

## **MAT 652 : Probability and Statistics II (Spring, 2016)**

### **Course Description**

The course will cover the central ideas of statistical inference: estimation (point and interval) and hypothesis testing. We learn how to find appropriate statistical techniques and how to evaluate these techniques in a general context first, and then consider some special cases. We plan to cover Chapters 5 to 9 in the textbook.

### **Topics to be covered**

Order Statistics, Convergence Concepts, Sufficiency and Completeness, MOM, MLE, MSE, Best Unbiased Estimators, LRT, Errors and Power in Hypothesis Testing, Interval Estimations, Constructing and Evaluating Confidence Intervals.

### **Instructor**

Professor Pinyuen Chen

Carnegie Building 316B, 443-1577, 443-1471(message), pinchen@syr.edu

Class time MW 3:45 pm – 5:05 pm

Office Hours: Mondays Tuesdays Wednesdays 11 am – 12 noon

### **Textbook**

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

### **Grading Policy**

Three Exams 90% and Homework 10%

### **Prerequisite**

Calculus, MAT 651 or equivalent

### **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

### **Religious observances policy**

SU religious observances policy recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty, and staff to observe religious holidays according to their tradition. Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that may be missed due to are religious observance provided they notify their instructors before the end of the second week of classes. For fall and spring semesters, an online notification process is available through MySlice (Student Services -> Enrollment -> My Religious Observances) from the first day of class until the end of the second week of class.

Related link: [http://supolicies.syr.edu/studs/religious\\_observance.htm](http://supolicies.syr.edu/studs/religious_observance.htm)

### **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>

### **Disability**

Students who may need academic accommodations due to a disability are encouraged to discuss their needs with the instructor at the beginning of the semester. In order to obtain authorized accommodations, students should be registered with the Office of Disability Services (ODS), 804 University Avenue, Room 309, 315-443-4498 and have an updated accommodation letter for the instructor. Accommodations and related support services such as exam administration are not provided retroactively and must be requested in advance."

For more information about services and policy, see [Office of Disability Services](#)

### **Syracuse University**

#### **Office of Disability Services**

**804 University Avenue Room 309**

**Syracuse, New York 13244-2330**

**Phone: Voice: (315) 443-4498**

**TDD: (315) 443-1371**

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