

COUNTY COLLEGE OF MORRIS

Course Information Outline

Course Title Statistics for Middle Grades PREFIX&NUMBER MAT 273

Lecture Hours 45 Laboratory Hours 0 Credit Hours 3 Course Fee None

Department Chairperson Approval Alexis Thurman *A. Thurman* Date 2/4/14

Division Dean Approval Patrick Enright *P. Enright* Date 2/10/14

General Education Information:

Categories:

- | | | | |
|--|---|---|--------------------------------------|
| <input type="checkbox"/> Communications | <input type="checkbox"/> History | <input type="checkbox"/> Humanities | <input type="checkbox"/> Mathematics |
| <input type="checkbox"/> Science | <input type="checkbox"/> Social Science | <input type="checkbox"/> Technological Competency | |
| <input type="checkbox"/> Diversity (check if course also meets diversity category) | | | |

Integrated Goals: (check all that apply)

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|---|---|
| <input type="checkbox"/> Ethical Reasoning and Action | <input type="checkbox"/> Information Literacy |
|---|---|

1. Catalog Course Description

An introduction to statistical methods and reasoning as applied to practical problems. Topics include collecting and summarizing data, histograms and other types of graphs, descriptive statistics, normal distributions, sampling, surveys, use of computers in statistics and interpretation of data.

2. Prerequisite(s)

Elementary School or N-12 subject matter endorsement

3. Co-requisite(s)

None

4. Textbooks

Larson, Ron: *Elementary Statistics*, 4th ed. (Prentice Hall).

5. Supplementary Books and/or Materials

Student Study Pack including Student's Solutions Manual and CD lectures (Prentice Hall), included with text.

6. Specialized equipment, supplies, facilities, for classes limited by enrollment or restricted by accreditation and/or equipment limitations. (Information will be used to determine differential funding category.)

None

7. Course Content (List of Topics)

- Overview of statistics, data classification
- Experimental design
- Frequency distributions
- Graphs and displays
- Measures of central tendency
- Measures of variation, measures of position
- Basic concepts of probability and counting
- Conditional probability and the multiplication rule
- Infusion of teaching techniques

8. Statement of Course LEARNING OUTCOMES

- **Understand** the basic terminology of statistics, such as sample, population, measures of central tendency, variation, and position, and **create** and **interpret** graphs of data
- **Calculate** and **interpret** measures of central tendency, variation, and position
- **Apply** probability rules of multiplication and addition to word problems
- **Find** and **interpret** probability and percentages of the normal distribution and **apply** its characteristics to word problems
- **Understand** correlation between two characteristics collected on data and **use** regression to make predictions

9. Statement of Relation to Curriculum(s)

This course is one course required to complete the Elementary with Subject Matter Specialization: Mathematics Grade 5-8 Certificate of Eligibility.

10. Format for offering the course (check all that apply)

- ☒ Traditional ☐ On-Line ☒ Hybrid