

Assessment 4

The purpose of this project is to help prepare you for teamwork and design and to also give you practice in communicating your work both in writing and in person. There is an interim due date of **Thursday, April 1** to turn in a rough draft of a portion of your work, and the final written report is due by **Thursday, April 29**. Students will present the final project in class on **Tuesday, May 4**.

As your customer, I get very, very annoyed every time I go to the grocery store. I have to manage my cart throughout the shopping process, putting the heavy items on the bottom, trying not to squish the bread, and keeping my toddler somewhat contained and entertained. Then I have to completely unload my cart, go through check-out, reload my cart (now with bags that may or may not stay upright and still trying not to squish the bread), then load my car, again, trying to keep the heavy items on the bottom and prevent my cart from rolling away with my toddler inside.

Using the 10-stage design process, create a new type of shopping cart that makes my life easier. Note: you probably don't have enough information about what I'm looking for, just from the above narrative. Customers never know exactly what they want, and it's your responsibility as a design engineer to talk to your customer (me) and figure out exactly what it is I need.

You will have a homework assignment related to this project where you must identify key milestones and set interim due dates and assign responsibilities for specific tasks. It is expected that you will keep in contact with me as you complete this assessment. Everyone in the group should participate. If difficulties arise within the team, you must notify me immediately.

You will need to complete a written report that outlines each of the ten stages that your team went through in finding a solution. The text in the report should be significant. It should follow all formatting requirements defined in the syllabus. You will be expected to turn in a rough draft of your report, with at least the first four sections completed by **Thursday, April 1**. This can be turned in on Blackboard by any one of the team members, or in class. Your final report must be turned in by **Thursday, April 29**. This final copy should be turned in during class time.

Each step in the 10-stage design process must be explicitly described. Your report should follow a format similar to the following:

Stage 1: Identify the Problem

Blah, blah, blah, we did this. And here we talk about it even more, using lots of detail. All my sentences are well-created, and there are no misspelled words. When I say words like "strong" I define what it means, and when I say "cold" I provide an exact temperature.

Stage 2: Define the Working Criteria Goals

Blah, blah, blah, we did this too. I talk about more stuff. I make sure to provide enough detail so that anyone could read what is written in this report and follow our process completely. I didn't start at the last minute, so I'm pretty sure I made a good solid attempt at getting this done.

Your team will also need to give a 15-minute presentation in class on your solution. Every person in the group must talk during the presentation. Presentations will be done on the final exam day of ***Tuesday, May 4***. If you will be using PowerPoint slides (which I highly recommend), you should email me your slides by 10 pm the night before, or arrive 15 minutes before class starts to make sure your visuals work. You should bring a backup copy of your slides for use on the projector in case there is a technical difficulty.

The grading scheme is shown below. Anything turned in late will earn, at most, only half credit.

Grading Scheme for Assessment 3

Item	Due Date	Points
First Draft Submitted (10%) <i>(same grade for everyone in group)</i>	Apr 1 – 1:00 pm	
Stage 1 Identify the problem/product innovation		5
Stage 2 Define the working criteria/goals		5
Stage 3 Research and gather data		5
Stage 4 Brainstorm/generate creative ideas		5
Final Written Report Submitted (47.5%) <i>(same grade for everyone in group)</i>	Apr 29 – 1:00 pm	
Contains no spelling or grammatical errors		5
Stage 1 Identify the problem/product innovation		9
Stage 2 Define the working criteria/goals		9
Stage 3 Research and gather data		9
Stage 4 Brainstorm/generate creative ideas		9
Stage 5 Analyze potential solutions		9
Stage 6 Develop and test models		9
Stage 7 Make the decision		9
Stage 8 Communicate and specify		9
Stage 9 Implement and commercialize		9
Stage 10 Perform post-implementation review and assessment		9
Oral Presentation in Class (15%) <i>(same grade for everyone in group)</i>	May 4 – 1:00 pm	
Presentation was polished and represented written report		12
Presentation lasted required time (\pm 1 minute)		8
Presentation was ready to go before class started		5
Presentation contains no spelling or grammatical errors		5
Oral Presentation in Class (10%) <i>(different grade for each group member)</i>	May 4 – 1:00 pm	
Dress is appropriate and arrived on time		5
Spoke for proportional amount of group's time (total time / # of members)		5
Appeared well-rehearsed and spoke with confidence		10
Group Participation Grade (17.5%) <i>(different grade for each group member)</i>	May 4 – 1:00 pm	
Completed group participation grades for all group members		10
Score recommended by self-evaluation and group evaluation		25
Total		200

I reserve the right to reduce or deny credit for this assessment on an individual basis in cases of extreme non-participation, including failing to participate in the final presentation.