

Mathematical Statistics

Department of Economics
Sogang University
Fall 2016

Instructor:

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Time: Tu 3:00-4:45, Th 3:00-4:45

Text:

- Cassella, G. and R.L. Berger (1990) *Statistical Inference*. Wadsworth.

References:

- Ash, R. (1972) *Real Analysis and Probability*. Academic Press.
- Bickel, P.J. and K. A. Doksum (2007) *Mathematical Statistics*. Second edition. Pearson Prentice Hall.
- Lehmann, E.L. (1999) *Elements of Large-Sample Theory*. Springer.
- Lehmann, E.L. and G. Casella (1998) *Theory of Point Estimation*. Springer.
- Lehmann, E.L. and J.P. Romano (2005) *Testing Statistical Hypothesis*. Springer.
- Pollard, D. (2002) *A User's Guide to Measure Theoretic Probability*. Cambridge University Press.
- Vaart, A.W. van der (1998) *Asymptotic Statistics*. Cambridge University Press.

Description of the Course:

The purpose of this course is to introduce probability and statistics at the graduate level. The course assumes that students took a basic course in statistics.

Course Outline and Reading Guide:

1. Probability theory (CB Ch 1)
2. Transformations and expectations (CB Ch. 2)
3. Distributions (CB Ch. 3)
4. Multiple random variables (CB Ch 4)
5. Properties of a random sample (CB Ch 5)
6. Principles of data reduction (CB Ch 6)
7. Point estimation (CB Ch 7)
8. Hypothesis testing (CB. Ch 8)