Mathematical Statistics,   MA 486/586-1D   Spring 2023

Class meets Mondays, Wednesdays, and Fridays 11:15am-12:05am, room UH 2013

Instructor: Dr. Nandor Simanyi
Office: UH 4014, ph. 934-2154
Office hours: Mondays and Wednesdays, 1:00-2:00, or by appointment
E-mail: simanyi@uab.edu

Text: R. V. Hogg, E. A. Tanis, D. L. Zimmerman *Probability and Statistical Inference,* Pearson.

Text: Dr. Nikolai Chernov *Mathematical Statistics*
http://people.cas.uab.edu/~simanyi/teaching/486-586/ma486-586.pdf

Grading policy:

Homework	20 %
Midterm I (around mid-February)	20 %
Spring break: March 13–March 19	
Midterm II (late March)	20 %
Final Monday, April 24, 10:45–1:15	40 %

Homework: Problems will be assigned weekly on Fridays, unless announced otherwise. Homework will be due the next Friday after assignment. Corrected and graded homework will be returned in the next class meeting. One (lowest) homework score will be dropped. You can use any software (including MATLAB) for doing homework problems.

To 586 students: You are taking this course at a *graduate* level! You will be given extra, more difficult, assignments periodically. Unlike regular homework assignments, those extra assignments are *mandatory*. The extra assignments will make 20% of your course grade, the rest will count for 80%, scaled appropriately. The 586-level problems can be turned in any time before (or on) the final exam. The 586-level problems can be resubmitted after being graded, for full credit.

Class Attendance: Class attendance is mandatory. One can get a passing grade only if the number of their unexcused absences is not more than 20% of the number of classes!

All tests in this course are open-book and open-notes. You may use a calculator, and you will actually need one.

Syllabus: Basic sampling and data analysis, Simulation, Point estimation, Confidence Intervals, Sufficient statistics, Cramer-Rao bound, Tests for binomials, Tests for normals, Goodness-of-fit test, Contingency tables, Two factor analysis, Regression, Order statistics, Nonparametric methods: Wilcoxon test, Kolmogorov-Smirnov test.

The syllabus is tentative, some changes are possible.

Classnotes, homework assignments, the list of computer projects are available at

http://people.cas.uab.edu/∼simanyi/teaching/486-586/

Welcome to MA 486/586 and best of luck to you all.