Stat 470W Problem Solving and Communication in Applied Statistics (3)

Instructor:  Dr. Linda Clark  
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Course Objectives
1. Be able to recognize experimental design
2. Have a working knowledge of SAS
3. Be able to apply statistical knowledge to real world problems
4. Be proficient in regression, ANOVA, and logistic regression
5. Be able to communicate statistical findings through written and verbal communication  
6. Conduct yourself in a professional manner, communicating timely with clients and professional staff

Class Meeting Times: MWF 8:00 – 8:50 a.m. 219 Thomas

PLEASE NOTE: We will occasionally join STAT 580/581 through the semester. These meetings will be announced in advance. If you have a COURSE conflict, please let me know right away.

Required Reading: Assigned journal articles and selected chapter (available through ANGEL)  

This course is a seminar format course. Class attendance and participation is critical to your success in the course. Just showing up is not participation. You will need to be actively engaged in the course during class meeting periods or your grade will suffer. This means that you will need to learn to communicate verbally in the classroom environment. If you continually arrive to class late (i.e. more than 5 minutes) you will be marked as absent for the class.

The schedule below is a tentative schedule. Due to the nature of the course and the interactions with the Statistical Consulting Center (SCC) some of the assignments may be dispersed throughout the semester. However, all students are responsible for all work.

There will be writing assignments almost every week in the course. Typically the assignments will be assigned on a Friday and due the next Friday BEFORE
class. Only 1 submission per assignment is allowed. There are several assignments, which do not have specified deadlines because of the nature of 470W’s relationship to the SCC. In these events, students have 1 week to complete the assignment associated with the SCC activity. Additionally, any assignments that are to be completed after a class presentation have one week (due before class) to be completed.

ABSOLUTELY NO LATE WORK WILL BE ACCEPTED! If you have a UNIVERSITY approved excuse and communicate your excuse no later than one week before your absence then, as per Faculty Senate guidelines, I will accommodate the assignment. Please note that any extended travel for personal reasons is NOT an excuse for missing class and any assignments missed will be graded as zeros. THIS POLICY IS STRONGLY ENFORCED. I WILL NOT MAKE ACCEPTIONS!

The three main assignments for this course consist of a previous SCC project done in a small group format, a current SCC project, and a class wide project.

Throughout the semester, students in 470W will be assigned to observe an active consulting project in the SCC. You will be responsible for the following:

- Responding quickly and professionally to any emails from the SCC or Graduate students
- Attending the first meeting, attending the faculty meeting, and attending the final meeting
- Preparing a first meeting summary for the first meeting
- Presenting the first meeting summary in 470W, presenting the final meeting conclusion in 470W.

During the third week I will randomly assign teams to work on an SCC project. This project will be completed in phases (first meeting summary, EDA, inferential statistics). Each portion of the project will be presented by the group in class, and then handed in individually one week after the presentation. For each section, you are required to hand in the all previously completed components. Students not in class on the day of their presentation will be severely penalized.
The class will be working on a group project. We will use in class time to work on the project. First meeting summaries, EDA and inferential statistics reports will be required for this project.

This is a writing intensive course so all written work will be graded in terms of grammatical correctness, clarity of writing, and accuracy of content.

**Grading of Written Work:**
Essays will be graded on a scale of 1 to 25. For assignments that do not require statistical analysis the grading will be out of 20 points. Points will be assigned in the following manner:

- 5pt for answering the question and strength of argument;
- 5pts for correct interpretation of data/results;
- 5pts for clarity and conciseness of writing;
- 5pts for grammar, spelling;
- 5pts for overall professionalism.

In addition to the grading of the written work class participation will reflect 20% of your total grade. Participation is based on three components 1) attendance, 2) meaningful participation 3) attentiveness (this includes being on time to class).

“Penn State welcomes students with disabilities into the University's educational programs. If you have a disability-related need for reasonable academic adjustments in this course, contact the Office for Disability Services (ODS) at 814-863-1807 (V/TTY). For further information regarding ODS, please visit the Office for Disability Services Web site at [http://equity.psu.edu/ods/](http://equity.psu.edu/ods/). In order to receive consideration for course accommodations, you must contact ODS and provide documentation (see the documentation guidelines at [http://equity.psu.edu/ods/guidelines/documentation-guidelines](http://equity.psu.edu/ods/guidelines/documentation-guidelines)). If the documentation supports the need for academic adjustments, ODS will provide a letter identifying appropriate academic adjustments. Please share this letter and discuss the adjustments with your instructor as early in the course as possible. You must contact ODS and request academic adjustment letters at the beginning of each semester.”

All Penn State policies regarding ethics and honorable behavior apply to this course (see links below for policy statements). Academic integrity is the pursuit of scholarly activity free from fraud and deception and is an educational objective of this institution. All University policies regarding academic integrity apply to this course.

**Academic dishonesty includes, but is not limited to, cheating, plagiarizing, fabricating of information or citations, facilitating acts of academic dishonesty by others, having unauthorized possession of examinations, submitting work of another person or work previously used without informing the instructor, or tampering with the academic work of other**
students. For any material or ideas obtained from other sources, such as the text or things you see on the web, in the library, etc., a source reference must be given. Direct quotes from any source must be identified as such. All exam answers must be your own, and you must not provide any assistance to other students during exams. Any instances of academic dishonesty WILL be pursued under the University and Eberly College of Science regulations concerning academic integrity.