

# Your Project Title Goes Here

## EE-241. Introductory Electronics Laboratory\*

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### 1 Summary.

Explain in a few lines, what this project is all about. Describe it as if you are explaining your project to an SSE freshman with as little technical details of circuits & electronics as possible. Also, give a line or two on why this project is interesting. This should not exceed 8-10 lines. Your total proposal need not be bigger than 3-4 pages.

### 2 Objectives and Requirements

Explain here (in a paragraph or two), what are the objectives of this project. What does your circuit do *functionally*? Are there any design specifications that you need to meet? You should not give details of the circuit but only what the technical requirements are and what you want to achieve.

### 3 Design Overview

Explain in this section, what are the main components of this project. If possible, make a rough block diagram of the circuit explaining what each block will do. Clearly, indicate what parts of the project will be designed by you and what parts (if any) will be used as “black-boxes” without design. Also, remember that in your final demonstration you will not be allowed to use any of the test equipment, i.e. function generators, oscilloscopes and power supplies. For powering up your circuits in the final demo, please use batteries or commercially available chargers and leave provision for this in your final design.

In your final evaluation you will only be given points for the parts that you designed yourself using discrete components (resistors, capacitors, inductors, transistors, diodes, OP-Amps etc.) e.g. if you were to make an audio amplifier, there is no design point for using an audio amplifier chip like KA2209 or LM386 because it is already available as a single chip solution. However, you can use such IC's and other complex modules to support your design.

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## 4 Project deliverables

Write here about what you will be demonstrating at the end of the project. Here is a rough distribution of how your project will be marked at the end.

Design points	30%
PCB	20%
Simulations <sup>1</sup>	5 %
It Works!	15%
Final report	20%
Proposal	10%

## 5 Project Plan

Write here the different steps you will take during the project. You can also describe how you will distribute your tasks within the team. Remember, that a proposal is not a final design. Writing this document will only help you think clearly about the steps you need to take before you embark on your project. You may need to change things later on. But at the end, your theme and design should not deviate too much from what you set out to achieve.

At the end of this document, you may give appropriate references to literature or resources that you may use during the project or in the writing of this proposal.

## References

- [1] Y. Tsividis, *A first lab in circuits and electronics*, John Wiley & Sons, 2002.
- [2] Laboratory for Cyber Physical Systems, <http://cyphynets.lums.edu.pk/index.php/EE-241>.