

# MATH 51 OUTLINE

## ELEMENTARY ALGEBRA

TEXT: Beginning Algebra, 10th Edition, Lial/Hornsby/McGinnis

**Approved: JUNE 2007**

**Effective: FALL 2007**

MATERIAL TO BE COVERED	SECTIONS FROM TEXT	TIME LINE
Exponents, order of operations, inequality. Variables, expressions and equations. Real numbers - operations and properties. Simplifying expressions.	1.2 - 1.8	3.25 Hours
Linear equations - properties of equality. Formulas and applications. Ratios and proportions. Properties of inequalities.	2.1 - 2.8	6.5 Hours
Linear equations in two variables - graphing, slope. Writing linear equations, graphing linear inequalities. Functions.	3.1 - 3.6	6.5 Hours
Solving linear systems by graphing, substitution and addition methods. Applications. Optional: solving systems of linear inequalities.	4.1 - 4.4 Optional: 4.5	5 Hours
Operations with polynomials. Integer exponents. Scientific notation.	5.1 - 5.7	5 Hours
Factoring - GCF, grouping, trinomials, differences of squares, sums and differences of cubes. Solving quadratic equations by factoring. Applications.	6.1 - 6.6	6.5 Hours
Rational expressions - fundamental property, operations. Complex rational fractions. Solving equations involving rational expressions. Applications of rational expressions including direct and inverse variation.	7.1 - 7.8	6.5 Hours
Roots and radicals - evaluating, operations and simplifying. Rationalizing denominators. Solving equations with radicals. Fractional exponents.	8.1 - 8.7	8 Hours
Solving quadratic equations by the square root property, completing the square and quadratic formula, (summary of different methods). Optional: Complex numbers. Optional: Graphing quadratic equations/functions.	9.1 - 9.3 Optional: 9.4-9.5	5 Hours

\*\*\* One hour = One hours of face time. \*\*\*\*This outline allows for 4 hours of exams.

16 Week Term: 1 week = 3.75 hours (face time)    6 Week Term: 1 week = 10 Hours (face time)

**NOTES:**

Most chapters contain in-chapter summary exercises. These special exercise sets provide students with "mixed" review problems necessary to master topics. Instructors should assign summary sets as they appear in each chapter.

**\*\* See reverse side for important Department Policy\*\***