

**Northwest Arkansas Community College**  
(Science and Mathematics Division)

**Discipline Code**

MATH

**Course Number**

0103

**Course Title**

Intermediate Algebra

**Catalog Description**

(F, S, SUM) 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. Prerequisite MATH 0053 with a C or better or appropriate placement scores.

**Prerequisites**

MATH 0053 with a C or better, or appropriate placement scores.

**Credit Hours**

3 credit hours, none counting toward any degree requirements.

**Contact hours**

45 lecture contact hours

**Load hours**

3 load hours

**Semesters Offered**

Fall, Spring & Summer

**ACTS Equivalent**

No ACTS equivalent

**Grade Mode**

A-F

**Learning Outcomes**

A student successfully completing Intermediate Algebra, MATH 0103, should be able to do the following, incorporating technology where applicable:

- Solve and graph linear equations and inequalities.

- Factor polynomials in one variable.
- Recognize functionality; find domain and range of a relation, evaluate a function, and graph basic functions.
- Solve quadratic, rational, and radical equations.
- Simplify exponential, rational, and radical expressions.
- Solve linear, rational, radical, and quadratic applications using algebraic process.

## **General Education Outcomes Supported**

- Students can achieve mathematical literacy.

## **Standard Practices**

### **Topics list**

- Exponential notation and properties of exponents
- Algebraic expressions
- Linear equations and applications
- Linear inequalities and interval notation
- Line graphs, slope, and intercepts
- Function evaluation, graphs, domain, and range
- Equations of lines
- Systems of linear equations
- Systems of linear inequalities
- Polynomials and factoring
- Rational and radical expressions
- Rational and radical equations and applications
- Complex numbers
- Quadratic equations
- Quadratic functions and applications

### **Learning activities**

- Course topic practice and exploration to include participation in mathematical problem solving and inquiry, reflection on past related skills, acquiring new math vocabulary, building new mathematical skill and connections.

### **Assessments**

- Each instructor will include a set of departmental final exam questions on their final exam. Approval to include the questions on another end-of-semester assessment tool may be granted if inclusion on the final exam is not possible.
- These questions will be in direct support of the Learning Outcomes. Department-wide results for these questions will be reported when final grades are submitted.

### **Grading guidelines**

- At least 70% of the student's final course grade should come from proctored work.