

**Design an OBERSERVATIONAL STUDY or an EXPERIMENT that will provide scientifically accurate statistical data to a business located in the Canon City area.**

The study will derive its direction from a local business which will specify the need for and specific requirements of the data. Each team must identify/contact/liaison with a local business to obtain an appropriate need which can be satisfied with statistical data. This need will typically be related to customer needs or competitor demands. The data will not be actually acquired or analyzed statistically **but how the data is acquired (via observational study or experiment) must be comprehensively detailed.**

**"... the chief business of the American people is business."**

President Calvin Coolidge in an address to the Society of American Newspaper Editors on **January 17, 1925** in Washington, D.C.

<http://www.thisdayinquotes.com/2010/01/business-of-america-is-business.html>



**Specifically, each team must:**

1. Design a detailed and realistic statistical observational study **or** experiment.
2. This design will be described in a word processed document and presented in Power Point form.
3. If the design is observational, it should employ *multistage sampling* and identify the population being measured, how the sample will be chosen from the population, what is to be measured, etc. The design of the survey tool(s) must also be presented.
4. If the design is experimental, principles of experimental design (comparison, random assignment, control, and replication) must be followed and documented.
5. Estimate man-hours of labor to complete an entire survey/experiment with mathematical analysis. Provide an estimated total cost to the business for the completed analysis.
6. In your report, provide analyses of your design's strengths and weaknesses. Estimate sampling error in the design and identify (as best as possible) any non-sampling errors.
7. Provide a 15 minute MS Power Point presentation addressing all salient points of your design. As a team, be prepared to answer questions following the presentation.
8. Provide a minimum of 2 copies of the design report the day of the team presentation.
9. The day of the presentation, e-mail to mheinen\_1@msn.com as attachments the Word.docx (with all supporting spreadsheets and documentation) and the power point presentation file.
10. All members of a team will receive equal grades.
11. Teams will meet with Mr. Heinen to discuss intermediate progress on presentations.

**The date of the presentation is:**

**1st Block (7:35-8:30 AM), Thursday and Friday: November 1-2, 2018.**