Sample Journal 10

Year: 2024/2025

Grade: G10

Semester: 1st Semester

Question 1:

IN YOUR SCHOOL ALL STUDENTS ARE CLASSIFIED INTO GROUPS FOR CAPSTONE. EXPLAIN HOW THIS CALCIFICATION HELPS YOU TO DEAL WITH YOUR NEW EDUCATIONAL LIFE IN TWO POINTS.

After our classification into groups, at first, I found it so difficult to deal with this point but after getting deeper and deeper into the work and getting to know my teammates and getting close to them I see that it has affected me a lot in a particularly useful way.

First of all , The big reflection that I see is that there is a very huge difference in my learning curve as we started to study in groups where each one of us start to share every information he/ she has whether by sharing different references or educational site that can help us in our classroom presentation , personal studies and also in our capstone project . We started to do some night sessions at our dorm that have become a daily habit for us.

The second thing that I feel that it has changed me into a whole new person is to manage my time between my studies, learnings, exams, middle year exam and my capstone project. It made me a very punctual person. In addition to many different skills, especially the soft skills (like how to be a good speaker, good listener, and good presenter) that I have gained, and I have benefited a lot from them.

Grade: Green

Feedback:

Strengths:

1. The answer has a clear structure: it opens with a short introduction and follows with two well-identified points.
2. It responds directly to the question and provides a personal reflection that is characterized by growth and adaptation.
3. Real examples, such as studying at night and soft skills acquisition, add reasoning and depth to the response.

Weaknesses:

1. Some sentences are long or awkwardly worded, such as like "...affected me a lot in a particularly useful way" ➔ "helped me a lot.".
2. There are minor punctuation issues, like the space before commas and incorrect capitalization: "First of all , The big reflection..." ➔ "First of all, the big reflection..."
3. The phrase "changed me into a whole new person" is too vague — it would be stronger with specific changes or examples.
4. The second point has too many points — time management, studying, soft skills, punctuality, exams — too many ideas are crammed into one paragraph. Focusing on one or two with examples would improve clarity.

General Notes:

The journal shows genuine self-reflection and a good sense of how group classification influenced the student. However, the stated problems should be solved.

Question 2:

YOU AND YOUR TEAM FOUND THE SOLUTION FOR YOUR CHALLENGE, EXPLAIN TWO WAYS THAT HELPED YOU TO DETERMINE THIS SOLUTION.

As we have studied the engineering design process (EDP) in our previous capstone sessions, and we have completely understood each step of it which are: 1. Defining the problem and the lofty ideas that need to be constructed 2. Gathering information about this problem 3. Start the brainstorming process and begin to find different solutions 4. Rate if this solution fits in with the criteria that is we need me to be fit in 5. started working in real life by starting to build the prototype Me and my team started to follow the following steps: Firstly, we defined

the problems that need to be solved which in our case are urban congestion and population growth, Consequently, we have started to search for these two problems and the definition of each of them and the places that these two problems are most concentrated in. Secondly, we started to gather more information about these problems in a more specific and wide way by knowing the prior solutions that we performed to solve this problem and getting deeper and deeper into the types of the truss bridges and knowing the characteristics of each type. and then choosing the most combatable one (For instance, this is what we have followed in my team and then we had picked the most combatable bridge which is lattice truss bridge as we have found that this is the best ne in both the weight handling and pressure distribution.)

Grade: Green

Feedback:

Strengths:

1. The response displays a good grasp of the Engineering Design Process and that it is applied in a work context.
2. It gives a direct reply to the question and presents two well-developed steps to find a solution.
3. Concrete examples such as urban congestion, population growth, and the lattice truss bridge strengthen the explanation.

Weaknesses:

1. In some cases, the sentence structure is too lengthy to be understood clearly. For example: "…definition of each of them and the places that these two problems are most concentrated in…" is too long.
2. There are some grammar mistakes, such as "…criteria that is we need me to be fit in…" and "the best ne in both…" which need correction.
3. The shift from listing EDP steps to describing the team's specific actions is abrupt and would benefit from a clearer transition.

General Notes:

Punctuation can be slightly improved.

Question 3:

IN YOUR CHALLENGE YOU ARE ASKED TO CONSTRUCT A BRIDGE WITH A SCALE OF 1:50 FOR THE CONSTRUCTED PROTOTYPE. IN MATH (MA.1.01) YOU ARE STUDYING SOME CONCEPTS SUCH AS THE UNIT CIRCLE, TRIGONOMETRIC FUNCTIONS, SIN LAW, COS LAW, ANGLE OF ELEVATION AND ANGLE OF DEPRESSION. CHOOSE ONE OF THE MATH CONCEPTS THAT YOU WILL DEPEND ON FOR YOUR PROJECT, AND EXPLAIN HOW YOU CAN GET BENEFIT FROM THAT CONCEPT IN YOUR PROJECT.

We have learned in the learning outcome number one in mathematics (LO1) diverse concepts that we can benefit from during the construction process of our bridge. I see that trigonometric functions will be the most useful one to keep in mind as our bridge is a type of bridge that is called truss bridges (Lattice truss bridge) which is mainly made up of triangle, so we can use this concept to measure the length of the members that will handle the weight and the pressure of the bridge. Moreover, we can use it to measure the dimensions that will separate each member and the other. Consequently, after knowing the dimensions, we can integrate another important concept which is the sine law to measure the angle between every member to know the best angle to construct these members together in the sake of getting the best results. In addition, sight line, angle of elevation and angle of depression are considered a key concept that is mostly related to these functions that we can really get the most out of it to know the amount of deflection of the bridge after placing the required weights. (This point has faced me and my team together, so we tried to solve this problem by reviewing the different angles whether it is elevation or deflection angle and by repositioning our sight line to get the most accurate and precise results)

Grade: Blue

Feedback:

Strengths:

1. The response links the concepts of mathematics with the process of construction of a bridge wisely and practically.
2. The selection of the trigonometric functions is also valid, and so is the mention of triangle structures in the lattice truss bridge.
3. There is an attempt to integrate several math concepts, which adds depth and value, though some could be explained further.
4. Real team experience is reflected, especially in how they solved the deflection angle issue using repositioning and sight lines.

Weaknesses:

1. The sentences are too long and slightly repetitive, like: “…angle between every member to know the best angle to construct these members together…”
2. Minor grammar mistakes are also present, i.e. “…in the sake of getting the best results…” which should be “for the sake of…”.
3. A clearer separation of ideas would help the flow, especially in the second half of the paragraph.

General Notes:

General phrasing can be more academic and a few math concepts can be explained better.