

**STATISTICS 3411**  
**STATISTICAL INFERENCE I**

Statistics 3411 is a continuation of Statistics 2410 and can also be counted as either a pure mathematics or a statistics course. Here, the basic problems and procedures of estimation and tests of statistical hypotheses are introduced in a traditional way. A weekly laboratory allows the students to become acquainted with problems representative of the material covered.

**Text.** The book chosen for Statistics 2410 is used for Statistics 3411 as well.

**Marks.** While the exact formula may vary from year to year, it is typical to assign 50% of the final grade in this course to a final examination, 30% to a midterm and 20% to either assignments or lab quizzes.

**Calendar description. 3411 Statistical Inference I** examines sampling distributions, order statistics, confidence interval, hypotheses testing, chi-square tests, maximum likelihood estimation, maximum likelihood estimation, Rao-Cramér inequality and efficiency, maximum likelihood tests, sufficiency, completeness and uniqueness, exponential class of distributions, likelihood ratio test and Neyman-Pearson lemma.

One and a half hour tutorial period weekly.

Prerequisite: Statistics 2410 or 3410.

**Offered.** Fall