TEMPLE COLLEGE
TEMPLE HUTTO TAYLOR

Course Syllab

MATH 1442 Elementary Statistical Methods

Instructor:

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Catalogue Description

Collection, analysis, presentation and,interpretation of data, and probability. ,Analysis includes descriptive statistics,,correlation and regression, confidence intervals,and hypothesis testing. Use of appropriate,technology is recommended.

Term:

Fall 2022

Format of Term:

16 week

Lab Hours Per Week:

0

End of Course Outcomes:

MATH 1442 Elementary Statistical Methods (4 SCH version, freshman level)

Collection, analysis, presentation and interpretation of data, and probability. Analysis includes descriptive statistics, correlation and regression, confidence intervals and hypothesis testing. Use of appropriate technology is recommended.

Learning Outcomes Upon successful completion of this course, students will:

Explain the use of data collection and statistics as tools to reach reasonable conclusions. Recognize, examine and interpret the basic principles of describing and presenting data. Compute and interpret empirical and theoretical probabilities using the rules of probabilities and combinatorics. Explain the role of probability in statistics. Examine, analyze and compare various sampling distributions for both discrete and continuous random variables. Describe and compute confidence intervals. Solve linear regression and correlation problems. Perform hypothesis testing using statistical methods.

Evaluation System:

GRADING:

Grading is based on some (but possibly not all) of the following:

1. 4 Unit Exams

2. Homework and Chapter Quiz assignments

3. Optional BONUS work

Specific percentages for each can be found in the first day handouts that are posted in D2L.

Course Schedule/Topics

UNIT 1: Introduction to Statistics, Descriptive Statistics (Graphs - Histograms, stem-and-leaf plots, box-and-whisker plots, etc.) Descriptive Statistics (Numerical - Measures of Central Tendency, Variation, and Position)

UNIT 2: Probability and Counting Methods, Discrete Probability Distributions (Binomial, Geometric, Poisson)

UNIT 3: The Normal Distribution, The Central Limit Theorem, Confidence Intervals for Population Means, Proportions, Variances, and Standard Deviations.

UNIT 4: Hypothesis Testing (one and two sample), Correlation and Regression

Marketable Skills

Marketable Skills

- **Critical Thinking**
- **Problem Solving**
- **Analytical Thinking**
- **Quantitative Reasoning**
- **Time Management**
- **Attention to Detail**