****

**Capstone Design Project Report**

**<Descriptive Project Title>**

**Project Sponsor/Client**

<Sponsor Name>

<Semester>

<Month>, <Year>

**Prepared by**

<Name (Discipline)>

<Name (Discipline)>

Project Engineer <Name> - CORE Engineering

Chief Engineer <Name> - <Department>

# 

**DO NOT START THE FINAL DESIGN REPORT FROM SCRATCH.**

**Begin with your SYSTEM DESIGN REPORT, incorporate the feedback from your CE,**

**and update various sections of this report accordingly.**

**BEFORE submitting this report**

**DELETE this page and all instructions (in blue/red text) throughout the document.**

**Recommended Text Format:**

**Arial, 12pt, double spaced, left-justified**

**There are instructions**

**(in blue/red text)**

**throughout the document**

**to help you to complete**

**this report.**

**REFER to EDN Wiki Page** [**https://designlab.eng.rpi.edu/edn/projects/capstone-support-dev/wiki/Final\_Design\_Report**](https://designlab.eng.rpi.edu/edn/projects/capstone-support-dev/wiki/Final_Design_Report)

**on completing this report.**

# Acknowledgements

# Executive Summary

Suggested length –1 page

Write a concise overview of your capstone project that highlights the primary problem you addressed in your capstone project, the solution you have proposed and developed. This section should give readers a clear overview of the report while motivating them to read it in full.

# Table of Contents

[Acknowledgements 3](#_Toc206494769)

[Executive Summary 4](#_Toc206494770)

[Table of Contents 5](#_Toc206494771)

[List of Figures 6](#_Toc206494772)

[List of Tables 6](#_Toc206494773)

[Glossary 7](#_Toc206494774)

[1. Introduction 8](#_Toc206494775)

[2. Project Overview 9](#_Toc206494776)

[2.1. Project Statement 9](#_Toc206494777)

[2.2. Semester Objectives / Deliverables 9](#_Toc206494778)

[2.3. System Overview 9](#_Toc206494779)

[3. Engineering Definition of the Problem 10](#_Toc206494780)

[4. System Concept Development 11](#_Toc206494781)

[5. Final Design 12](#_Toc206494782)

[6. System Evaluation 13](#_Toc206494783)

[7. Significant Accomplishments and Recommendations 14](#_Toc206494784)

[8. Conclusions 15](#_Toc206494785)

[References 16](#_Toc206494786)

[Appendix A: Standards 17](#_Toc206494787)

[Appendix B: Bill of Materials 18](#_Toc206494788)

[Appendix C: Ethical and Professional Responsibilities Worksheet 19](#_Toc206494789)

# List of Figures

[**Figure 1 System Block Diagram** 23](#_Toc80276556)

# List of Tables

[**Table 1 Sample Gantt Chart** 23](#_Toc80276556)

# Glossary

Define all the abbreviations, acronyms, and terms required to interpret the terminologies in this report. **You can use the information from your SYSTEM DESIGN REPORT and update it accordingly.**

# Introduction

Suggested length – 1 page

Introduce your project in terms of background information and motivation/ justification for conducting this project. Be sure to address work done by prior capstone team(s) to provide context for later sections. **You can use the information from your SYSTEM DESIGN REPORT and update it accordingly.**

# Project Overview

2 pages max.

**You can use the information from your SYSTEM DESIGN REPORT and update it accordingly.**

# Project Statement

# Semester Objectives / Deliverables

# System Overview

# Engineering Definition of the Problem

2 pages max.

**You can use the information from your SYSTEM DESIGN REPORT and update it accordingly.**

# System Concept Development

Explain the development and selection of design concepts – such as the significant criteria that lead to specific concept selection, alternate concepts that were considered, design analysis and trade-offs. Present the system concept that the team ultimately developed. Help the reader visualize the system concept using appropriate drawings/diagrams, such as sketches, system schematics, circuit diagrams, and UML diagrams. **You have prepared this for your CONCEPT GENERATION AND SELECTION SLIDES. Incorporate CE feedback and use the information from there. DO NOT REDO.**

# Final Design

Describe the final design (including the detailed design) and implementation, with appropriate diagrams/drawings with design values. Describe the critical design parameters. Where applicable, address manufacturability and cost issues; include details in the Appendices. Similarly, organize and place large data tables and/or a full set of detailed diagrams/drawings in Appendices. It should be clear from this section how your design met the project's needs and requirements.

# System Evaluation

**Copy the information (Table) from the same section of the SYSTEM DESIGN REPORT.** Add a column to the table to show your results. Outside this table, be sure to explain the information in the table. You may update if needed to represent your final plan. As part of your explanation, provide the analysis of the test results and how that validates your project design.

# Significant Accomplishments and Recommendations

1 page max

Indicate what you have accomplished in the project this semester and give your recommendations on what can be done in the future to enhance this project.

**Use separate numbered lists for the Accomplishments and the Recommendations.**

**Use a table for the list of Open Issues and your suggestions for resolving them. It will benefit the client (and the next team, if applicable).**

# Conclusions

1 page max

Based on the work you have done, put together a concise conclusion. What is the outcome of your work? How will it be used? Who will benefit?

# References

**Copy the information from the same section of the SYSTEM DESIGN REPORT.**

Update the references to include additional sources related to the team’s work.

# Appendix A: Standards

**Copy the information from the same section of the SYSTEM DESIGN REPORT.**

Update content as necessary to capture ALL standards identified which apply to the team’s work.

More information on standards available on the Capstone Support Wiki <https://designlab.eng.rpi.edu/edn/projects/capstone-support-dev/wiki/Standards>

# Appendix B: Bill of Materials

Projects with physical hardware

Add the Bill of Materials (in Table format) for the final solution developed by your team, including part numbers and manufacturers or sources.

Refer to the instructions in Wiki <https://designlab.eng.rpi.edu/edn/projects/capstone-support-dev/wiki/Bill_of_Materials> for this section.

Use template file in Capstone Support Repository - <https://designlab.eng.rpi.edu/edn/projects/capstone-support-dev/wiki/Templates_and_Forms>

Projects with software

Generate a list of the programs used. Include version number and license (open source vs proprietary). It is helpful to add the specific open source license to help client know under what conditions they may use the software.

# Appendix C: Ethical and Professional Responsibilities Worksheet

Refer to the instructions in Wiki (<https://designlab.eng.rpi.edu/edn/projects/capstone-support-dev/wiki/Final_Design_Report>) for this section. **Lookout for Appendix C: Ethical and Professional Responsibilities Worksheet in above mentioned Wiki Page.**