

Colorado School of Mines—EPICS 151

Guidelines for Final Proposal (Report) Fall 2016

PURPOSE OF THIS DELIVERABLE

Your submission is a response to the Call for Proposal; it's to propose your concept as the best possible solution.

SUGGESTED OUTLINE THE FINAL PROPOSAL

1. Front materials

- a. Title page: Title of the document, team name / logo, team members, class section, date submitted.
- b. Executive Summary: A one page stand-alone summary that provides an overview of the content of the report; it serves as a marketing tool to compel the reader to read the full report.
- c. Table of Contents: listing report sections (each main section starting with the introduction below).
- d. Separate lists of Figures, Tables, and Appendix items.

2. Introduction

- a. Purpose of this document
- b. Background information of the problem
- c. Your team's problem statement / design intent
- d. Stakeholder identification and analysis (who are your key stakeholders)

3. Proposed Solution (full-scale production version)

- a. Overview: Concept description
 - Include an isometric view of a CAD-generated 3D model of your final design assembly, which includes call-outs for the subsystems, and an indication of scale
- b. Your system functionality, key components, physical properties
 - Include material type, specifications, weight, construction, and graphics with dimensions.
 - Product assembly, interfaces, calculations and drawings
- c. Your value proposition: the equation of the costs and the benefits
 - Materials list and cost estimation, broken down into a table
 - Real benefits, both quantified and unquantified
- d. Operations and maintenance summary, including a graphic of the process.

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- e. Risk analysis and mitigation plan.

4. Concept Validation (works-like prototype)

- a. Describe/reference subsystems or key elements that were physically tested
 - Describe key elements of testing, analysis, and results
- b. Describe/reference subsystems or key elements that were validated using research and analysis
 - Show key analysis calculations and results
 - Describe stakeholder inputs and how they guided your design
- c. Final validation processes, analysis, and results for integrated works like prototype, including the impact of these validation processes on your design iterations
 - Include your works-like prototype cost, broken down into a table or chart

5. Conclusion

- a. Major highlights of the concept, and underscore the value proposition
- b. Next steps/recommendations

6. Bibliography

- a. All references must be numbered within text, and cited using IEEE format.
 - Include your scholarly and authoritative research sources, presentations, and interviews.
 - A report of this type generally includes 15-30 references.

7. Required appendix items

- a. A full set of production drawings, as per graphics lab

8. Suggested appendix items

- a. The original Call for Proposal
- b. Team photo and biographies
- c. Extra sketches (beyond those included in text)
- d. Any additional prototype test data and calculations
- e. Parts of the Subsystem Reports omitted in the above summary
- f. Prototype Test Photos (beyond those included in text)
- g. Decision matrices

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GRAPHICS

- Formal hand-sketches and CAD-generated models and drawings should be copious and must be labeled, embedded, and referred to in the text appropriately.
- Use graphics instead of long detailed explanations of physical attributes.
- Consider which graphics will benefit the report in-text, versus those that might be included in the Appendix.

SAMPLE REPORT PARAGRAPH FORMATTING

Use this formatting for your text. This is a justified format paragraph, no indentation, with single spacing. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Aenean commodo ligula eget dolor. Aenean massa. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Donec quam felis, ultricies nec, pellentesque eu, pretium quis, sem.

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OTHER FORMATTING

- Your Final Proposal is a formal document which is spiral bound with a clear cover.
- Text: 11 or 12 point font, single spaced. Headings: 14 point type, bold
- Page numbers at bottom
- Figure names numbered in order of appearance: Figure 1, Figure 2, Figure 3, etc
- Table names are numbered in order of appearance: Table 1, Table 2, Table 3, and so forth
- Double-sided pages

