North Hennepin Community College

MATH 1150: College Algebra

A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: *.*

Lab Hours/Week: *.*

OJT Hours/Week: *.*

Prerequisites: None

Corequisites: None

MnTC Goals: Goal 04 - Mathematical/Logical Reasoning

This college-level course continues the study of algebra conducted in the developmental algebra courses. Topics include polynomial, rational, inverse, exponential, and logarithmic functions and their applications. Additional topics include systems of non-linear equations, systems of linear equations, and matrices. Prerequisites: College math placement level or successful completion of Math 0902 or 0903 with grade of "C" or better

B. COURSE EFFECTIVE DATES: 08/27/1997 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. See Course Description and Course Outcomes.

D. LEARNING OUTCOMES (General)

1. Find all real and complex zeros of polynomial functions (MnTC Goal 4:a; NHCC ELO 1,2)
2. Use the degree, leading coefficients, and multiplicities of zeros of a polynomial function to analyze graphs and equations (G4:a; NHCC ELOs 1,2).
3. Find the composition of two functions (G4:a; NHCC ELOs 1,2).
4. Use the equation of a circle to graph it. Be able to write the equation of a circle based on a graph or given information (G4:a; NHCC ELOs 1,2).
5. Find the inverse of a function (G4: a; NHCC ELOs 1,2).
6. Evaluate the difference quotient using function notation (G4: a; NHCC ELOs 1,2).
7. Solve exponential equations (G4: b, c; NHCC ELOs 1,2).
8. Solve logarithmic equations using properties of logarithms (G4: b, c: NHCC ELOs 1,2).
9. Solve applied problems with exponential and logarithmic functions (G4: b,d; G2: a,b,c; NHCC ELOs 1,2).
10. Identify asymptotes and intercepts of rational functions, and use them to graph (G4: a; NHCC ELOs 1,2).
11. Solve systems of non-linear equations in two variables (G4: b,c; G2: a,b c; NHCC ELOs 1,2).

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. Apply higher-order problem-solving and/or modeling strategies.

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

1. Knowledge of Human Cultures and the Physical and Natural World--Through study in the sciences, mathematics, social sciences, humanities, histories, languages, the arts, technology and professions.

2. Intellectual and Practical Skills--Including: Inquiry and analysis; Critical and creative thinking; Written and oral communication; Quantitative literacy; Information literacy; Teamwork and problem solving.