

CHAMINADE UNIVERSITY

Syllabus

Name of Course

MA102 Introductory Algebra (10220)

Instructor

Dr. David Lani

Office Hours

MW 5:00 pm – 5:25 pm

Textbook

Beginning Algebra / Gustafson, R. & Frisk, P. — 4th edition

Course Objectives

- (1) To introduce students to the fundamentals of algebra;
- (2) To prepare students for entry into MA103 College Algebra;
- (3) To emphasize: manipulating algebraic expressions (polynomials, rational expressions, radical expressions); solving equations and inequalities; graphing linear equations and inequalities; solving systems of equations and inequalities in two variables.

Course Requirements

Homework:

Assignments are due at the *beginning* of class. Work that is one day late is accepted but assessed a 25% deduction; work that is more than one day late is not accepted.

Tests:

All tests are closed-book, with no notes allowed. All have “no calculator” parts; some also have “calculator* allowed” parts. The time limit for the final exam is two hours; each of the previous three tests has a time limit of one hour.

*NOTE: Calculators (scientific) are *optional*. However, borrowing is not allowed during tests for which calculators are allowed.

Grading

Homework — 20% of final grade
Three Tests — together, 45% of final grade
Final Exam — 35% of final grade

Topics Covered**Real Numbers (chapter 1):**

Sets of numbers and their graphs; fractions; algebraic expressions; exponents; order of operations; absolute values; arithmetic of real numbers; the basic properties.

Equations and Inequalities (chapter 2):

Addition, subtraction, multiplication and division properties of equality; simplifying expressions to solve equations; applications of equations; solving inequalities.

Polynomials (chapter 3):

Natural-number exponents; zero and negative integral exponents; scientific notation; adding, subtracting, multiplying, and dividing polynomials.

Factoring Polynomials (chapter 4):

Greatest common factor; grouping; difference of squares; general trinomials; summary of factoring techniques; solving equations by factoring; applications.

Rational Expressions (chapter 5):

Basic properties; multiplying, dividing, adding, and subtracting rational expressions; solving equations that contain fractions; applications.

Graphing Linear Equations and Inequalities (chapter 6):

Rectangular coordinate system; graphing lines; slopes of lines; writing equations of lines; graphing inequalities.

Solving Systems of Linear Equations (chapter 7):

Solving systems of equations using the substitution method and the addition method; applications.

Roots and Radical Expressions (chapter 8):

Radicals; simplifying radical expressions; adding, subtracting, multiplying, and dividing radical expressions.

Student Exercises

Completion of all tests and homework assignments as described in the course requirements.