

MATH 4635/6635 Introduction to Probability Theory
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Spring, 2015
Time: TT 11:20am - 12:45 pm
Room: DH 249

(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. Distributions of Functions of Random Variable: functions of one random variables, transformations of two random variables, ...

(B) Office Hours: 10am-11am TT (DH 219) or by appointment. email: 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:

- mid-term exam -1 March 5, 2015 (Thursday) 25 %
- mid-term exam -2 April 16, 2015 (Thursday) 25 %
- final exam (comprehensive) May 7, 2015, **8am-10am** (Thursday) 35 %
- homework and class participation 15 %