Minnesota State University Moorhead

MATH 234: Introduction to Probability and Statistics

A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 3

Lab Hours/Week: 0

OJT Hours/Week: *.*

Prerequisites:
This course requires any of these four prerequisite categories
 1. MATH 127 - College Algebra
    Or
 2. MATH 127L - College Algebra with Lab
    Or
 3. MATH 227 - Survey of Differential Calculus with Algebra
    Or
 4. MSUM Math Above MATH 127

Corequisites: None

MnTC Goals: Goal 04 - Mathematical/Logical Reasoning

Measures of central tendency and variation, probability, probability distributions, sampling distributions and the central limit theorem, estimation and tests of hypotheses for population mean and population proportion, and simple linear regression. May not be taken for credit by those who earned credit in MATH 336. Students who have completed MATH 262 are encouraged to take MATH 335 rather than MATH 234. Must have successfully completed College Algebra or acceptable placement score. MnTC Goal 4.

B. COURSE EFFECTIVE DATES: 05/17/2010 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Measures of central tendency and variation
2. Probability and probability distributions
3. Sampling distributions and the central limit theorem
4. Estimation and tests of hypotheses for one population mean and proportion
5. Simple linear regression

D. LEARNING OUTCOMES (General)

1. Use a variety of statistical methods to analyze data.
2. Understand the requirements of a statistical test, and know when it is applicable.
3. Understand what statistical analyses can and can not tell the researcher about the data.

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

Goal 04 - Mathematical/Logical Reasoning

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

F. LEARNER OUTCOMES ASSESSMENT

    As noted on course syllabus

G. SPECIAL INFORMATION

    None noted