

SYDE361 - Project Proposal

Grading: 20% Team Submission

Due Date: Wednesday, June 7th, 2023 by 8pm ET on LEARN

All submissions MUST BE SUBMITTED as PDF files unless otherwise specified. Any other file formats will not be accepted.

General Rubric

Missing components = 0

0-40%	U = Unsatisfactory (clearly below standard for a 3rd year SYDE student);
50%	M = Marginal (meets minimum expectation, but not more);
60%	S = Satisfactory (demonstrates basic design and engineering competence);
70%	G = Good (demonstrates average design and engineering effort);
80%	VG = Very Good (demonstrates above average design and engineering effort);
90%	E = Excellent (exceeds expectations);
100%	O = Outstanding (I think this component is award-worthy).

Project Proposal Instructions

Grade: /30

6 pages maximum excluding references

PROPOSAL SECTIONS

1. Abstract
2. Introduction
3. Design Concept
4. Prototype Plan
5. References

ABSTRACT

250 words max.

INTRODUCTION

Describe design context and provide motivation for design. Include analysis of the problem area and use literature sources to describe existing solutions (state-of-the-art) and identify user needs.

DESIGN CONCEPT

Introduce a design concept that addresses the problem defined in the introduction. Provide illustrations or drawings of the design concept. Demonstrate consideration of all aspects/ components of the design for it to be a working solution — even if these go beyond the scope of the proposed prototype. Identify a comprehensive set of requirements/constraints which a complete working design could be tested against. Use research/analysis to support chosen metrics.

PROTOTYPE PLAN

Three key questions to be addressed by the prototype will be identified. A preliminary plan will be put forth for how the prototype could be tested to provide evidence that would inform future stages of the design. Describe how design alternatives will be implemented to provide evidence for or against design features. Describe a preliminary testing plan: what aspects will require user testing and what aspects can be tested without users (i.e. from a technical perspective). Identify what aspects of the design concept will not be addressed in this stage.

REFERENCES

IEEE format. If evidence is included that derives from the System Identification (JupyterLab) assignment, you can consider this your own work (no need to reference the assignment itself).

GRADING BREAKDOWN:**Technical writing: 5 marks**

Better submissions will clearly and effectively communicate ideas and include references to reliable sources. Write professionally, concisely, and without typos and grammatical errors. Use appropriate terminology.

Analysis and proposed design: 15 marks

Better submissions will provide strong motivation for the design, based on research and needs analysis. They will include justifiable requirements and constraints for the design to clearly demonstrate how the concept will be considered to be effective. Diagrams and figures are effectively used to communicate the design concept.

Prototype Plan: 10 marks

Better submissions will identify clear objectives for prototyping with an emphasis on verifying assumptions for user interactions. High priority questions should be identified, especially those that require prototyping rather than could be addressed by analysis/research. Implementation of design alternatives should be simplified such that the burden on prototyping is not unnecessarily increased.