

**University of Arkansas – Fort Smith**

5210 Grand Avenue

P. O. Box 3649

Fort Smith, AR 72913–3649

479–788–7000

**General Syllabus:**

**MATH 0302 College Algebra Extended Drill**

Credit Hours: 2      Lecture Hours: 2      Laboratory Hours: 0

Prerequisite: Required placement score.

Corequisite: MATH 1403 College Algebra

Effective Catalog: 2023-2024

**I. Course Information:**

**A. Catalog Description**

Support and enhance math skills by providing instructional time for developmental math skills directly needed for MATH 1403 College Algebra.

**B. Additional Information - NA**

**II. Student Learning Outcomes:**

**A. Subject Matter**

Upon successful completion of this course, the student will be able to:

1. Recognize Real Number Sense topics and perform operations therein.
2. Apply operations on Algebraic Expressions.
3. Analyze Graphs.
4. Solve Equations.
5. Model Data and perform analysis on the data.

**B. University Learning Outcomes**

This course enhances students' abilities in the following areas:

**Analytical Skills**

**Critical Thinking Skills**

Students will draw conclusions and/or solve problems. Students are routinely taught to examine the methods used to solve problems and to decide if answers obtained are reasonable.

### **Analytical Skills**

#### **Quantitative Reasoning**

Students will assign and use numbers, read and analyze numerical data, create models, draw inferences and support conclusions based on sound mathematical reasoning. Word problems are employed throughout the course to give students practice at reading and analyzing information pertaining to a given situation and writing a mathematical equation to model the situation. This equation is then solved to answer questions about the situation.

### **III. Major Course Topics:**

- A. Factor different types of polynomials
- B. Manipulate operations on radicals, operations using fractional exponents and solve radical equations containing square roots
- C. Multiply, divide, and subtract rational expressions
- D. Graph lines and determine intercepts and slopes
- E. Solve polynomial and rational inequalities
- F. Formulate equations and solve application problem