ELECOMP Capstone Design Program

Spring 2025 Semester

Major Progress Report (MPR#3) Format

Due Date: Sunday, March 2nd, 2025, 8-9pm

MPR#3 should contain work done during the Winter break and the Spring Semester ONLY. Send to all recipients, as in previous WPRs.

Subject Line: ELECOMP Capstone: MPR#3: Team Name & Brief Title

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Cover page**
Table of Contents (with page numbers)
Acknowledgements
Project Motivation (Identifying Opportunities)
Functional Specifications in ABO (updated, if necessary-Developing Requirements)
Key Design Trade-offs Made in the Functional Specifications
Best Anticipated Outcome of the Project by April 11th, 2025
Updated doc *BESTRACK#6*
Schedule Assessment (if behind, provide details to get back on schedule)
Confidence Level to achieve the Anticipated Best Outcome (ABO) by April 11th.
(justify appropriately, using specific references from previous work on the project)
Risk Evaluation to achieve the ABO (updated, as it stands now)

My Individual Technical Accomplishments by "Designer 1 Name" (restrict to 1 page per member; bullet form, with page numbers for the details in the section below: "Details of Results and Discussion")

My Remaining Technical Accomplishments by "Designer 1 Name" (provide details and confirm timeline until 04/11/25, as provided in *BESTRACK #6* above.)

Repeat above 2 items for each designer in the team.

Details of Results and Discussion: free to choose your own appropriate headings after discussion with your Technical Directors; make sure you give them all the details they need.

(Note: You must justify and discuss your accomplishment in DETAIL; 20% allocation of grade for Individual Technical Contributions; See the Grading Breakdown for *Guidance to the Technical Directors* to assign a score out of 20%)

**** Download pptx template from the website**

References

Appendices

Appendix A: Risk Tracking Template, with full details:
https://web.uri.edu/elecomp-capstone/files/RiskTemplate.pdf
(more details are below)

Appendix B: ABET Outcomes 2 and 4: Details are posted on the website.
You will be providing more details in this MPR#3; after your initial thoughts, and discussion, provided in MPR#2 (see below for more details)

Appendix C: For ABET Outcome 5: Three Engineering Considerations:
1-Establish Goals: Copy and paste the Anticipated Best Outcome (ABO) section, from MRP#3 above. (The ABO of the project are the goals established by the sponsoring company)

2-Plan Tasks: Copy and paste this section from the MPR#3 above: "Team Project Management," which has the tools you have used for planning the various tasks in the project.

3-Meet Objectives: Copy and paste this section from the MPR#3 above: "Key Technical Accomplishments by Team to-date." This will highlight the objectives that have been met this spring semester.

Appendix B in Major Progress Report #3 (MPR#3)

Final evaluations for ABET Outcomes 2 and 4.

These 4 Outcomes are Engineering related and covered by ALL teams in the MPR#3 above.

1. **Identifying Opportunities (Project Motivation)**
2. **Developing Requirements (Functional Specifications in the ABO)**
3. **Making Design Trade-offs**
4. **Risk Evaluation to achieve the ABO**

These 7 Outcomes are non-Engineering related and must be discussed by ALL teams in this Appendix.

5. **Economic Implications and Impact**
6. **Local & Global Implications and Impact**
7. **Safety Considerations (health and welfare)**
8. **Environmental Implications and Impact**
9. **Ethical Implications and Impact.**
10. **Cultural Implications and Impact**
11. **Social & Societal Implications and Impact**

APPENDIX B- TEMPLATE FOR COMPLETION

Final evaluations for ABET Outcomes 2 and 4.

These 4 Aspects are Engineering related and are covered by ALL teams in the MPR#3 above.

1. **Identifying Opportunities (Project Motivation)**
   (copy and paste from MPR#3 above)

2. **Developing Requirements (Functional Specifications in the ABO)**
   (copy and paste from MPR#3 above)

3. **Making Design Trade-offs**
   (copy and paste from MPR#3 above)

4. **Risk Evaluation to achieve the ABO**
   (copy and paste from MPR#3 above)

These 7 Aspects are non-Engineering related and MUST be discussed by ALL teams in this Appendix. The quality of the discussions will determine the score for each designer on the team.

5. **Economic Implications and Impact** *(copy & paste from MPR#3; and/or Discuss further with a paragraph. If not applicable to your project, you must justify why, with a paragraph)*

6. **Local & Global Implications and Impact** *(copy & paste from MPR#3; and/or Discuss further with a paragraph. If not applicable to your project, you must justify why, with a paragraph)*

7. **Safety Considerations (health and welfare)** *(copy & paste from MPR#3; and/or Discuss further with a paragraph. If not applicable to your project, you must justify why, with a paragraph)*

8. **Environmental Implications and Impact** *(copy & paste from MPR#3; and/or Discuss further with a paragraph. If not applicable to your project, you must justify why, with a paragraph)*

9. **Ethical Implications and Impact.** *(copy & paste from MPR#3; and/or Discuss further with a paragraph. If not applicable to your project, you must justify why, with a paragraph)*

10. **Cultural Implications and Impact.** *(copy & paste from MPR#3; and/or Discuss further with a paragraph. If not applicable to your project, you must justify why, with a paragraph)*

11. **Social & Societal Implications and Impact.** *(copy & paste from MPR#3; and/or Discuss further with a paragraph. If not applicable to your project, you must justify why, with a paragraph)*

ADDITIONAL EXPLANATION ON:

Risks to Best Anticipated Outcome Guidance:

Managed projects typically capture and track risks to achieving a specific or overall goal. While Capstone projects don't need the same level of formal tracking as more complex projects, a basic assessment of risks to the best anticipated outcome should be included.

By identifying risks early, expectations can be managed, and mitigation strategies can be identified, as appropriate. For Capstone, only include risks with a reasonable likelihood of occurring. Identify critical decisions that need to be made, findings that need to occur, schedule targets that need to be hit etc., that would impact the best anticipated outcome of the project.

Risk Examples:

- The team identifies two potential service providers for cloud storage. The TD asks the sponsor company IT department to choose which one works best with their existing system. Development progress on that portion of the project is put on hold until a decision is made. By the time the decision comes back there isn't enough time left to implement the cloud features.

- The team is tasked with finding the best available sensor with a certain performance and cost. After an extensive search and discussions with sensor manufacturers, it becomes clear that no existing solutions exist so the performance or cost target (or both) cannot be met.

Method of Risk Tracking and Reporting:

Add a table to your report with at least the following columns:

- Description of Risk
- Impact to the Project (Consequences if risk comes true)
- Likelihood of Risk Occurring
- Seriousness of Risk Occurring
- Grade of Risk (see below)
- Mitigation Strategy

Grade				
	Seriousness			
Likelihood		Low	Medium	High
	Low	D	D	C
	Medium	D	C	B
	High	C	B	A

Recommended Action by Risk Grade	
Grade	Risk mitigation actions
A	Immediately identify and implement actions to reduce the likelihood and seriousness as a top priority.
B	Identify actions to reduce the likelihood and seriousness to implement as the risk become more likely/serious.
C	Identify actions to implement should the risk occur.
D	Monitor the risk for changes in the future.