

Math 411C Mathematical Statistics II Spring 2013

10 – 10:50 MWF Bouillon 110

Instructor: Cen-Tsong Lin

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Office Hours: 11:00 to 11:50 Monday – Friday

Course goals: The goal of this course is to deliver the knowledge of probability theory and lay the foundation work for the mathematical statistics course. At the conclusion of this course, students will understand the following topics:

- (i) Bivariate distributions, multivariate probability distributions.
- (ii) Distribution of functions of random variables (change of variables)
- (iii) Estimations: point estimations, confidence intervals, regression problems
- (iv) Tests of statistical hypotheses

Prerequisite: Math 411B with grade C or better; or by permission

Required Text: Hogg and Tanis, Probability and Statistical Inference, 8th edition, Prentice Hall

Sections Covered:

Chapter 6: Estimation

Chapter 7: Test of Statistical Hypotheses

Chapter 10: Some Theory, including sufficient statistics, power of a statistical test, best critical regions, likelihood ratio tests, and others

Chapter 9: Bayesian Method

Evaluation:

- Homework assignments and quizzes (20%)
two in-class tests (50%), tentative dates: 4/19 and 5/17
- Final exam (30%): Comprehensive, 8:00 – 10:00, Wednesday, 6/5/2013

Course Conduct:

- Homework assignment will be assigned daily and the due date is on the following Monday since it was assigned. No late homework will be accepted.
- The assignments and class handouts will be also posted at the class website: www.cwu.edu/~ctl for your convenience.
- No make-up test will be given unless you can document a circumstance that is beyond your control and unexpectedly prevented you from taking the test.

Grading:

Your grade will be assigned based on the following scale:

Grade	Percentage needed
A/A-	93/90
B+/B/B-	87/83/80
C+/C/C-	77/73/70
<u>D+/D/D-</u>	<u>67/63/60</u>
F	below 60

I reserve the right to adjust the above scale (in student's favor) if deemed appropriate.