**ENGR-240 Project Write-up Guidelines**

Dr. Mowry

**Small groups:** 3 – 5 students per group. The cover page of your project response will include the names of your group. Everyone in the group will receive the same overall points score.

**The 7 deliverables for our project write-ups:**

1. Cover page
2. **Prioritized Questions:** Prioritize the 3 most important questions (usually these are the most provocative, or interesting, or ones that best helped you) that you thought of in response to the QFocus.
   * All question are valuable and should be documented “AS THEY ARE ASKED” – verbatim!!
   * No answering or judging of the merits of questions is allowed at this point in the project
   * Change any statement into a question; ‘**yes**’ or ‘**no**’ questions **NOT** useful
   * Questions need to be open-ended. Short-answers indicate close-ended questions

**This part of the group project may take an hour or more!!!**

1. **Question Direction:** Identify how your questions led you on your search for answers.
2. **Question Responses:** Document the responses to your questions based on your investigations.
3. **Additional Questions:** What additional questions occurred during your investigation that need more study?
4. **References:** List the references that you found in your investigation.
5. **Reflection:** Finish the project with **INDIVIDUAL** reflection write-ups that discuss the above process and your responses. There will be 1 signed reflection page per small-group member. This is an individual input and not performed by the small group in-total.

**Scoring:**

* 50 points per project
* Scoring based on my assessment of your response to the deliverables

**Key Habits for life-long learning1**

1. **Evidence:** How do we know what’s true or false? What evidence counts?
2. **Viewpoint:** How might this look if we stepped into other shoes, or looked at it from a different perspective?
3. **Connection:** Is there a pattern? Have we seen something like this before?
4. **Conjecture:** What if it were different?
5. **Relevance:** Why does this matter?

**The Why, What If, and How of Innovative Questioning2** (examples)

**Why …**

WHY do we have to wait for the picture?

WHY does stepping back help us move forward?

WHY do comedians see things that the rest of us missed?

WHY should you be stuck without a bed if I’ve got an extra air mattress?

WHY must we “question the question”?

**What If …**

What if we could map the DNA of music?

WHAT IF your brain is a forest, thick with tress? (And what if the branches touch?)

WHAT IF you sleep with a question? (Will you then wake with an answer?)

WHAT IF your ideas are wrong (and your socks do not match)?

**How …**

HOW can we give form to our questions?

HOW do you build a tower that doesn’t collapse (even after you put the marshmallow on top?)

HOW can you learn to love a broken foot?

HOW might we create a symphony together?

**1** ‘A More Beautiful Question’ by W. Berger, Bloomsbury, 2014, p51. **2** IBID, p71.