

Syllabus for Theory of Statistics II (BIST 0614) – Spring 2005

Description: The course will cover theory of point and interval estimation and hypothesis testing. Topics include sampling distributions, sufficiency, unbiasedness, Bayes methods and power functions. Emphasis is on fundamental concepts underlying the theory.

Objectives: At the conclusion of this course, student will be able to master the properties of a random sample, principle of data reduction, methods of point estimation and hypothesis testing.

Prerequisites: Theory of Statistics I (BIST 0613) or equivalent (determined by instructors)

Textbook: *Statistical Inference*, 2nd Edition, by George Casella and Roger L. Berger, Duxbury Thomson Learning. ISBN: 0-534-24312-6

Instructors: Yong Lin, Ph.D. (732) 235-5513/9621, linyo@umdnj.edu
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Meets: Tuesday 6:10-9:00 pm, School of Public Health, Room 2B

Office Hours: Two hours before classes begin or by appointment.

Course WEB site: <http://www2.umdnj.edu/~linyo/bist614>

Course format:

- There will be weekly lectures.
- Homework problems will be assigned at each class meeting. Students may be called upon to present homework solutions on the board during class.
- Five quizzes will be given.
- There will be a final examination

Grading Policy:

The course grade will be determined by a combination of

- Class participation (5%)
- In-class quizzes (25%),
- Home works (20%)
- Final exam (50%).

Course Outline (Tentative):

Date	Class	Topic(s)	Chapter in Textbook
01/18/05	1	Multiple Random Variables	4.6 – 4.7
01/25/05	2	Properties of a Random Sample (1)	5.1 – 5.3
02/01/05	3	Properties of a Random Sample (2)*	5.5 – 5.6
02/08/05	4	Principles of Data reduction (1)	6.1 – 6.2
02/15/05	5	Principles of Data reduction (2)*	6.3 – 6.4
02/22/05	6	Point Estimation (1)	7.1 – 7.2
03/01/05	7	Point Estimation (2)*	7.2 – 7.3
03/08/05	8	Point Estimation (3)	7.3
03/15/05		Spring Break	
03/22/05	9	Hypothesis Testing (1)	8.1 – 8.2
03/29/05	10	Hypothesis Testing (2)*	8.2 – 8.3
04/05/05	11	Hypothesis Testing (3)	8.3
04/12/05	12	Interval Estimation (1)*	9.1-9.2
04/19/05	13	Interval Estimation (2)	9.3
04/26/05	14	Review	
05/03/05		Reading period	
05/10/05	15	Final Exam	
* Quizzes will be given at the beginning of the class			