

ELECOMP Capstone Design Program
Major Progress Report MPR#2 Format

MPR#2 will be fully comprehensive for the whole semester.

Submit on Sunday, December 8th 2024, 8-9PM:

Subject Line in email: ELECOMP Capstone: MPR#2: “Team Name: Brief Title”)

Cover page (Use Color Template provided)

Table of Contents (with page numbers)

Acknowledgements (page #)

Project Description (page #)

Project Motivation

Anticipated Best Outcome (ABO) of the Project by April 11th, 2025.

Implications of ABO for Company and Economic Impact

Risks to Anticipated Best Outcome (Details in Appendix A)

Confidence Level to achieve the ABO of the Project by April 11th, 2025 (justify appropriately, using specific references from previous work on the project)

Functional Specifications of Final Deliverable Product

Key Technical Accomplishments by Team to-date (bullet form, with page numbers for further elaboration in *Details of Results and Discussion* section below)

Key Technical Accomplishments to be made by Team between January 2nd – April 11th, 2025 (bullet form and dates)

All My Individual Technical (Engineering) Contributions for Fall ‘24 Semester, by...

(restrict to 1 page per designer; bullet form, with page numbers for **FULL** details, in the Section below on “**Details of Results and Discussion.**” Include details of any special efforts made, above and beyond the normal requirements.)

My Future Individual Technical (Engineering) Contributions for the ABO by.....

(These 2 items, to be written individually, by each Capstone Designer in the team)

(Repeat the above 2 items for Capstone Designers 2, 3 & 4, as needed)

Team Project Management Summary

Tool used (e.g. Jira, Trello, MS Project, Other)

Approach (e.g. Agile [Sprint/Kanban], Waterfall)

Screenshot of tool showing entire project, e.g. all items (done, in progress, and planned)

Tasks completed to date (Agile [Completed Sprints], Waterfall [Closed Items])

Current Tasks in Progress (Agile [current sprint], Waterfall [current stage])

Defined Future Tasks (Agile [stories in backlog], Waterfall [next stage])

Details of Results and Discussion

(choose appropriate headings; discuss with your TDs at last meeting; make sure you give them ALL the details which are essential) Include the Risk Tracking Template and provide further explanations.

Note: Details of both Key Technical Accomplishments by Team and Individual Technical (Engineering) Contributions, for the Fall 2024 Semester, should be included here. You must justify your accomplishment in DETAIL.

References

Appendices

Appendix A: Risk Tracking Template, with full details:

<https://web.uri.edu/elecomp-capstone/files/RiskTemplate.pdf>

Appendix B: ABET Outcomes 2 and 4: Details are posted on the website.

You will be providing more details in this MPR#2 and MPR#3; after your initial thoughts, and discussion, provided previously in MPR#1

Appendix C: For ABET Outcome 5: Three Engineering Considerations:

1-Establish Goals: Copy and paste the Anticipated Best Outcome (ABO) section, from MRP#2 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#2 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#2 above: “Key Technical Accomplishments by Team to-date.” This will highlight the objectives that have been met this fall semester.
(similar data provided in MPR#3 in the Spring Semester)

Appendix D: For ABET: Standards Awareness

List each Standard, **clearly identified**, that is applicable to your project. If there are more than 1, rate their priority to your project. Add any appropriate discussion to help better understand these standards.

Discuss which specifications may be accomplished by April 11th, 2025.

Final evaluations for ABET Outcomes 2 and 4.

These 4 Outcomes are Engineering related and covered by ALL teams in the MPRs.

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.

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**
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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#1 above.

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

These 7 Aspects are non-Engineering related and MUST be discussed by ALL teams in this Appendix. These must be updated in MPR#2.

5. **Economic Implications and Impact** *(copy & paste from MPR#2; 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#2; 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#2; 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#2; 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#2; 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#2; 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#2; and/or Discuss further with a paragraph. If **not** applicable to your project, you must justify **why**, with a paragraph)*
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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				
		Low	Medium	High
Likelihood	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.

