

Northwest Arkansas Community College
(Science and Mathematics Division)

Discipline Code

MATH

Course Number

0022

Course Title

Foundations of Beginning Algebra

Catalog Description

This is a corequisite course for those students who do not meet the prerequisite for MATH 0053. Topics include foundational math topics not already included in MATH 0053. This course can only be taken concurrently with MATH 0053 and cannot be taken alone. This course builds a strong number sense by emphasizing integers, decimals, percent, fractions, ratio, and proportion. It also prepares a student to complete the beginning algebra co-requisite course by introducing variables, variable expressions, first degree equations, elementary geometry, graphs, and problem-solving skills.

Prerequisite

None

Co-Requisite

MATH 0053

Credit Hours

2 credit hours, none counting toward any degree requirement

Contact hours

30 lecture contact hours

Load hours

2 load hours

Semesters Offered

Fall & Spring

ACTS Equivalent

No ACTS Equivalent

Grade Mode

A-F

Learning Outcomes

Students completing Foundations of Beginning Algebra, MATH 0022, should be able to do the topics necessary to support completion of MATH 0053, Beginning Algebra, which covers but is not limited to the following:

- 1) Perform operations on integers using the order of operations.
- 2) Simplify and evaluate variable expressions.
- 3) Perform operations on fractions and decimals.
- 4) Solve basic percent and proportion problems.
- 5) Solve and check simple equations in one variable.
- 6) Find the perimeter and area of rectangles.
- 7) Plot points on a rectangular coordinate system
- 8) Recognize number sets: compare magnitudes, plot on the real number line.
- 9) Simplify and approximate square roots.
- 10) Work with ratios and rates.

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 simple first degree (linear) equations)
- Solve first-degree application problems, including: perimeter and area problems, ratios, proportions, and percents
- Some calculator use is incorporated

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 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 grade should come from proctored work