

## **MAT 652: Probability and Statistics II (Spring, 2010)**

**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 Hyune-Ju Kim, 304E Carnegie  
443-1494, 443-1471(message)  
hjkim@syr.edu  
Class Hours TTh 11:00 a.m. -12:20 p.m.  
Office Hours T 1 p.m.-2 p.m., W 1:30 p.m.-2:30 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 9 (Tuesday)
- \*\* Take-home Final: May 4 (Tuesday)-May 6 (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

**Academic Integrity:** The Syracuse University Academic Integrity Policy holds students accountable for the integrity of the work they submit. Students should be familiar with the Policy and know that it also governs the integrity of work submitted in exams and assignments as well as the veracity of signatures on attendance sheets and other verifications of participation in class activities. Serious sanctions can result from academic dishonesty of any sort. For more information and the complete policy, see <http://academicintegrity.syr.edu>