

MATH 4614-6614 Probability and Statistics
Lih-Yuan Deng, DH219, 678-3134
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Fall, 2015
Time: MW 12:40pm-02:05pm
Room: DH 225

(A) Course Contents:

1. Probability: basic concepts, properties, methods of enumeration, conditional probability, independent events, Bayes' theorem.
2. Discrete distributions: random variable, mathematical expectation, variance, binomial, hypergeometric, Poisson, negative binomial distributions, moment-generating functions.
3. Continuous distributions: exploratory data analysis, uniform, exponential, normal, gamma and chi-square distributions.
4. Bivariate distributions: distribution of two random variables, correlation coefficient, conditional distribution, bivariate normal distribution.
5. Point and Interval estimation: Maximum likelihood estimation, sufficient statistics, Bayesian estimation, confidence intervals.

(B) Office Hours: 10:30am-12pm TR (DH 219) or by appointment lihdeng@memphis.edu

(C) Textbook:

- "Probability and Statistical Inference", 9th edition (8th edition OK), Robert V. Hogg, Elliot A. Tanis and Dale L. Zimmerman. Prentice Hall, ISBN 0-321-92327-8 (978-0-321-92327-1)

(D) Grading:

- Two Mid-term Exams **NO MAKEUP EXAMS.**
 - mid-term exam -1 Oct. 5, 2015 25 %
 - mid-term exam -2 Nov. 16, 2015 25 %
- final exam (comprehensive) 35 %
- homework and class participation 15 %