

North Hennepin Community College

MATH 0900: Mathematical Literacy

A. COURSE DESCRIPTION

Credits: 5

Lecture Hours/Week: *.*

Lab Hours/Week: *.*

OJT Hours/Week: *.*

Prerequisites:

This course requires both of these prerequisite categories

1. Any one of these three

Placement into MATH 0900

MATH 0800 - Pre-Algebra

MATH 0801 - Math Foundations (Minimum grade: 1.67 GPA Equivalent)

And

2. Any one of these 10

Placement into ADEV 0952 and ADEV 1052

Reading College Level

Reading at College Level

Placement into EAP 0930

ADEV 0951 - College Reading and Learning Strategies I

ADEV 0952 - College Reading and Learning Strategies II (Minimum grade: 1.67 GPA Equivalent)

ADEV 1950 - Reading Texts Critically

EAP 0830 - Reading Skills Development (Minimum grade: 1.67 GPA Equivalent)

EAP 0930 - Academic Reading and Study Skills (Minimum grade: 1.67 GPA Equivalent)

EAP 1230 - College Reading and Studying Skills

Corequisites: None

MnTC Goals: None

In this course, students will develop the necessary mathematical reasoning skills to succeed in a wide variety of college-level courses, including Math 1010, 1031, 1130, 1140 and other courses outside the math department. Students will solve realistic, interesting problems incorporating numeracy, proportional reasoning, algebraic reasoning, and functions. Students will be expected to use mathematical terminology appropriately in written communication.

Additional coursework may be required for students pursuing a STEM degree.

Prerequisites: Placement test or successful completion of Math 0800 or Math 0801

B. COURSE EFFECTIVE DATES: 01/09/2017 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. See course description and course outcomes.

D. LEARNING OUTCOMES (General)

1. Students will interpret and analyze quantitative information using language appropriate to the context and intended audience.
Read and interpret short, authentic texts containing quantitative information and/or graphical displays of it.
Interpret and use rates in context
Identify the dependent and independent variables
Calculate and interpret slope and intercepts
Interpret solutions to equations
Create and interpret a variety of graphs in the Cartesian coordinate system
Determine and interpret mean, median, and mode
Calculate and interpret weighted means
2. Students will be able to transition from specific and numeric reasoning to general and abstract reasoning using the language and structure of algebra to investigate, represent, and solve problems. (ELO 1, 2) Students will:
Write algebraic expressions that represent real-life scenarios and simplify those expressions as necessary
Construct and use linear, quadratic, and exponential functions
Apply rules for exponents, especially as part of operations using numbers written in scientific notation
Add and subtract polynomials
Multiply and factor using distributive property
Solve equations
3. Students will make sense of problems, develop strategies to find solutions, and persevere in solving them. (ELO 1, 2) In support of this outcome, students will:
Solve multi-step problems by applying strategies in new contexts or by extending strategies to related problems within a context
Create and use proportions to solve problems
Construct and use linear, quadratic, and exponential functions as mathematical models
Given data in a table or as a scatterplot, determine whether a linear, quadratic, or exponential model is appropriate and provide reasoning for the choice
4. Students will use proportional reasoning to solve problems that require ratios, rates, proportions, and scaling. (ELO 1, 2). In support of this outcome, students will:
Create and use proportions to solve problems
Interpret and use rates in context
Use dimensional analysis to convert units

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted