Statistics 6302
Theory of Statistical Analysis
3 semester hour course

Prerequisite: Stat 6301 or Stat 610 or Stat 6801 or Stat 620 or permission of the instructor.

Exclusions: Not open to students with credit for Stat 6802 or Stat 621 or Stat 622 or Stat 623.

Location: - - -


Conversion note: Converted from a 5 credit hour quarter course (Topics are unchanged)

TENTATIVE COURSE DESCRIPTION

Estimation, hypothesis tests, best tests, likelihood ratio tests, confidence sets, sufficiency, efficient estimators; intended primarily for students in the MAS degree program.

TOPIC LIST

1   Method of moments estimators and their properties
2   Maximum likelihood estimators and their properties
3   Efficient estimators; Cramer-Rao Lower Bound
4   Sufficient statistics; exponential families
5   Confidence sets, including approximate and bootstrap confidence intervals
6   Principles of hypothesis testing; duality of confidence intervals and tests
7   Most Powerful and Uniformly Most Powerful Tests
8   Generalized Likelihood Ratio Tests; examples in applied statistics
9   Theory of statistical inferences for comparing two samples
10  Additional discretionary topics, such as theory for contingency tables