MATH 560
PROJECT GUIDELINES

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Project Description MATH 560 

In the project, you need to analyze a real life experiment. You may conduct the experiment and collect data by yourself, or find existing experiment data from online sources, preferably in your major area.

Submit a final report of your findings, including

(1) a brief background statement covering why you chose to study the system you did and other relevant information,

(2) the levels of the variables you studied,

(3) the responses and how they were measured,

(4) the experimental design chosen,

(5) the data collected,

(6) your analysis,

(7) an interpretation of your results,

(8) a comparison between what you found and what you expected to find.

Requirements:

- Each group should contain at most 3 students.
- The project involves three components as below:

➢ *Preliminary proposal*: Each group should submit a one-page proposal of their project for approval. The proposal should include a brief description of the problem and your data, and tasks that you intend to complete. This is due on in 5th week (email submission)

➢ *Presentation*: each group will give a short presentation at the end of semester.

➢ *Report*: Each group should submit a formal report at the end at the end of semester. (email submission + Hard copy)

GUIDELINES

EXPERIMENTAL DESIGN

OBJECTIVE OF EXPERIMENT: To test the hypothesis that (response(s)) is/are a function of (control variables).

DATE EXPERIMENT IS TO START _____
END _____

1) How many independent factors are to be studied? _____

	FACTORS	TYPE*	DIMENSIONS	RANGE OF INTEREST	LEVELS
1.					
2.					
3.					
4.					
5.					
6.					
7.					

2) How many Responses (dependent variables) are to be measured? _____

List responses in order of importance as follows:

	RESPONSE	TYPE	DIMENSIONS	SIGNIFICANCE DIFFERENCE YOU WANT TO DETECT	RISK	ESTIMATE OF STD. DEV.
1.						
2.						
3.						
4.						
5.						
6.						

3) How many runs do you want to make? _____ maximum allowable? _____

4) How long does it take for one run? _____

5) Can all the treatment combinations be randomized? _____

If not, which factors can't be? _____

* Put A for qualitative (attribute), V for quantitative (variable), C for controllable and N for uncontrollable.