
EDD Project Proposal (Semester 1)

Introduction

Your team has done a lot of work to find, define, validate, and justify a problem that you want to solve. Most inventors and innovators do not have the time or resources necessary to develop a solution to their problem on their own. Often, it becomes necessary to convince other people or organizations that he has a problem worth solving in order to generate funds to develop a solution to the problem. Typically, investors require a written proposal that defines the problem and provides evidence that the problem is both valid and justified. The proposal should also include information on the proposed plan for developing a solution to the problem and the scope of the work anticipated during the design process.

For this project your team will develop a project proposal to “sell” your project idea to potential investors. The document should be written in a persuasive manner and organized such that all of the information and research is easily understood and clearly supports development of a solution. Your proposal document will be evaluated by your instructor and/or a review panel to assess the thoroughness of your research and the strength of evidence supporting development of a solution. Once the design process is complete this document will be extremely valuable as a means to share your work with experts and mentors that may assist with your team’s project. Further, this documentation will become an important component of your final documentation and will provide much of the material needed to present your final project solution.

Equipment

- Engineering notebook
- Computer
- Previous work related to the problem

Procedure

Create an electronic project proposal document in 8.5 in. x 11 in. format. It should include all sections detailed below and should meet any expectations set forth by your instructor. Beyond that, it is up to your team to ensure that the document is professional and impressive. Keep in mind that the purpose of the proposal is to sell your project idea by demonstrating that you have a valid and justified problem.

Your document should include, at a minimum, the following:

Title Page

The title page should include, at a minimum, the title of the project, team member names, and the date.

Problem Statement & Statement of Purpose

It may be appropriate to elaborate on your statements in order to properly support them. For example you could include a source for statistics or a map of a geographic location.

Executive Summary

The summary is a condensed version of your entire proposal. The summary will contain information that you might mail or email to potential financial supporters or experts. Such individuals could read the executive summary and determine whether they should read your proposal. Be sure to emphasize the importance of what you are doing.

Performance Benchmarks

If the product or system that your team develops is successful, how will you know? Brainstorm a list of benchmarks, against which you can compare your solution, that represent performance expectations that your solution must meet in order to successfully solve the problem. Benchmarks must be measurable. Sometimes a benchmark is a simple pass or fail assessment. Other times a success rate or percentage of success is the goal.

Math, Science, and Engineering Concepts

The problem that you choose to solve will certainly require known math, science and/or engineering concepts. This can include formulas, laws, etc. Brainstorm a list of math, science and/or engineering concepts that you anticipate will be needed in order to solve your team's problem. Consider applications of mathematics, chemistry, biology, physical science, nanotechnology, electrical engineering, mechanical engineering, civil engineering, etc. that may be incorporated into your solution. Input from experts may be helpful in the identification of the concepts needed.

Expert Input and Needs

Detail the information that you gathered from experts regarding your problem and potential solutions. Also include areas in which you will need additional expert assistance. Be sure to specify the type of expert help for which you anticipate a need and when in the process you will need it.

Past and Present Solutions

Include a summary of your research of similar existing products and/or competitive products including strengths and weaknesses of these products. Also include patents that address a similar problem and that may or may not have made it to development. Justify why you believe there is a need for your solution in the midst of similar work that has been completed.

Market Research

Detail the important aspects of your team's marketplace study. How can you be reasonably certain that if you solve the problem, a need and/or demand for the solution will exist? Who will buy your product? Why will they bother to try it?

Gantt Chart

Create a Gantt chart to detail all tasks, responsible parties, and due dates. Clearly define the entire scope of work in the task list. Be sure to consider the Rule of Thirds when making scheduling projections.