



Probability and Statistics for Electrical Engineering

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Course Description

This course provides an elementary introduction to probability and statistics with practical applications. Topics include basic combinatorics, random variables, probability distributions, Bayesian inference, hypothesis testing, estimation, and linear regression. Specifically, throughout the course, we provide practical examples of using probability and statistics tools to analyze and model problems in different area of electrical engineering.

Required Texts and Useful References

- Athanasios Papoulis, "Probability and Statistics,"

Course Content

- The meaning of probability
- Fundamental concepts
- Repeated trials
- The random variables
- Two random variables
- Conditional distribution, regression, reliability
- Sequence of random variables
- The meaning of statistics
- An introduction to estimation
- Hypothesis testing
- The method of least square

Grading Policy

- Assignments 25%
- Midterm Exam 25%
- Final Exam 50%