Project Deliverable C: **Conceptual Design, Project Plan, and Feasibility Study**

GNG 2101 – Intro. to Product Dev. and Mgmt. for Engineers

Faculty of Engineering – University of Ottawa

Objective:

Develop a conceptual design for your product and create a plan for completing multiple prototypes in time for Design Day. Provide a feasibility study to verify the viability of your proposed concept.

Instructions:

This project deliverable is split into two parts and will *require a lot of work* from all members of your team. To be successful, you will need to start early. Create a separate document for each part, but submit them together.

C.1 Conceptual Design. As a group:

1. Based on customer needs, clarify core functionality by breaking down required product functions (functional decomposition) into smaller basic sub-functions, identifying external sub-system boundaries.
2. Provide a minimum of 3 product concepts per team member (clearly identify each concept's creator).
3. Analyze and evaluate all concepts provided by each team member based on the target specifications of Project Deliverable B. Use simple calculations and/or simulations to make decisions. Justify the process and methods used for analysis and evaluation.
4. Choose one or a few promising solutions you wish to develop further based on your evaluation.
5. Develop a group design concept which is either an integration or modification of the promising concepts chosen in the previous step, or a brand-new concept created from these ideas. Justify your approach.
6. Visually represent (sketch, diagram, CAD model, etc.) your group concept.
7. Provide a few lines explaining your concept's relationship to the target specifications, as well as its benefits and drawbacks.

C.2 Project Plan and Feasibility Study. Using the Project Management Workbook provided in class:

1. Develop a project plan and ensure you address each point in the workbook.
2. Conduct a feasibility study by discussing the five TELOS factors.

It is highly likely that you need to modify your concept or your plan later on in the design process. Therefore, it is critical that you document your ideas and processes properly.

Submission:

Each team (***only one person from each team***) must submit a PDF copy of each part of this deliverable by uploading the files as a single submission into Brightspace.

Due Date:

See Brightspace.