NorthWest Arkansas Community College
(Division of Science and Mathematics)

Discipline Code
MATH

Course Number
MATH 0013

Course Title
Prealgebra

Catalog Description
(F, S, SUM) This course builds a strong number sense by emphasizing integers, decimals, percent, fractions, ratio and proportion. It also prepares a student to move forward with confidence into a first developmental algebra course by introducing variables, evaluating variable expressions and solving first degree equations. Elementary geometry, reading graphs, critical thinking, and problem solving skills support the AMATYC and NCTM standards. Some calculator use is incorporated. Computer-assisted, www, and hybrid versions of this course may be offered in addition to the traditional format. Upon successful completion, a student may take Beginning Algebra. No prerequisite.

Prerequisites
No Prerequisite

Credit hours
3 credit hours

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 Prealgebra, MATH 0013, will demonstrate these primary competencies:
1) Perform operations on integers using the order of operations.
2) Simplify and evaluate variable expressions.
3) Solve a one variable first degree modeling problem situation.
4) Perform operations on fractions and decimals.
5) Solve percent and proportion problems.
6) Find the perimeter and area of rectangles.
7) Construct various graphs.
8) Solve and check equations in one variable using integers.
9) Recognize number sets: compare magnitudes, graph on the real number line.
10) Simplify square roots of perfect squares and approximate square roots of non-squares using a calculator.
11) State ratios and rates and find unit rates.
12) Convert units of measure (includes Imperial and Metric systems).

General Education Outcomes Supported
• Students can achieve mathematical literacy.

Standard Practices
Topics List
- Order of operations with integers, fractions, and decimals
- Simplify and evaluate variable expressions (includes an introduction to solving first degree (linear) equations)
- Solve first-degree application problems, including perimeter and area problems; ratios, proportions, and percents (including similar triangle applications)
- Review measurement including conversions within English and metric systems
- Create bar and circle graphs
- Some calculator use is incorporated (once decimal operations are completed

Learning activities
- Courses must, at a minimum, cover the core learning outcomes for each topic. Faculty may add to these outcomes but may not omit any of them.

Assessments
- 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 1-12. These outcomes will be assessed via a common grading rubric developed by and made available to all faculty members. The results of the departmental questions and overall student performance will be reported when final grades are reported.

Grading guidelines
- At least 70% of the grade should come from proctored work.