

NORTHWEST ARKANSAS COMMUNITY COLLEGE  
Division of Science and Mathematics

**Course Number and Title**

MATH 0012 Foundations of Quantitative Reasoning

**Catalog Description**

This is a corequisite course for those students who do not meet the prerequisite for MATH 1313. Topics include foundational math topics not already included in MATH 1313. This course can only be taken concurrently with MATH 1313 and cannot be taken alone.

**Co-requisite**

MATH 1313 Quantitative Reasoning

**Credit/Contact/Load Hours**

2 credit hours, 2 contact hours, 2 load hours

**Target Audience and Transfer**

This is a corequisite course for those students who do not meet the prerequisite for MATH 1313. This course can only be taken concurrently with MATH 1313 and cannot be taken alone. It does not transfer.

**Course Outcomes**

Upon successful completion of this course students should exhibit mastery of certain knowledge and basic skills. These skills include, but are not limited to:

1. The student will perform calculations with fractions, decimals, and percents.
2. The student will analyze algebraic expressions with real numbers.
3. The student will solve linear equations using addition and multiplication.
4. The student will read and interpret graphs.
5. The student will use ratios and proportions.
6. The student will analyze exponential expressions and equations.
7. The student will use geometry and measurement to solve problems.

**Topics**

|    |  |
|----|--|
| 1) | Real Numbers & Algebraic Expressions     |
| 2) | Pre-algebra                              |
| 3) | Linear Equations & Inequalities          |
| 4) | Graphing Linear Equations in 2 variables |
| 5) | Ratios & Proportions                     |
| 6) | Exponential & Logarithmic Functions      |
| 7) | Geometry Review                          |

### Required Instructional Activity

The content of this course will be delivered online and will integrate with the content being delivered in MATH 1313 Quantitative Reasoning.

### Required Forms of Assessment

Each instructor must include a set of 6 departmental final exam questions on his or her final exam. These questions will be in direct support of the specific Course Outcomes and will be based on material covered in the Required Text Coverage section, and be similar to the questions on the Departmental Review Sheet for Quantitative Reasoning. These questions should be evenly weighted on the final and should compose at least 10% of the students' overall grade in the course. The questions will be graded using a departmental grading rubric utilizing a 10-point scale per question. The results of these questions and overall student performance will be reported when final grades are turned in. Please note that no resources other than a calculator will be allowed for use by students during the final exam. It is also a departmental policy that no TI-89 or TI-92 or comparable calculators be allowed for use during the final exam.