

INTERMEDIATE ALGEBRA

Math 1310

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1.0 Course Description

- 1.1 (3 hours) Properties of real numbers, linear equations and graphing, systems of equations, linear inequalities, quadratic equations, polynomials, algebraic fractions, exponents and radicals and logarithms.
- 1.2 This course is intended for non-math or computer science majors, to fulfill the university general requirement in mathematics. The specific requirements may vary within the different colleges and departments within the university.
- 1.3 Prerequisite: placement via the ACT math sub score or the placement exam.
- 1.4 Unusual circumstances: None

2.0 Objectives

- 2.1 Performance objectives for the student:
- 1) Solve and graph linear equations, inequalities and absolute value problems.
 - 2) Perform mathematical operations on polynomials, as well as factoring of polynomials.
 - 3) Evaluate and simplify rational expressions.
 - 4) Perform mathematical operations on expressions involving roots and radicals.
 - 5) Solve quadratic equations and nonlinear inequalities.
 - 6) Develop linear equations given information regarding slope and points, solve linear equations, and apply linear equations.
 - 7) Evaluate inverse functions, exponential functions, and logarithmic functions.

3.0 Content and Organization

- 3.1 Topics:
- 1) Polynomials
 - 2) Rational Expressions
 - 3) Roots and Radicals
 - 4) Quadratic equations and inequalities
 - 5) Straight lines
 - 6) Systems of linear equations
 - 7) Exponential and logarithmic functions

4.0 Teaching Methodology

- 4.1 Methods to be used:
During the fall and spring semesters most sections are taught in the Math Lab using facilitated classroom instruction that emphasizes group dynamics and is taught by a trained instructor. Individual assistance, online practice tests and videotapes are also available. Summer sections are taught in traditional classroom lectures.

5.0 Evaluation

- 5.1 Basis for Determining Final Grade:

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During the fall and spring semesters, 5 exams are given, each worth 35 points. Students are given the opportunity to retake each exam and receive a weighted average of the two tests (25% of the first score, 75% of retake score). Unannounced quizzes, each worth 2 points is given for a total of 24 points. A comprehensive multiple choice final worth 75 points is given at the conclusion of the semester. Attendance is recorded and a minimum of 150 minutes is required and represents approximately 10% of the course grade, 30 points. The number of points out of the possible 304 points determines the course grade.

6.0

Resource Material

6.1

Textbook(s) or other required readings:
Intermediate Algebra, Seventh Edition
Lial, Hornsby, Mc Ginuis, Addison-Wesley Publishers, 2002

Revised April 2003