MTH 244 : INTRODUCTION TO PROBABILITY AND STATISTICS 2

Transcript title

Intro to Prob Stat 2

Credits

4

Grading mode

Standard letter grades

Total contact hours

40

Lecture hours

40

Prerequisites

STAT 243Z.

Course Description

Introduces methods of inferential statistical analysis. Includes confidence intervals, hypothesis testing, linear correlation and regression, chi-square tests, and analysis of variance (ANOVA). May cover nonparametric methods. Uses spreadsheet and graphing technology.

Course learning outcomes

1. Compute and interpret confidence intervals in the context of hypothesis testing.
2. Execute hypothesis tests on claims involving both means and proportions.
3. Execute hypothesis tests with manual calculation and technology.
4. Perform quantitative and categorical tests of association.
5. Determine the proper statistical technique to use for various circumstances.
6. Produce and interpret statistical output from non-calculator statistical software.

Content outline

1. Central limit theorem
2. Interval estimates
    a. Proportions
    b. Means
    c. Variance/standard deviation
    d. Bootstrap intervals
3. One and two-sample hypothesis testing
4. Correlation and regression
5. Chi-squared tests
    a. Goodness of fit
    b. Independence/homogeneity
6. One-way analysis of variance (ANOVA)

Required materials

No materials required.

General education/Related instruction lists

- Mathematics