



BME322
BioMedical Engineering
Design Project

General Guidelines



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General Mission Statement

The purpose of this Design Project is to:

- **Enable our Company to improve upon existing BioMed or BioEng products and/or services.**
- **Utilize available novel or cutting edge technology.**
- **Insure that another profitable Product or Service is added to our current list of offerings.**
- **Insure that our Company will continue to increase overall market share.**



Design Project Description

- **Each Project Team will select a Design Project of interest to the Team and of benefit to our Company.**
- **This Project must reside in either the BioMedical or the BioEngineering business sector.**
- **The Project must be based on signal processing or wireless technology, explore some aspect concerning signal processing or wireless systems, or involve the use of the EM Spectrum.**
- **The Project will be defined from a feasibility standpoint only.**



Design Environment

- **Teams will utilize planning, budgeting and time management tools.**
- **A budget request will be developed for the Project and presented to management for approval.**
- **Teams will utilize software tools to model and simulate, as necessary, complex systems.**
- **Industry level research must be conducted as required by the Project.**



Design Environment

- **The quality, maintainability and reliability aspects of the Project must be evaluated.**
- **Consumer aspects such as operating and maintenance costs must be considered.**
- **Liability aspects of the Project must be considered.**



Design Environment

- **A marketing plan must be created for the Project.**
- **Predicted production costs, selling price and profit margins must be developed for the Project**
- **Overall profitability and marketing potential of the Project must be considered.**



Report Requirements I

Reporting and presentation skills required will be those of an experienced, high-quality Project Team.

The Written Report must include the following:

- **Executive Summary**
- **Description of the Project**
- **Mission Statement**
- **Goals and Objectives**
- **Concept Validation**
- **Technical Design Description, incl. block diagrams, simulations, etc.**



Report Requirements II

The Written Report must include the following, cont'd.:

- **Project Management and Timeline Graphics**
- **Marketing Plan**
- **Cost Analysis**
- **Profitability Analysis**
- **Funding Request**
- **Conclusions and recommendations to management**



Presentation Requirements

- **Prepare an Oral Presentation based on the Written Report submitted to management**
- **This Presentation will be created in PowerPoint.**



Design Project Schedule

- **Week 2:**
 - Team formation
- **Week 4:**
 - Project requirements, project selection
- **Week 8:**
 - Oral Status Report (Midterm)
- **Week 13**
 - Power Point rehearsal and review
- **Week 14 (Last Class):**
 - Complete Project, Submit Final Report and Powerpoint.