

As a final project for the Statistics level 1 course, students will design their own statistical **project**.

A statistical **project** is the process of answering a research question using statistical technique and presenting the work in a written report. .

Guidelines for developing a statistical project.

- The research question may arise from any field of scientific endeavor, such as athletics, advertising, aerodynamics, nutrition, politics, etc.
- The project should demonstrate the scientific method of solving a problem by using the following process:
 - 1. Pose a focused question**
 - 2. Collect appropriate data**
 - Are you able to collect data to answer the proposed question? If yes, time should be spent deciding how to collect it, record it, and use it. ***Great care should be exercised at every stage of data collection. Careless measurement or recording of data cannot be remedied in the analysis phase of the project.***
 - Has someone else already collected the data that could be used to find the answer? If published data are used, explain how the published data were obtained and record the source.
 - 3. Analyze the data intelligently**
 - Intelligent analysis of the data may take many forms and should be guided by the question and how the data were collected. Usually it is best to begin by graphing the data. More than one graph is required. Appropriate statistical methods of analysis should be used.
 - 4. Draw correct conclusions**
 - Once the analysis is complete the question should be answered correctly. The data may not be able to provide a conclusive answer. Be careful not to get ‘caught up’ in the analysis phase and obtain many answers, none of which addresses the research question.
 - Consider the strengths and weaknesses of the project. What went right? What went wrong? What would be changed if it was done again?

PROJECT DUE DATE: MAY 24, 2004

PROJECT REQUIREMENTS

The following guidelines will be used to assess each project:

1. Selection of Project & submit Project in a timely manner.

(-5 points per day penalty for not selecting a project)

(-5 points per day penalty for not submitting the project – up to 3 days late)

(projects submitted after three days past the due date receive no credit)

2. Question of Interest (5 points)

Is the question of interest focused, clearly stated and relevant?

3. Research Design and Data Collection (20 points)

Can the data, as collected, answer the question? Were the data collected in an appropriate manner? Were data collected directly by the students? Share the data with the teacher.

4. Analysis of data (25 points)

Is the analysis appropriate for the design?

5. Conclusions (10 points)

Are conclusions consistent with analysis? Has the question been answered?

6. Reflection on the Process (5 points)

What went right? What went wrong? What could be done differently? Are there any suggestions for further study?

7. Final Presentation (15 points)

Is the typed report well organized and presented? Is it neat? Does the project display creativity and/or originality? Are supporting graphs and charts carefully prepared?

8. Degree of Difficulty (5 points)

