640:104:04 - Intro to College Algebra

Logan Reed

Fall 2022

E-mail: l.reed@rutgers.edu

Office Hours: M/W 2:00-3:00pm
Office: Armitage 312
Final Date: Wed, Dec. 21st

Class Hours: M/W 3:45-5:35pm
Class Room: Armitage 208
Final Time: 2:45-5:45pm

Course Description

This is an introductory course on college level algebra which prepares the student for precalculus mathematics. This course will include chapters 3-12 from the textbook and incorporate arithmetic review throughout.

Topics covered include algebraic equations and inequalities, coordinate geometry and systems of linear equations, operations on and factoring of polynomials, rational expressions and equations, roots and radicals,quadratic equations (with both real and complex solutions), equations and graphs of conic sections, and introduction to functions (time permitting).

Textbook

- Elementary and Intermediate Algebra, 6th Edition. Kaufmann and Schwiters

Grading Policy

I reserve the right to curve the scale dependent on overall class scores at the end of the semester. Any curve will only ever make it easier to obtain a certain letter grade. The grade will be calculated in the following way:

- **60%** of your grade will be determined by 4 in-class midterm exams (15% each).
- **30%** of your grade will be determined by the Final Exam.
- **10%** of your grade will be determined by class participation.

Exam Policy

There will be four regular semester exams and one cumulative final exam. At the end of the semester the lowest grade from the semester exams will be replaced by the final exam grade. **No make up exams will be given**. If one exam is missed for any reason (excused or unexcused) that grade will be the one replaced by the final exam grade. Further missed exams will be given a grade of 0. **Calculators are not allowed on exams**.

Homework

Homework will not be collected/graded for this course. However, you will be expected to review the material and work on problems outside of class. Sample problems will be suggested for the sections covered in class. The rule of thumb for a college course is two hours studying for each hour spent in class.

Course Policies

Code of Conduct and Academic Integrity

Rutgers University-Camden seeks a community that is free from violence, threats, and intimidation; is respectful of the rights, opportunities, and welfare of students, faculty, staff, and guests of the University; and does not threaten the physical or mental health or safety of members of the University community, including in classroom space, and a community in which students respect academic integrity and the integrity of your own and others' work. As a student at the University you are expected adhere to the Student Code of Conduct and Academic Integrity Policy. To review the academic integrity policy, go to https://deanofstudents.camden.rutgers.edu/academic-integrity To review the code, go to: https://deanofstudents.camden.rutgers.edu/student-conduct

Accommodations for Disabilities

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation:
https://ods.rutgers.edu/students/documentations-guidelines. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the registration form at
https://webapps.rutgers.edu/student-ods/forms/registration.

Sections Covered

3.1: Solving First-Degree Equations
3.2: Equations and Problem Solving
3.3: More on Solving Equations and Problem Solving
3.4: Equations Involving Parenthesis and Fractional Forms
3.5: Inequalities
3.6: Inequalities, Compound Inequalities, and Problem Solving
4.1: Ratio, Proportion, and Percent
4.2: More on Percents and Problem Solving
4.3: Formulas
4.4: Problem Solving
4.5: More about Problem Solving
5.1: Cartesian Coordinate System
5.2: Graphing Linear Equations
5.3: Slope of a Line
5.4: Writing Equations of Lines
5.5: Systems of Two Linear Equations
5.6: Elimination-by-Addition Method
5.7: Graphing Linear Inequalities
6.1: Addition and Subtraction of Polynomials
6.2: Multiplying Monomials
6.3: Multiplying Polynomials
6.4: Dividing by Monomials,
6.5: Dividing by Binomials
6.6: Integral Exponents and Scientific Notation
7.1: Factoring by Using the Distributive Property
7.2: Factoring the Difference of Two Squares
7.3: Factoring Trinomials of the Form $x^2 + bxc$
7.4: Factoring Trinomials of the Form $ax^2 + bx + c$
7.5: Factoring, Solving Equations, and Problem Solving
9.1: Simplifying Rational Expressions
9.2: Multiplying and Dividing Rational Expressions
9.3: Adding and Subtracting Rational Expressions
9.4: More on Rational Expressions and Complex Fractions
9.5: Equations Containing Rational Expressions
9.6: More on Rational Equations and Applications
10.1: Integral Exponents and Scientific Notation Revisited
10.2: Roots and Radicals
10.3: Simplifying and Combining Radicals
10.4: Products and Quotients of Radicals
10.5: Radical Equations
10.6: Merging Exponents and Roots
11.1: Complex Numbers
11.2: Quadratic Equations
11.3: Completing the Square
11.4: Quadratic Formula
11.5: More on Quadratic Equations and Applications
11.6: Quadratic and Other Nonlinear Inequalities
12.1: Distance, Slope and Graphing Techniques
12.2: Graphing Parabolas
12.3: More Parabolas and Some Circles
12.4: Graphing Ellipses
12.5: Graphing Hyperbolas
Further Topics (Time Permitting): Function Notation, Domain, Range, Inverse, and Composition