

120-Page Final Document

The final document should include, but not limited to, all the following contents.

A. Chapter 1 Executive Summary (1-2 pages)

- page count starts here

B. Chapter 2 Project Description (10 pages)

- motivation and background
- goals and objectives including basic, advance and stretch goals
- existing product/past project/prior related work
- table of at least 7 key engineering specifications with numbers (highlight 3 demonstrable specifications)
- hardware block diagram (use color blocks to indicate work distribution)
- software flowchart (use color blocks to indicate work distribution)
- house of quality

C. Chapter 3 Research

- technology comparison and selection (10-15 pages)
 - summarize each comparison using a table and highlight your selection
 - use one table for each comparison of hardware technology
 - use one table for each comparison of software technology
- part comparison and selection (30-40 pages)
 - summarize each comparison using a table and highlight your selection
 - use one table for each hardware part (provide at least 3 options)
 - use one table for each software (provide at least 3 options)

D. Chapter 4 Standards and Design Constraints (10-15 pages)

- only relevant standards and design constraints should be included
- discuss 1-2 standards in detail (1-2 pages each)
- discuss 2-3 design constraints in detail (1-2 pages each)
- discuss the remaining standards and design constraints briefly (half to one page each)
- **NOTE:** deduction of a letter grade will be enforced if page count < 9

E. Chapter 5 Comparison of ChatGPT with other Similar Platforms (5-8 pages)

- compare the limitations, pros and cons of these platforms
- provide 3-4 examples to show how these platforms benefit (or harm) your learning experience in Senior Design
- **NOTE:** you must provide proper citation to any content copied from ChatGPT; failure to do so will result in plagiarism.

F. **Chapter 6 Hardware Design** (15-20 pages)

- subsystem block diagram, schematic diagram, structural illustration, etc.
- **NOTE:** failure to present overall schematic will result in one letter grade deduction

G. **Chapter 7 Software Design** (10-20 pages)

- flowchart, case diagram, state diagram, class diagram, user interface, etc.

H. **Chapter 8 System Fabrication/Prototype Construction** (5-10 pages)

- PCB layout, etc.

I. **Chapter 9 System Testing** (5-10 pages)

- hardware and software testing
- overall integration
- plan for SD2

J. **Chapter 10 Administrative Content** (5-10 pages)

- budget estimates, bill of materials, milestones, etc.
- table of work distributions (indicate primary and secondary person)

K. **Chapter 11 Conclusion** (2-3 pages)

- page count ends here

L. **Appendix A** – reference

Appendix B – copyright

NOTE: The answer to the question “Do I need to cite this material?” is always a ‘YES’. The reason is simple. It is always better to provide proper citation than not. So, please contact the authors/creators/producers to request for permission to use their material. All requests and approvals should be documented in this section. For all requests that have been rejected, the corresponding materials **MUST** be removed from the final document.

Appendix C – etc.

10-Page Divide & Conquer

The Divide & Conquer document should include all the following contents.

- A. **Chapter 2 Project Description**
- B. **Chapter 10 Administrative Content** (BOM can be excluded)

60-Page Document

The 60-page document should include, but not limited to, all the following contents.

- A. **Chapter 2 Project Description**
- B. **Chapter 3 Research**
- C. **Chapter 4 Standards and Design Constraints**
- D. **Chapter 5 Comparison of ChatGPT with other Similar Platforms**
- E. **Chapter 10 Administrative Content** (BOM can be excluded)