MTH 125S: Modern College Math with Support

This course gives the student a better appreciation and understanding of mathematics with topics from developmental math provided in a just-in-time as needed basis. Topics may be selected from the following: sets, logic, inductive reasoning, elementary number theory, consumer mathematics, probability, statistics, and number systems, all with the related developmental math to support these topics. Co-requisite: MTH 060. Three lecture and three support hours per week. Gen. Ed. Competencies Met: Quantitative and Symbolic Reasoning.

Course Student Learning Outcomes

1. Use inductive and deductive reasoning to solve several types of problems.
2. Use the properties and tools of sets to solve applications and determine if an infinite set is countable.
3. Perform arithmetic operations in additive, multiplicative, ciphered, and positional-valued number systems and in other bases, and discuss early computational

methods and tools.

1. Use the properties of the real number system to solve applications; recognize if a series is arithmetic or geometric, determine the nth term, and find the sum of

the first n numbers and use to solve applications and determine the golden ration of Fibonacci sequences in applications.

1. Determine if a finite mathematical system is an algebraic group and/or a commutative group and explain their conclusion; perform group operations and

modular arithmetic.

1. Use the formulas and concepts of simple and compound interest, installment purchases, APR, mortgages, annuities, sinking funds, and retirement investments

to solve applications.

1. Solve applications with probability, odds, expected value, counting, tree diagrams and conditional probability.
2. Determine measures of center and dispersion of data and create frequency distributions and graphs; determine the linear correlation coefficient and line of best

fit and use in applications.

Credits: 3
Co-Requisites:
MTH-060
Program: Mathematics