

Senior Design II – Final Report Template

0. Cover sheet

Project title
Team names
Date

I. Executive Summary

Provide a summary of your project not to exceed 3 pages. By reading these pages, someone should acquire a clear understanding of your problem, your customers and your current solution. The final cost of your project should be mentioned here as well. Briefly describe noteworthy project outcomes that you want the reader to examine.

II. Introduction

Write the introduction in terms of the following:

- introduces the topic of the report in context
- explains the problem and/or motivation for the project
- states the aim/s of the project
- indicates the purpose of the report
- outlines briefly the report structure (not necessary in a short report).

Since Senior Design is the capstone of your undergraduate education, discuss how the project contextualize your undergraduate coursework. Explain how you employed your engineering education to accomplish the design and development for this project.

III. Requirements and Specifications

State the final set of requirements and component specifications agreed upon by you and your customers. Every requirement must be included and indexed for reference in the presentation acceptance tests results later in the report.

IV. Final Design

Describe the final design that you determined to meet the requirements. Include a discussion of changes that were made to the initial design described previously in the final report for the fall term. Provide any electronic circuits diagrammed and labeled to the component level, any mechanical parts properly dimensioned in CAD drawings and any software described appropriately in UML diagrams. Describe any steps taken to mitigate the risk of injury or harm and product failure. Include the parts list for your design.

V. Project Outcome

Since this semester is the build phase, provide a description of the project outcome. The content should include photographs (if relevant) as well as test data that shows how their design worked. This is where the acceptance test results (completed templates) are presented and discussed.

VI. Project Risk Assessment

Discuss the risks that you faced associated with completing the project and the steps you took to address these risks. Risks include schedule, technical complexity, parts selection and delivery.

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VII. Work Plan/Schedule

Describe the work plan used for your project. This includes the schedule of tasks done, time planned, time taken and who performed the task. A Gant chart is a very useful tool for this information.

VIII. Budget

Present your complete budget for the project. This should include both the material costs as well as personnel costs.

IX. Assessment of Context

Your project solved a complex engineering problem that included one or more of the following characteristics: involving wide-ranging or conflicting technical issues, having no obvious solution, addressing problems not encompassed by current standards and codes, involving diverse groups of stakeholders, including many component parts or sub-problems, involving multiple disciplines, or having significant consequences in a range of contexts.

Suppose a company, an educational institution, or another organization turns your project into a commercial success. For each of the items below, write a half-page summary that describes consideration given to each context:

- economic impact
- environmental impact (If there is no environmental impact, explain why.);
- societal impact (If there is no societal impact, explain why.);
- global impact;
- and ethics considerations.

Then write a paragraph tying these all together that describes the priority of these contexts in the decision-making process.

X. References

Any references or standards documents used in the design process need to be included here.