

NorthWest Arkansas Community College
Division of Science and Mathematics

Course Number and Title - MATH 0103 Intermediate Algebra

Catalog Description – This developmental algebra course covers factoring, exponential, radical, and rational expressions; quadratic, radical, rational equations and compound inequalities; further study of functions and graphs, including quadratic and other basic functions; and interwoven relevant problem solving.

Prerequisites - Beginning Algebra (MATH 0053) with a C or better, appropriate module completion in Algebra I (MATH 0063), or appropriate placement scores.

Credit hours/Contact hours/Load hours

3 credit hours/3 contact hours/3 load hours, none counting toward any degree requirements

Target Audience/Transferability

This course is intended for college students who have had considerable algebra instruction, and for those students needing a review of high school algebra concepts to strengthen skill in preparation for college algebra or quantitative literacy study. Intermediate Algebra is a non-transfer course.

Student Learning Outcomes

CORE:

A student successfully completing Intermediate Algebra, MATH 0103, will demonstrate these primary course competencies:

- 1) Factor a one variable polynomial.
- 2) Graph a quadratic function.
- 3) Recognize functionality; find domain and range of a relation, evaluate a function.
- 4) Solve a quadratic equation with irrational solutions.
- 5) Model linear, rational, Pythagorean, radical and quadratic problems using algebraic process.

6) ADDITIONAL EMPHASIS:

A student successfully completing Intermediate Algebra, MATH 0103, will also:

- a) Solve rational and radical equations.
- b) Solve any quadratic equation via a variety of methods.
- c) Solve a compound inequality in one variable.
- d) Perform operations on radical and rational expressions.
- e) Simplify an exponential expression.

Topics

Factored polynomials

Quadratic equations with a variety of methods used to find solutions

Graphs of quadratic functions
Function concepts including domain, range, and evaluation
Radical and rational expressions
Rules of exponents
Rational, and radical equations
Applications of the topics covered above, and
Graphing calculator use.

Forms of Assessment

Each instructor will include a set of departmental final exam questions on his or her final exam. These questions will be in direct support of the Student Learning Outcomes. The questions will be graded according to a standard grading rubric. The results of these questions and overall student performance will be reported when final grades are turned in.

As of Spring 2016 (Fall 2016 2nd 8 week classes).