? Why or why not?
  - 2) What are your biggest challenges in the assignment (e.g. is it reducing product cost, increasing appeal, working as a team, etc.).
  - 3) Where did your team make mistakes in designing a good product?
  - 4) What things did your team do that were most effective in designing a good product?
  - 5) What would you have done differently in your design process and/or team activities, given the perspective that you have now? (think of this as advice to the next group of students taking this course)