ENGR 103 Freshman Design Proposal Guidelines – Read this Page!

Use this template file as the basis for your ENGR 103 Freshman Design Proposal. It lists and explains several *required* sections, but other sections can be added as appropriate. Please review the guidelines and template carefully.

Purpose

The Freshman Design Proposal should clearly state the motivation for your project, the goals you hope to achieve at the conclusion, the technical challenges you expect to face, the major tasks, and the final deliverables.

This proposal should provide the foundation for the work you and your group will carry out during its Freshman Design project. The proposal should clearly outline the main tasks of the project and the specific deliverables that will be provided at the conclusion.

Your proposal must include at least four (4) references related to your freshman design project.

Cover Page

The cover page must include the project title, your group number, project number, and ENGR-103 and section number. This proposal will be submitted to the faculty and fellow in the ENGR 103 section that you are registered for as well as your freshman design technical advisor (if different than your ENGR 103 section instructor(s)). The names of these individuals must also be included on the cover page. The names of all members of the group must be included as well. Finally, an abstract must be included and fit completely on the cover page.

Submission Requirements

- **Do not include these guideline pages in your final report!**
- Update the header to include your ENGR 103 section, design group number, and project number.
- All reports must be submitted as a PDF to BbVista by the Friday of Week 9 of the Winter Term (3-4-11).
- The proposal should be at least 2 pages long (not including the cover sheet). There is no upper page limit.
- Use the following file naming convention: ENGR 103 **Design_SecXXX_GroupYYY.pdf** where
    - XXX is your 3-digit ENGR-103 section number and YYY is your 3-digit group number

ENGR 102 - Winter 2011
Freshman Engineering Design Lab

"The Title of Your Project"
Project Proposal

Section XXX, Group YYY, Project ZZZ **Date: March 4, 2010**

Submitted to: *{lab section faculty member}*

{lab section teaching fellow}

{technical advisor (if different than lab instructors)}

Group Members: *{member name}*

{member name}

{member name}

{member name}

{member name}

Abstract:

Start your abstract here. The abstract should be a short summary of the entire Freshman Design project. It should discuss the motivation for the project, your goals, the technical challenges you expect to face, the major tasks, and the final deliverables.

It may be easier to write the abstract *after* you have written the body of the document. The entire abstract should fit on this page. If not, it is too long.

1. Introduction

Discuss the motivation and goals of the planned project. Discuss the learning objectives, major tasks, technical challenges, and desired outcomes.

2. Technical Approach

Elaborate on the major tasks of the project and how these tasks will allow you to address the technical challenges of the project.

2.1 Project Timeline

During Spring term, you will have approximately 10 weeks to complete your project. Provide a project timeline (a Gannt chart) that shows the major tasks and their duration. If this project requires you to learn a specific skill, time should be allocated for this in your timeline.

Table 1: Freshman Design Project Timeline

	Week									
Task	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Literature study	x	x								
Mechanical design		x	x	x	x	x				
Electrical design			x	x	x	x	x			
System integration						x	x	x		
Testing							x	x	x	
Final report preparation								x	x	x

2.2 Facilities and Resources (if appropriate)

Describe any resources you are expected to use during the course of the project. This includes *anything* that is necessary for the completion of the project and that your group does not already possess. Examples include use of machine shop tools, rapid prototyping machine, faculty research space and equipment, on or off-campus work space.

3. Deliverables

Describe in detail what you will at the conclusion of the project: examples include physical prototypes, computer models, simulation results, algorithms and programs, design studies, lab test results.

4. Expertise

Some projects may require group members to have skills in certain areas upon starting the project while other projects may require group members to acquire these skills through the

course of the project. Describe any specialized skills that may be needed for this project. Some examples include

- Familiarity with a specific software package
- Computer programming experience
- Knowledge of basic circuit theory
- Use of machine tools

5. References

You must include at least four (4) "quality" references (not *Wikipedia*) that directly relate to your Freshman Design project. References can be used to provide background for your project (e.g. a patent describing a device similar to the one you propose) or discuss relevant theory (e.g. a textbook that discusses an algorithm you will use).

References can include (but are not limited to)

- book chapters
- conference and journal papers
- magazine articles
- patents
- manufacturer's product datasheets, application notes, whitepapers

All references must be formatted using IEEE citation format. For this proposal, you must not cite web pages (including *Wikipedia*) or quote individuals. Doing so will result in a severe grade penalty.