

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 five 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. Any one of these five

FYEX 1000 - College Success Strategies

A score of 18 on test ACT English

A score of 21 on test ACT Reading

A score of 78 on test Accuplacer Reading Comprehension

A score of 250 on test Accuplacer NG Reading

Or

2. A score of 1 on test Accuplacer College Level Math

Or

3. A score of 86 on test Accuplacer Elementary Algebra

Or

4. A score of 230 on test Accuplacer NG Advanced Algebra Functions

Or

5. A score of 20 on test ACT Math

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 Elementary Algebra Accuplacer score of 86 or above) (2 credits: 2 lecture/0 lab)

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

C. OUTLINE OF MAJOR CONTENT AREAS

1. Measurement Systems: English & Metric
2. General Equations, Applications of Equations, and Formulas
3. Applications of Personal Finance
4. Statistics Fundamentals

D. LEARNING OUTCOMES (General)

1. Understand that quantities associated with physical measurements must be assigned units; apply such units correctly in expressions, equations, and problem solutions that involve measurements; and convert between measurement systems. (9.3.1.3)
2. Make reasonable estimates and judgment about the accuracy of values resulting from calculations involving measurements. (9.3.1.5)
3. Quantities associated with physical measurements must be assigned units, apply units correctly and convert between measurement systems. (9.3.1.3)
4. Represent and solve problems in various contexts using linear functions. (9.2.2.1)
5. Understand a function. Use functional notation and evaluate a function at a given point in its domain (9.2.1.1)
6. Solve literal equations.
7. Solve quadratic equations using the quadratic formula. (9.2.4.1)
8. Solve personal finance problems relating to simple and compound interest, amortization, payment amounts, and discounting loans.
9. Use scatter plots to analyze patterns and describe relationships between variables. (9.4.1.3)
10. Use mean and standard deviation of a data set to fit into a normal distribution and estimate percentages. (9.4.1.4)
11. Identify and explain misleading uses of data; recognize when arguments based on data confuse correlation and causation. (9.4.2.2)
12. Use random numbers to perform probability simulations and to introduce fairness into decision making. (9.4.3.4)
13. Understand and use simple probability formulas involving intersections, unions and complements of events. (9.4.3.7)

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.