

Bemidji State University

MATH 1170: College Algebra

A. COURSE DESCRIPTION

Credits: 4

Lecture Hours/Week: *.*

Lab Hours/Week: *.*

OJT Hours/Week: *.*

Prerequisites: None

Corequisites: None

MnTC Goals: Goal 04 - Mathematical/Logical Reasoning

Problem solving with linear, quadratic, rational and absolute value equations and inequalities; function notation and inverses; graphs of relations and functions; polynomial, rational, exponential, and logarithmic functions and applications; systems of equations and inequalities, matrices. Prerequisites: Successful completion of MATH 0800 with a grade of B or better, or three years of high school mathematics (including two years of algebra) and an appropriate score on the Mathematics Placement Test. Liberal Education Goal Area 4.

B. COURSE EFFECTIVE DATES: 08/02/2011 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Polynomials and rational functions
2. Exponential and logarithmic functions
3. Science/business/finance applications
4. Solution and application of systems of linear equations, matrices, the binomial theorem, sequences, and mathematical induction

D. LEARNING OUTCOMES (General)

1. become familiar with the different families of functions and their graphical representations.
2. examine various methods of solving equations by numerical, algebraic, and graphical techniques.
3. use multiple problem solving techniques to model, solve and draw conclusions in various problem situations.
4. be able to use logical arguments to justify their ideas and solutions either verbally or in writing.

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

Goal 04 - Mathematical/Logical Reasoning

1. Illustrate historical and contemporary applications of mathematical/logical systems.
2. Clearly express mathematical/logical ideas in writing.
3. Explain what constitutes a valid mathematical/logical argument(proof).
4. Apply higher-order problem-solving and/or modeling strategies.

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted