

# Probability and Statistics

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UAB - BSE

IDEA

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## ● Textbooks

- Ash, R.B. (1972), Real Analysis and Probability, Academic Press.
- Bierens, H.J. (2004), Introduction to the Mathematical and Statistical Foundations of Econometrics, Cambridge University Press.
- Billingsley, P. (1995), Probability and Measure, Wiley.
- Casella, G.H. and Berger, R.L. (2002), Statistical Inference, Duxbury/Thomson Learning.
- DeGroot, M.H. and Schervish, M.J. (2012), Probability and Statistics, Pearson.
- Hogg, R.V., McKean, J. and Craig A.T. (2012), Introduction to Mathematical Statistics, Pearson.
- Lindgren, B.V. (1993), Statistical Theory, Chapman and Hall/CRC.
- Mood, A.M., Graybill, F.A. and Boes, D.C. (1974), Introduction to the Theory of Statistics, McGraw Hill.
- Rice, J.A. (2007), Mathematical Statistics and Data Analysis, Cengage Learning.

## ● Program

### ★ Descriptive Statistics

- 1. Probability

### ★ A Primer on Integration

### ★ Measure Theory

- 2. Random Variables and Distributions
- 3. Expectation
- 4. Special Distributions
- 5. Functions of Random Variables
- 6. Stochastic Processes and Limiting Distributions
- 7. Sampling
- 8. Estimation
- 9. Hypothesis Testing