

Dakota County Technical College

MATS 1251: Statistics

A. COURSE DESCRIPTION

Credits: 4

Lecture Hours/Week: 3

Lab Hours/Week: 1

OJT Hours/Week: *.*

Prerequisites:

This course requires either of these prerequisites

MATS 0600 - Intermediate Algebra

A score of 76 on test Accuplacer Elementary Algebra

Corequisites: None

MnTC Goals: Goal 04 - Mathematical/Logical Reasoning

Fundamental principles of inferential statistics are presented in lecture (3 hrs) augmented by computer labs using Excel (2 hrs). Essential topics include sampling methods; descriptive statistics; counting and probability; binary, normal, and other probability distributions; confidence intervals; hypothesis testing; inferences from two samples; correlation and regression. Optional topics include goodness-of-fit and contingency tables; ANOVA; nonparametrics; and statistical process control.

Meets MnTC Goal 4

B. COURSE EFFECTIVE DATES: 08/21/2006 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Descriptive Statistics
2. Probability
3. Bell curve
4. Confidence Intervals
5. Hypothesis Testing
6. Further Topics including;
Inferences from two samples, Correlation and regression
Goodness-of-fit and contingency tables, ANOVA, Nonparametric statistics, Statistical process control

D. LEARNING OUTCOMES (General)

1. Explore data independently and draw justifiable conclusions
2. Critically analyze statistical claims
3. Present convincing statistical arguments backed up by persuasive graphics
4. State conclusions of hypothesis tests carefully and precisely

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

Goal 04 - Mathematical/Logical Reasoning

1. Clearly express mathematical/logical ideas in writing.
2. Explain what constitutes a valid mathematical/logical argument(proof).
3. Apply higher-order problem-solving and/or modeling strategies.

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted