Summer 2020

INT 222 Social Science Statistics

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Contact Methods and Response Time
The best way to contact me is through email. Generally responses will be within 24 hours but it may take up to 48 hours. These response times exclude weekends but I tend to respond to emails on weekends as well. Please use proper grammar when sending emails. I am not a fan of "text-speak". The quicker I am able to determine your needs or question the quicker I will be able to respond.

Course Description:
Students learn how to correctly interpret data tables, download data from online databases, manipulate the data in a spreadsheet, and analyze social science and business data with Excel, and SPSS statistical software. Through an understanding of sampling, distributions, and summary statistics, students acquire the means to understand and evaluate quantitative reasoning in corporate, government, and news reports. In this course you will encounter various forms of representation of data including lists, spreadsheets, tables, and graphical representations. Students will manipulate, summarize, and display data. You will also represent data summaries using statistics software packages. During this course you will use Microsoft Excel to assist you to complete a PowerPoint project. You will use SPSS to complete an exploratory data analysis project. Finally, you will use SPSS to perform a survey analysis. Students studying Sociology, Business, Communication, Economics, Health Care Administration, or Marketing Communication are required to take this course as a part of their program of study. It is also required for upper-level students in the social sciences and business disciplines.

Software: You will have multiple opportunities to apply statistics using various forms of software. You will also need a basic scientific calculator and access to the internet.
We will use the following software:
Microsoft Word
Microsoft Excel
SPSS You can obtain a copy of this through the google doc located in the course documents. You will need to have this program installed when you get to Assignment 13. We will be using it on the assignments for the EDA and Survey Projects.

General Objectives:

To encourage the use of judicious data analysis for decision making and for the evaluation of current events and issues in the social sciences, in business, and in health care administration
To use the computer as a tool in data retrieval, statistical analysis, and project reports
To comprehend the use of graphs as a vehicle for research and expression
To generate an appreciation of the uses and abuses quantitative reasoning in proving theories, solving problems, and inferring relationships
To introduce students to the theory and application of key statistical concepts
To develop student confidence and skill in technical writing
To rise to the challenge of being precisely correct

This course has three projects, a midterm, a final, and several assignments. Most of the assignments are designed to assist you working through the projects. You will begin the course by clicking the getting started section. There are a few simple readings regarding percent, ratio, and rate to begin and then you will move to assignment 1.

Assignments: There are 22 assignments in this course. All assignments are located in the assignment folder. Many of the assignments require a submission to receive credit. All submissions should be done through Black Board. If you submit an assignment more than 2 days early send me an email so that I can grade it in a timely manner. The assignments are designed to provide guidance and assistance as you complete the projects. Many assignments can be used directly on the projects.

Projects: You will be responsible for completing three projects over the duration of the semester. The use of a computer software will be necessary to complete the projects. A detailed description of the project and a requirement checklist can be found on the Black Board course site. The first project will involve using Microsoft Excel to complete a PowerPoint project. In the second project you will use SPSS to complete an exploratory data analysis project. The last project will involve interpreting survey data using SPSS.

Mid-term: At approximately the half-way point in the semester you will take a mid-term exam. You will have a limited amount of time to access the exam so you must plan your schedule accordingly. You may use your book and notes on the exam but you will sign an honor pledge stating that you have not used any other outside sources such as other people's notes or the Internet. You must submit the midterm by the due date listed on the course schedule.

Final Exam: The final exam will be cumulative. The specific materials that are allowed will be listed on the final exam. You must complete the final exam by the date listed on the course schedule.

Schedule: Check the BB course website for due dates and weekly assignments.

Grading:

Assignments	15%
Projects	45%
Mid-term	20%
Final Exam	20%

Final Course letter grades are assigned based upon the following percentages:

93%-100%	A
89.5%-92.99%	A-
87%-89.49%	B +
83%-86.99%	B
79.5%-82.99%	B-
77%-79.49%	C+
73%-76.99%	C
69.5%-72.99%	C-
65%-69.49%	D+
59.5%-64.99%	D

0%-59.49% F

TEXTBOOKS:

Miller, J. E. (2014). *The Chicago guide to writing about multivariate analysis 2nd edition*. University of Chicago Press ISBN 978-0-226-52787-1

Supplemental resources can be found here http://press.uchicago.edu/books/miller/multivariate/index.html

Moore,D.S.,& Notz,W.(2018). *Statistics: Concepts and controversies* (9th ed.). New York: W.H. Freeman & Co. ISBN 9781464192937

Incomplete Policy:

If you have a legitimate reason to obtain an ET (e. g. personal illness, illness of a family member, death of a family member, work scheduling issues) and have completed the assignments through halfway point of the course then you will be granted one. Otherwise please do not request an incomplete. If you cannot submit an assignment by the due date then you need to contact me in order to obtain additional time. If you do not contact me you will not be given additional time. There are no exceptions to this policy.

The following list should provide you with a general idea regarding the understandings and corresponding techniques you should have upon completion of this course.

1. Understand and make precisely correct statements from data in tables
2. Discover stories and patterns in graphs
3. Download data from internet databases and reformat data in a spreadsheet
4. Compare observations by subtraction: take first differences
5. Compare observations by division: ratios, rates, proportions, percents, rates of change
6. Plot data: pie charts, bar charts, line graphs
7. Explore descriptive analysis for one variable: frequency distribution, summary statistics, EDA graphs including stem-leaf and box-and-whiskers displays
8. Explore relationships between two continuous variables with scatterplots
9. Explore relationships between a continuous variable and a categorical variable with multiple box plots
10. Quantify relationships between two categorical variables with cross-tabulation: row percents and column percents
11. Use p-values to measure statistical significance