

PHCY 5160 Methods

Instructor: Scott Crawford

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Website: <http://www.uwyo.edu/crawford/methods/>

Dates: July 9th – Aug 10th

Video Introducing Class <https://youtu.be/0gAAISBE990?list=PLz-0gflgE2L9ICDW8WrhmTRs8q7rvNqE->

Course Goals

- (1) Formulate your science questions into questions about appropriate parameters;
- (2) Choose statistical tools applicable to your questions, and assess their validity;
- (3) Correctly report the results of your statistical analyses;
- (4) Write about the statistical discoveries with clarity and quality.

The main topics will be correlation, regression, and analysis of variance. Knowing when to use an analysis depends on the scenario and what has been measured. The focus of this class is not to teach formulas or how to use software. Although software will be used, it is to calculate the formulas and create graphs. The interpretation of the output and how to use it to answer the research question is the main goal.

Grading

Posting 10%
Assignments 40%
Final Project 50%

The following letter grades and percentage will be used for all graded evaluations.

A 90% - 100% High level of clarity, consistency and correctness. Few mistakes, all of which are minor.

B 80% - 89.9% Satisfactory level of clarity, consistency and correctness. Some mistakes, few are major

C 70% - 79.9% Acceptable level of clarity, consistency and correctness. Several mistakes, many are major

D 60% - 69.9% Unacceptable level of clarity, consistency and correctness. Lots of major mistakes

F Below 60% Too many mistakes to be considered statistically professional.

Posting

You are required to post three times each week. That will correspond with the pattern of having three homework assignments each week. There are no restrictions on the quality of the posts except against bullying.

Assignments

Each assignment will be marked with a grade that represents what I think you would deserve if that assignment had been your final project. The actual grade recorded in the gradebook will be 100% for all assignments you complete. This allows you to do your own work and experiment without fear of failure. Early in the class you should not be surprised by grades of 20%, but near the end you should be able to consistently achieve 90%. Your actual grade will be 100% for all the assignments if you complete them.

Note that the reports will be written as if you were responding to a client who is intelligent but has not taken statistics (like a company CEO). There are some assignments which are not reports and are simply designed to check that you can run the analysis correctly.

Final Project

The final project is due Friday August 10th. The final project will be a data analysis project incorporating the techniques learned in class. The final project is to be completed individually and written in journal style format (explained below). You may not ask another person to write or edit your final project for you. The only person you are allowed to communicate with about the data is the instructor.

Late Assignments Policy

I would rather have you turn in an assignment a day late and have it correct than on time but poor quality. Students are allowed to turn in an assignment a day late, but if it's later the assignment will receive a zero unless prior arrangements have been made with me.

Class meetings/Office Hours

Instruction is done through the videos and notes provided. Class will meet each Monday and Thursday 6-8pm through Zoom. Click here for the zoom link <https://uwyo.zoom.us/j/719424634>. Class sessions will cover material for 30-40 minutes, and then be open for help and questions as people have them. Class sessions will be recorded, but the recording will only be open to students in the class (they will not be publicly published).

Journal Style Reports:

Computer output should not be copied straight into report (except graphs)
Graphs need to have meaningful labels on the axis
All graphs or tables must be described in the report
Written in journal/article format (not bullet points)
Only include relevant statistics
Interpret every statistic included
Every claim is supported by a statistic

Note there is no extra credit in this class

Disability Statement:

If you have a physical, learning, sensory or psychological disability and require accommodations, please let me know as soon as possible. You will need to register with, and provide documentation of your disability to University Disability Support Services (UDSS) in SEO, room 330 Knight Hall.

Academic Honesty:

The University of Wyoming is built upon a strong foundation of integrity, respect and trust. All members of the university community have a responsibility to be honest and the right to expect honesty from others. Any form of academic dishonesty is unacceptable to our community and will not be tolerated.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
July 8	July 9 Class meets	July 10	July 11 Homework 1 Due Bad Memo	July 12 Class meets	July 13 Homework 2 Due Fish Oil and SDA	July 14
July 15	July 16 Class meets Homework 3 Due Run Regression	July 17	July 18 Homework 4 Due Captain Bucktooth	July 19 Class meets	July 20 Homework 5 Due Categorical Regression	July 21
July 22	July 23 Class meets Homework 6 Due Deliciousness	July 24	July 25 Homework 7 Due Drug Reactions	July 26 Class meets	July 27 Homework 8 Due Server Times	July 28
July 29	July 30 Class meets Homework 9 Due Quadratics	July 31	Aug 1 Homework 10 Due Sleep Levels	Aug 2 Class meets	Aug 3 Homework 11 Due Foxbooks Model	Aug 4
Aug 5	Aug 6 Class meets Homework 12 Due Foxbooks Report	Aug 7	Aug 8	Aug 9 Class meets	Aug 10 Final Project Due	Aug 11