COUNTY COLLEGE OF MORRIS
Course Information Outline

Course Title Mathematics for Middle Grades **PREFIX&NUMBER** MAT 272

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 **Date** 2/10/14

General Education Information:

Categories:

☐ Communications ☐ History ☐ Humanities ☐ Mathematics
☐ Science ☐ Social Science ☐ Technological Competency

☐ Diversity *(check if course also meets diversity category)*

Integrated Goals: *(check all that apply)*

☐ Ethical Reasoning and Action ☐ Information Literacy

1. **Catalog Course Description**

   This course will explore topics including: history of mathematics, algebra, probability and statistics while infusing instructional techniques and uses of technology.

2. **Prerequisite(s)**
   Elementary School or N-12 subject matter endorsement

3. **Co-requisite(s)**
   None

4. **Textbooks**
   Van de Walle, John A. (2007). *Elementary and Middle School Mathematics: Teaching Developmentally* (6th edition). New York: Addison Wesley Longman, Inc.

   Chapin, S. H. and Johnson, A. (2006). *Math Matters: Understanding the Math You Teach,* 2nd edition, Sausalito, CA: Math Solutions.

   Angel, Abbott and Runde, *A Survey of Mathematics with Applications,* 9th ed. (Pearson Education, 2013)

5. **Supplementary Books and/or Materials**
   MyMathLab, Pearson

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.)
   Access to computer lab

7. Course Content (List of Topics)

- History of Mathematics
- History of geometry, points, lines, planes, angles
- Nature of Probability
- Theoretical probability, odds, expected value
- Tree diagrams
- And/or problems, conditional probability
- Measures of central tendency
- Basic algebra
- Functions
- Infusion of teaching techniques

8. Statement of Course LEARNING OUTCOMES

- **Name** significant historical contributions in the development of mathematics
- **Compute** measures of descriptive statistics
- **Solve** linear equations involving one variable
- **Apply** methodology for solving word problems
- Infusion of instructional techniques.

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**