

MISSOURI WESTERN STATE UNIVERSITY

COLLEGE OF LIBERAL ARTS AND SCIENCES

DEPARTMENT OF COMPUTER SCIENCE, MATHEMATICS, AND PHYSICS

Course Number: MAT 081

Course Name: Foundations for University Mathematics I

Course Description: A study of the fundamental arithmetic and algebraic concepts prerequisite to university level mathematics. The specific topics studied are determined by assessment of the individual student's mathematical background.

Prerequisite: None

Text: Aleks User's GDE.W/One Term Access Code, Baker, Edition 00, McG,
ISBN 9780072391305

COURSE OBJECTIVES: In general, the objective of this course is to provide the student with a review of elementary arithmetic and to introduce topics from elementary algebra.

1. Real Numbers
2. Equations & Inequalities
3. Graphing

In order to successfully meet the course objectives, students will be able to:

1. add, subtract, multiply, divide, apply the order of operations, and apply the properties of real numbers to integers, fractions, decimals and percents.
2. add, subtract, multiply and divide algebraic expressions.
3. evaluate algebraic expressions given a specified value for the variable.
4. solve linear equations (inequalities) using the appropriate properties of equality (inequality).
5. solve linear application problems.
6. solve literal equations and formulas.
7. plot ordered pairs in the rectangular coordinate system.
8. graph linear equations and inequalities in two variables.
9. determine the slope of a line.
10. determine the equation of a line.

11. solve equations and inequalities involving absolute value expressions.
12. determine the slope of a line.
13. determine the equation of a line.