



Fab Lab HTMAA HTMAA Projects



Name	Period	Date
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Project Overview

1. Design and create something from scratch. You cannot use predesigned parts.
2. The final product must show mastery by utilizing multiple pieces of software and at least three pieces of hardware (vinyl cutters, laser engravers, ShopBot, 3D printers, 3D scanners, 3D mills, heat press, card printer, vacu-form, etc.).
3. You work alone or with one other person.
4. Each project is worth 50% of your total grade in the class.
5. You must complete two projects.
6. There are four components to the project, each worth 10 points:
 - Project 1 Proposal – Due: 3/28/16
 - Product 1 – Due: Week of April 25th.
 - Documentation Project 1 – Due: Week of April 25th.
 - Presentation on the process for Project 1 – Due: Week of April 25th.
 - Project 2 Proposal – Due: 5/2/16
 - Product 2 – Due: Week of May 30th for seniors. Week of June 6th for underclassmen.
 - Documentation Project 2 – Due: Week of May 30th for seniors. Week of June 6th for underclassmen.
 - Presentation on the process for Project 2 – Due: Week of May 30th for seniors. Week of June 6th for underclassmen.

Project Proposal

- Completed form turned in on time
- Presented Proposal
 - The proposal should be an oral version of the completed form
 - All appropriate information must be identified/shared

Final Product

- The project should be fully assembled completed, polished (clean/presentable), and function as designed.

Final Documentation

- Documentation will not be accepted unless it is typed using a word processor.
- For this project, you will write a paper with the following key components:
 - Use the Engineering Design Process and Design Brief as a guide for the structure of your paper
 - Take us step-by-step through the whole project from start to finish
 - Images of *part designs* and *finished parts* should be seen, where appropriate, throughout the paper.
 - 6 or more images (2 per component/machine) should be present
 - All images should be annotated.
 - Images of *completed design* and *assembled project* should be seen, where appropriate, throughout the paper.
 - 6 or more images (3 for the design and 3 for the assembled project) should be present.
 - All images should be annotated.
 - Identify issues and how they were addressed.
 - Identify any changes from the original design that were made and why they were made.
 - Identify the materials used and total cost.
 - Personal Reflection:
 - Are you satisfied? Why?
 - Given more time what would you change?
 - What was the most challenging part? Why?
 - What was the most interesting part? Why?

Presentation

- The presentation should be 5-10 minutes long.
- The presentation topics should reflect the final documentation explained above.
- The presentation should be done using presentation software.