Mathematical Statistics, MA 486/586-1C Spring 2021

Class meets Mondays, Wednesdays, and Fridays 10:10am-11:00am, room CH 301

Instructor: Dr. J. Li
Office: 4006 University Hall, ph. 934-2154
Office hours: Tuesday and Thursday, 9 am-11 am, or by appointment
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Text: R. V. Hogg, E. A. Tanis, D. L. Zimmerman *Probability and Statistical Inference* Ninth Ed. Pearson 2015.

Text: Dr. Nikolai Chernov *Mathematical Statistics* available on Canvas.

Grading policy:

Homework	20 %
Midterm I (around February 22)	20 %
Midterm II (around April 5)	20 %
Final Friday, April 30, 8:00–10:30	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.

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 etc. are available on Canvas.

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