## **Final Design Report DESCRIPTION**

**Formatting:**

Use the format below which is the same standard formatting we have been using all semester.

Incorporate all the items (sections) listed and label who writes which sections next to the heading, e.g., (C. Martin).

* Single-spacing for all paragraphs, 1-inch margins all around, 12 font size, Times New Roman
* Double-space between paragraphs – do not indent paragraphs. NO space between any heading and the text. If there are headings, (recommended to break up the content and make it easier for readers to find information) **bold the headings**.
* **Page number** at the **bottom right** of every page (except cover)
* **Must use APA style in-text citations** and have a separate **Reference Page,** with “References” centered at the top of the page
  1. **References to be listed in alphabetical order with hanging indentation. References must be complete—even for website sources. Make sure References are reliable, even if not scholarly—you may need to defend your source—so make sure you can. If you can’t, find another source—or ask for help.**

**THIS IS THE ORDER THAT THE REPORT MUST BE IN**

**Cover Page:**

* EDD 104, Section #, Project # and Name, Team Member Names (first and last)
* Include picture relevant to the project

**Executive summary:**

* No longer than 1 page.
* This must be the LAST document written as it is a summary of the entire project in a single page—a Summary of the entire report condensed.
* Include enough detail for your client to read and understand the contents and don’t use technical terms unless you define them. Write this for a client who might be reviewing designs from several companies and will only buy one design and may not be an engineer, but a CEO.
* This needs to be particularly well-written, so put your best writer on this task and do it at the end of the project.
* Look at samples I have posted. Have 3 sections for this part of the report:

**Table of Contents:**

* Use the same font and font size used throughout the report –except for headings—but do not have enormous heading—12 pt font and headings can be up to 18 pt—no larger.
* Connect the listed items to the page numbers, for example, “Introduction…………..1”.
* Use the TOC function on MS Word to help you keep your Table of Contents organized.

**Introduction:**

* Introduce the background and motivation for the project. Someone with no prior knowledge of the project should be able to completely understand what the project is.

**Design Statement:**

* Exact Design Statement given in Project Description

**Design Focus:**

* Introduce the System Level Requirements
* Describe what each Evaluation Criterion is
* Justify why the Evaluation Criteria were chosen and assigned certain weights

**Design Description:**

* Use a functional schematic and other visuals to give a thorough description of the overall design and its main parts/features/functions.
* Highlight what Evaluation Criteria different design parts/features/functions address. Organize by part/feature/function or by Evaluation Criteria.
* Refer to requirements, cost analysis and other supporting documents in appendices. Back up your design choices by referencing materials and using in-text citations.

**Discussion:**

* Clearly and convincingly explained how the System Level Requirements were verified using supporting evidence. Reference the requirements and verifications in Appendix A, B, and C.
* What was the rating of the Final Design using the Evaluation Matrix? Refer to Appendix E.
* How did this compare to the ratings of the Viable Designs? Refer to Appendix G-I.
* How were the Viable Designs altered and/or combined to form the Final Design?

**Conclusion:**

* Summarize key aspects of the design and relate back to Design Statement.
* How could the design be further improved in the future?

**References:**

* Once list of references for entire team in APA format.

**Appendices:**

* Appendix A: Requirements
  + Requirements Structure
  + Project Requirements List and Justifications
* Appendix B: Verification of Requirements
  + Start each verification on a new page with the requirement listed at the top of the page.
  + Each team member needs to write verifications for AT LEAST two requirements.
  + All requirements, including System level requirements, need verifications.
* Appendix C: Supporting Documents
  + Model results, Code, CAD Models, used for the verifications
* Appendix D: Cost Analysis
  + Make a convincing case for how much you expect each part/feature to cost based on existing technology/materials etc. For standard parts, you can include links to where you would purchase the parts and how much they cost. For custom parts, estimate the cost based on materials, labor, shipping, etc. Report final cost estimates in the **Design Description** section and refer to this appendix.
* Appendix E: Evaluation Matrix
  + Show the completed Evaluation Matrix for all the Viable Designs and the Final Design.
* Appendix F: Research Table
  + Include a research table for every source listed in the references.
* Appendix G-I: Viable Design Reports (one appendix for each report)
  + All team members should include their original Viable Design Report as an appendix. Any instructor feedback should be incorporated into the rest of the Final Design Report.