Engineering Project Proposal

2141498 - NANO Engineering Pre-Project

NANO Engineering

International School of Engineering

Chulalongkorn University

MEMORANDUM

{INSERT DATE HERE}

TO:

|  |  |
| --- | --- |
| {INSERT NAME OF ADVISOR} | Advisor |
| {INSERT NAME OF CO-ADVISOR} | Co-Advisor |
| {INSERT NAME OF COMMITTEE 1} | Committee Member |
| {INSERT NAME OF COMMITTEE 2} | Committee Member |

FROM:

|  |  |
| --- | --- |
| {STUDENT NAME 1} | {Signature} |
| {STUDENT NAME 2} | {Signature} |
| {STUDENT NAME 3} | {Signature} |

SUBJECT: Design Project Proposal Submission

Enclosed is our group's design project proposal, {INSERT PROJECT TITLE HERE}. This proposal is submitted in partial fulfillment of the Engineering Pre-Project requirement outlining the plan for the project pursued through the problem formulation with functional requirement, alternative solution generation with engineering approaches, project management and milestones, and task assignments and deliverables. We understand this proposal, in written report as attached, and oral exam scheduled with the committee, will undergo a rigorous assessment, and we are willing to accept recommendations from the committee and modify and resubmit for final approval.

**Engineering Project Proposal**

**{INSERT PROJECT TITLE HERE}**

**Submitted by**

**{Student 1}**

**{Student 2}**

**{Student 3}**

**Approved by:**

Senior Project Advisor:: **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  Name

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Signature

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Date

Senior Project Co-Advisor:: **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  Name

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Signature

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Date

{Title}

1. Introduction

State the objective of the project. Discuss here the need for and value of the project in the context of a customer’s need, including any relevant background. Clearly state the identified need. Also, describe the knowledge and skills acquired in earlier course work which plays a major role in the problem formulation and problem solving. Also, a clear and concise description of the project goals and scopes is important. (~0.5 pages)

2. Problem Definition

Identify the requirements, specifications (or standards, rules, or regulations), and constraints of the project around the root cause of the problem. Ensure the design requirements are both quantitative and measurable. If applicable, provide a description of the sustainable design related to the project and solutions. (~0.5 pages)

3. Current Status of Research

Summarize the search and research results of the existing products or technologies with references. Describe their advantages and disadvantages from the perspective of the design requirements of the project. Find the main technological point that serves as the main reason why the proposed project is important and solves the problem (~0.5 pages).

4. Engineering Approach (including alternative solutions)

Describe at system level your project and rough solution ideas. There should be more than one solution alternative with somewhat detailed description even though the solution should be refined later. Providing schematic diagrams and components necessary for the solutions would be helpful. You should provide explanation, not just drawings. Also, mention what contents of knowledge gained in the courses taken would be applied, and what contents of knowledge are needed beyond what you have already learned to pursue the solution approaches. (~1.5 pages)

5. Tasks and Deliverables

Describe the scope of your expected work, including work to be completed and tasks to be conducted. Do not list or describe different tasks assigned to different members: that is the subject of next section. Instead, the task description should follow the order of the project progress or the order of components of the project. Also, in this section describe deliverables, which means you have to clearly declare what you will give your customer such as prototype, schematics, manual, etc. (0.75 pages)

6. Project Management

Description of timeline and milestones, using, for example, a Gantt chart. A detailed description of the task assignment of each member of the team must be presented. Also describe rough budget, and resources and facilities needed and, if there is any, request to department for facilities. Mention here safety concerns and/or engineering ethics relevant to the project. (0.75 pages)

7. Conclusion

Conclude by rephrasing the problems and needs and benefits of the project. Also rephrase the objectives of the project. Then, summarize the engineering approaches and alternative solution ideas. State briefly on costs and timeline. (0.5 pages)

8. References

Should be taken from trustworthy sources and written in proper format. (See some examples in [Guide to Referencing and Citations of Department of Education, Oxford University](https://weblearn.ox.ac.uk/access/content/group/cd464c28-e981-4dcc-af89-945b50a3ef48/Referencing%20and%20plagiarism/SHU_Guide_to_referencing%20NEW%20TO%20USE.pdf).)