Minnesota State College Southeast

MATH 1020: Special Topics in Mathematics

A. COURSE DESCRIPTION

Credits: 2
Lecture Hours/Week: 2
Lab Hours/Week: *.*
OJT Hours/Week: *.*

Prerequisites:
This course requires any of these four prerequisite categories
1. Both of these groups
   1. Any one of these four
      MATH 0544 - Pre-College Math (4 cr)
      MATH 0533 - Pre-College Math (3 cr)
      MATH 0522 - Pre-College Math (2 cr)
      MATH 0511 - Pre-Special Topics Math
   And
2. One of these two
   Writing College Level  
   FYEX 1000 - College Success Strategies
   Or
2. Math Level 2
   Or
3. Math Level 1
   Or
4. Algebra College Level

Corequisites: None
MnTC Goals: None

This course covers measurement systems, English and metric conversions, general and literal equations, applications involving equations, personal finance applications, and fundamental concepts of statistics and probability. Related practical application problems are explored. This course will satisfy diploma level option. (Prerequisites: MAT0511 Pre-Special Topics and FYEX1000 or Math Level 2 Placement) (2 credits: 2 lecture/0 lab)

B. COURSE EFFECTIVE DATES: 07/27/2016 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Applications of Linear and Nonlinear Functions
2. Geometry
3. Personal Finance
4. Statistics and Probability
D. LEARNING OUTCOMES (General)
   1. Solve authentic problems involving ratios, rates and proportions.
   2. Translate linear relationships among graphical, verbal, and numerical forms
   3. Calculate and differentiate between problems involving simple and compound interest.
   4. Solve personal finance problems relating to annuities and amortization.
   5. Solve authentic problems involving perimeter and area.
   6. Calculate volume and surface area of three dimensional geometric shapes.
   7. Determine size of a sample space using the Fundamental Counting Principle
   8. Solve probability problems involving addition and complement rules.
   9. Understand and solve conditional probability problems.
  10. Solve authentic problems involving measures of central tendencies and measures of dispersions.
  11. Use mean and standard deviation of a data set to fit into a normal distribution and estimate probabilities of events.
  12. Use z-score to solve problems relating to relative position of different populations.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies
   None

F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. SPECIAL INFORMATION
   This course was previously MATH 1577.