



Study Guide - Statistics Preliminary Exam

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Topics

- Continuous and Discrete Random variables
- Population and Sample Moments; expected values
- Sampling Distributions and Central Limit Theorem
- Estimation: confidence intervals, maximum likelihood and method of moments point estimation techniques
- Hypothesis testing and OC curves
- Regression Modeling: simple and multivariate
- Analysis of Variance - one-way and randomized block design
- Goodness-of-fit test procedures
- Normal probability plotting techniques

Suggested Textbooks

- Hines and Montgomery: Probability and Statistics in Engineering and Management Science: Chapters 9-15.
- Mendenhall and Sincich: Statistics for Engineering and the Sciences: with student solutions manual: Chapters 7-12,14
- Most engineering statistics textbooks which emphasize applications

Exam Rules

- Open book, no notes