

## **MAT 652: Probability and Statistics II (Spring, 2012)**

**Course Description:** The course will cover central ideas of statistical inference: point/interval estimation and hypothesis testing. The primary objective of the course is to learn basic concepts and theory of statistical inference. Topics covered include principles of data reduction, methods of finding and evaluating estimators, and methods of finding and evaluating tests.

### **Instructor**

Professor H. Hyune-Ju Kim,           304E Carnegie  
  443-1494, 443-1471(message)  
  hjkim@syr.edu  
Class Hours TTh 12:30 p.m. -1:50 p.m.  
Office Hours M 11a.m.-12 a.m., T 2:00 p.m.-3:00 p.m.

**Text:** *Statistical Inference*, by George Casella and Roger L. Berger, 2<sup>nd</sup> edition, Duxbury

**Grading Policy** : Midterm Exam (30%), Final Take Home Exam (30 %), Homework (30 %),  
Reading Assignment and presentation (10%)

**Prerequisite:** Calculus, MAT 651 or equivalent

**Course Schedule** : Chapters 5-9 and some additional topics will be covered.

- \*\* Midterm (in Class): March 6 (Tuesday)
- \*\* Take-home Final: May 1 (Tuesday)-May 3 (Thursday)
- \*\* Readings of selected articles will be assigned as the course progresses. A short report is required for each reading assignment. In the middle of the semester, students are asked to choose a topic among recently developed inferential methods, and will be asked to present a summary of their research during the last two classes.

### **References**

Bickel and Doksum (2001), *Mathematical Statistics*, Vol. 1, 2<sup>nd</sup> edition, Prentice Hall  
Cox and Hinkley (1974), *Theoretical Statistics*, Chapman and Hall  
E.L.Lehmann (1983), *Theory of Point Estimation*, Wiley  
E.L.Lehmann (1988), *Testing Statistical Hypothesis*, Wiley  
Dudewicz and Mishra (1988), *Modern Mathematical Statistics*, Wiley

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