

GRS MA 782 - Hypothesis Testing-Spring 2016

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Course web-page: <http://math.bu.edu/people/kspiliop/Spring2016MA782.html>

Meets: TuTh... 11:00AM-12:30PM at PSY B50

Text: *Statistical Inference*, 2nd edition, G. Casella and R.L. Berger, John Wiley and Sons, Inc., (2002)

Recommended Texts:

1. *Nonparametric Statistical Methods*, 2nd edition, Myles Hollander and Douglas A. Wolfe
2. *Testing Statistical Hypothesis*, 3rd Edition, Erich L. Lehmann and Joseph P. Romano

Prerequisites: GRS MA 781; or consent of instructor. The students are required to have a solid working understanding of the MA 781 material.

Course Description: This is a graduate level introductory course to theoretical statistics that focuses primarily on hypothesis testing and interval estimation. In particular, we will cover: construction and evaluation of hypothesis tests, interval estimation, the multiple testing paradigm, asymptotic theory and more. We will explore both parametric and non-parametric methods and both frequentists (e.g. likelihood ratio testing) and Bayesian methods.

Tentative grading policy: Your grade will be based on :(a) Homework (30%), (b) midterm exam (30%) and final exam (40%). The grading policy may change according to the progress of the class.

Exams: There will be one midterm exam and one final exam. The exam material for each one of the two exams will be announced in class and posted on the webpage of the course. The final exam will be cumulative. Hence, make sure that you have learned from your mistakes of the midterm.

Homeworks: There will be several homeworks, both theoretical and more of applied flavor. The due date of each homework will be announced in class and it will usually be about two weeks after. Needless to say, you should work on the homework on your own, unless otherwise instructed by me. Late homeworks will NOT be accepted.

Late homework policy: No late homeworks will be accepted.

Make-up policy: Make up exams will be given only in extreme circumstances, and only when accompanied by appropriate documentation. Any student with a valid reason to be given a make up exam must contact me prior to the exam, either by email or in person, and present documentation at the next class session attended.

Cheating: No form of cheating or plagiarism will be tolerated. University's policy and my policy are very strict here.