

Project Deliverable C: **Design Criteria and Target Specifications**

GNG 1103 – Engineering Design

Faculty of Engineering – University of Ottawa

Objective:

Define a list of prioritized design criteria, do technical benchmarking and determine target specifications which can be used in the development of your final solution.

Instructions:

1. Based on the team's list of interpreted needs, teams will define a list of prioritized design criteria, including functional and non-functional requirements, as well as constraints (and metrics, where appropriate).
2. Teams will perform technical benchmarking (i.e. researching existing products that already satisfy one or many of the interpreted needs) and update user benchmarking information (user perceptions of similar products).
3. Teams will determine target specifications (numerical values or a range of values which represent reasonable product attributes) such as minimum or maximum weight, speed, dimensions, etc. This will aid in evaluating potential solution ideas and provide measurable design goals which can be fulfilled by the final solution.
 1. Remember: Target specifications are just design specifications with ideal or marginal values and metrics are measurable design criteria, as explained in the lectures. The same list of metrics must be used in each step of this deliverable (prioritized list, benchmarking and target specifications).
4. Reflect on how the client meeting impacted the development of your design criteria and specifications, when deciding on the relative importance of your criteria and explicitly state any updated needs that have changed from deliverable B.

Ensure that each identified need has at least **one** design criterion which can be used to measure the ability of different solutions to satisfy that specific need. Note that one design criterion can be used for multiple needs. A comprehensive set of design criteria must be generated to avoid missing key or critical design parameters. The tables developed in the lecture can be used as a guide for doing this. This should be a maximum of 5 pages.

Task Plan Update:

1. Update your Trello task board to include any changes in estimated task duration, missing tasks, task responsibilities, or details, based on your better understanding of the project or based on feedback that you have received from your PM/TA.
2. Include more detailed sub-tasks for the tasks that will need to be completed over the next few weeks.
 - **Important note:** It should be possible for ONE person to complete each identified task or sub-task in the allotted time. The allotted time should also be *reasonable*, based on the task owner's availability. Everyone should be doing their fair share of the work.
3. Verify and update the task start dates and end dates for each task, based on your project progress.
4. Ensure that you have taken into account each team member's *actual* availability over the next two weeks, as well as significant events, such as particularly high course loads, exams or travel, which might be going to limit actual project work progress.
5. For *each* person in your group, it should be possible to determine:
 - What was completed last week (i.e. **"Completed"** tasks),
 - What will be done next (i.e. **"In Progress"** tasks)
 - If tasks are going to be put **"On Hold"** or **"Cancelled"** altogether
6. Any and all group "Issues" should be discussed and dealt with, ideally with the assistance of your Project Manager (PM). This should happen during **each** of your lab sessions or can happen earlier, using your defined communication methods. As already explained, it is essential to keep your PM/TA *"in the loop"* throughout the term. It is usually *not* a good idea to ignore conflicts between team members. Instead, you should deal with them in a constructive way.

Submission:

Each team (***only one person from each team***) must submit a PDF copy of this deliverable by uploading the file as an attachment into BrightSpace.

Due Date:

See BrightSpace.