

Project Deliverable 3 - Project Proposal

(Part 2 - Written Documentation of Proposed Design)

Purpose:

The purpose of a proposal is to justify the start or continuation of the development of a proposed design. For the purposes of this class, the proposal allows teams to evaluate different design options in a formal matter and present their preliminary decision before proceeding to the building phase. It will allow the team members (and the teaching team) to gain confidence that a successful project will be completed by the end of the course. The project proposal consists of two parts (1) a 5-7 team presentation about your proposed design (details can be found in a separate handout), and (2) written documentation of your proposed design. This document details the requirements of the written documentation of your team's proposed design.

Documentation of Proposed Design:

After you have viewed the comments and feedback from your peers about your proposal presentation, you should think about the feedback, and make modifications or additions to your design based on the feedback received (and any new or additional ideas you have). The documentation of your proposed design should include the design you presented, and any changes/modifications that you made after your presentation. The format and content of the documentation is described in detail below. Your proposal document will be evaluated based on the format, professionalism, and the sections described below (refer to the Appendix for detailed grading rubric.). This should be a cohesive document with transitions from one section to another and a coherence of information presented (individual contributions are seamlessly combined and build upon each other).

Format:

- **Title Page:**
 - Project Title, Team number, Full Names of all team members who participated (If your name appears on the title page, that means you have helped create this document and understand everything in this document)
- Your proposal document should **be typed** (single spaced) in paragraph form, with appropriately formatted section headings (use bold and/or underline, and/or larger font size). You should use consistent spacing, formatting, font, and style, as well as correct grammar and spelling.
- Document should be written as a formal technical document (Please refer to the discussions about technical communication) It should be in narrative form and all figures, tables, equations, etc. should be discussed in text.
- Sections to include: Introduction, Proposed Design, Justification of Proposed Design, Revised Schedule

Content:

- **Introduction**
 - Provide a summary of the proposal document
 - Describe the purpose of this document and the general make-up of the document (i.e., what will be included in the document)
- **Proposed Design**
 - Detailed Sketch of Proposed Design (including any revisions/modifications to the design that have been made after receiving feedback from the presentation audience). **Make sure to point out what modifications/additions have been made.**
 - Description of your proposed design (consisting of 3 or 4 instruments) Make sure to include any revisions/modifications that have been made.

- Description of the underlying physics of your proposed design.
- Discussion of how the design will meet all design requirements and satisfy all constraints.
- Estimated Budget & Materials list (including any revisions/modifications to the design that have been made after receiving feedback from the presentation audience).
- **Alternative Designs Considered**
 - Briefly describe all of the alternative designs you considered in your decision matrix (i.e. the designs you compared your 'proposed design' against, see below).
 - Include a rough sketch of each of the alternative designs considered.
- **Justification of your proposed design**
 - Decision Matrix
 - Decision matrix should compare all the design options your team considered (descriptions and sketches of each of these designs should be in the 'Alternative Designs Considered' section above). Note: one decision matrix should be used to compare all design options your team has considered, each consisting of 3 or 4 instruments.
 - Documentation of the evidence/rationale you presented to support your design decision. **This should also include evidence/rationale for any modifications/additions made to your proposed design after your presentation.** Some examples of documentation of evidence/rationale may include the following:
 - Sketches/pictures/information about current designs/technologies (be sure to cite sources you use). Make sure to discuss **why** these current designs/technologies are relevant.
 - Equations/calculations related to scientific principles relating design factors to system performance (i.e. frequency, wavelength; etc.)
- **Revised Project Schedule**
 - Include a revised version of your team's project Gantt Chart (preferably in the Appendix)
 - Discuss **specific** tasks that you have identified as necessary to complete your project. Be realistic about time it will take to complete these tasks and leave some room for delays or setbacks.
- **Conclusion or Summary**
 - Summarize the key selling points of your design
- **References:**
 - Include all references used (references should also be cited in the text of the report)
 - Use an appropriate citation format (i.e. Chicago Manual of Style, IEEE, etc.)
 - See <http://libguides.asu.edu/citing> for helpful information

Deliverable:

Submit your proposal document as a **TEAM** (have only **one** member of your team submit it) **to the assignment in the course shell by the date specified.**

Appendix A. Proposal Document Grading Rubric**Team Number:**

Topic	Max Pts	Score
Professional quality document (cohesiveness, spelling & grammar, cohesiveness, flow, correct & consistent formatting, typed, labels for figures and tables, etc.)	5	
Cover Page (Title, Date, Team Member Names and Initials)	Required	
Introduction		
Summary of the proposal document & purpose of the document	2	
Proposed Design		
Detailed sketch of design (including revisions)	6	
Description of proposed design, underlying physics (including revisions)	6	
Estimated budget & materials list (including revisions)	5	
Alternative Designs Considered		
Brief description of each alternative design	5	
Rough sketch of each alternative design	5	
Justification of Proposed design		
Decision matrix (comparing all design alternatives)	5	
Documentation of evidence/rationale to support design decision (sketches/info of current designs/technologies; scientific principles, equations/calculations)	5	
Revised Project Schedule		
Revised Gantt chart (specific tasks included)	2	
Conclusion or Summary	2	
Summarize the key selling points of your design		
References (cited in text, appropriate formatting, appropriate sources, etc.)	2	
Total	50	