Instructor:
Vu Dinh
Email: vucdinh@udel.edu
Office: Ewing Hall 312

Class Times:

MWF 2:30pm-3:20pm, Ewing Hall 101

Office Hours:

Tuesday 2pm-3pm and Wednesday 3:30pm-4:30pm, Ewing Hall 312, or by appointment.

Web page:

http://vucdinh.github.io/m450s19

Visit this page regularly. It will contain homework assignments, lectures, etc.

Prerequisites: Algebra, calculus, and MATH 350 (or an equivalent course in probability).

Reference: *Modern mathematical statistics with applications*, Second Edition by Devore and Berk. Springer, 2012. The text is available online from the UD library. This text is required.

Topics: The aim is to cover Chapter 1 and Chapters 6-12. Topics include sampling distributions, parameter estimation, maximum likelihood estimation, hypothesis testing, confidence intervals, correlation and regression.

Homework: Assignments will be posted on the web every other Wednesday (starting from the first week) and will be due on Friday of *the following week*, *at the beginning of* lecture. No late homework will be accepted. Your lowest homework scores will be dropped in the calculation of your overall homework grade.

Quizzes: To encourage you to keep up with reading and understanding the concepts, at the end of some chapters, there will be a short quiz during class. The quiz dates will be announced at least *one* class in advance. Your lowest quiz score will be dropped.

Exams:

- There will be an in-class midterm exam (tentative: 04/12)
- Final exam: Wednesday, 05/29/2019, 10:30am - 12:30pm, Ewing Hall 101

Evaluation:

- Overall scores will be computed as follows:
  25% homework, 10% quizzes, 25% midterm, 40% final

- No letter grades will be given for homework, midterm, or final. Your letter grade for the course will be based on your overall score.
- The lowest homework scores and the lowest quiz score will be dropped.
- Here are the letter grades you can achieve according to your overall score.
  - $\geq 90\%$: At least A
  - $\geq 75\%$: At least B
  - $\geq 60\%$: At least C
  - $\geq 50\%$: At least D

Data Analysis: We will do data analysis using an open source statistical system called R

http://cran.r-project.org/

To install R:

- Windows: Go to `http://cran.r-project.org/bin/windows/base/` and download using the link saying "Download R 3.x.y for Windows"
- Mac: `http://cran.r-project.org/bin/macosx/R-latest.pkg`
- Linux: Go to `http://cran.r-project.org/bin/linux/` and download as needed.
- To program in R, you have the option to work in RStudio, an open source development environment `http://www.rstudio.com/ide/download/`.

Ethics:

- You **must** write up solutions on your own.
- You may **never** read or copy solutions of other students.
- You are **encouraged** to discuss with other students about the class materials and homework
- You may use books and online resources for help, but you **must** credit all such sources and **never** copy the material verbatim.

Please refer to UD's Guide to Academic Integrity `http://www.udel.edu/studentconduct/ai.html`. In particular, note that copying solutions in whole or in part from other students or **any other source** without acknowledgement constitutes cheating. Any student found cheating risks automatically failing the class and will be referred to the Office of Student Conduct.