ECON 2300 Statistics for Economists: Prospectus

Course Description and Level:

This course will teach you how to learn from data and understand uncertainty using the ideas of probability theory and statistics. After completing this course, you will be able to carry out simple statistical analyses yourself on the computer package R.

The prerequisite for this course is multivariate calculus. To do well in this course you will need to be comfortable with algebra, manipulating sums, differentiation and partial differentiation, solving unconstrained optimization problems, and integration.

Class Structure for Fall 2023

- In-Person Sessions Planned
 - In-person lectures will be held during 1:45-3:15pm on Tuesdays and Thursdays weekly.
 - Weekly one-hour recitations will be held at designated time slots.
 - There will be two 1-hour instructor office hours (tentatively 2:30-3:30pm Monday and 10:30-11:30am Thursday). Each recitation instructor will also hold weekly office hours.
- Online Activities
 - Announcements and additional course materials will be posted on Canvas.
 - Ed Discussion, accessible via Canvas, will be used to answer questions and facilitate discussion about course material. Piazza will be moderated actively, both to answer questions and approve (or correct) answers written by students.
- Schedule reflecting the workload for a typical week
 - FRIDAY SUNDAY: Read and take notes from assigned text, and review material from lectures. Work on homework assignments. Group work is encouraged, but you will have to submit your own answers.
 - MONDAY: Attend instructor office hour. Same as Friday-Sunday.
 - TUESDAY: Attend lecture.
 - WEDNESDAY: Revise previous day's lecture. Same as Friday-Monday.
 - THURSDAY: Attend lecture and attend instructor office hour. Submit homework assignment. New homework assignments will also be posted the same day.

Outline of Assignments & Assessments

- Homework assignments, best 8 out of 10, roughly one every week: 20%
- Midterm 1, early October: 25%
- Midterm 2, mid November: 25%
- Take-home final exam (with data analysis in R): 25%

Required book

 Introductory Statistics, Sheldon M. Ross, 4th edition, Elsevier The textbook is freely available online via the Penn Library website and the following webpage (PennKey login required): <u>https://www.sciencedirect.com/book/9780128043172/introductory-statistics</u>

Required software

- R with RStudio as the front-end. This is open-source and freely downloadable from the internet. Make sure you update to the latest version regularly.
- Homework assignments, midterms and final will have questions requiring you to do some programming and/or data analysis on R.