

Minnesota State University Moorhead

MATH 634: Probability & Statistics for Applications

A. COURSE DESCRIPTION

Credits: 4

Lecture Hours/Week: 4

Lab Hours/Week: 0

OJT Hours/Week: *.*

Prerequisites: None

Corequisites: None

MnTC Goals: None

This course offers a wide range of probability and statistical concepts, concentrating on specific statistical techniques used in science and industry. It provides students with practical ability to choose, generate, analyze, and interpret appropriately, descriptive and inferential statistics. There is an extensive breadth of coverage ranging from elementary methods to such advanced methods as multiple regression and nonparametric analysis. Topics include: Measures of location and variability, probability theory, random variables, common families of distributions, point and interval estimations, hypothesis testing, confidence intervals, chi-square tests, nonparametric statistics, analysis of variance, regression, and correlation.

B. COURSE EFFECTIVE DATES: 02/02/2019 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

D. LEARNING OUTCOMES (General)

1. Explore random phenomena by using probability and simulation.
2. Explore, assess, and describe data, and describe including any departure from data.
3. Plan and conduct experimental and survey studies by employing appropriate sampling techniques.
4. Use appropriate statistical tools to estimate population parameters and test hypotheses.

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

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted