



## COLLEGE ALGEBRA FOR SCIENCE & BUSINESS

21:640:109 (3 credits)

This course is for students who intend to major or minor in Business, Economics, Life Science, Physical Science, Computer Science, or Mathematics. For related questions, contact the Director of College Algebra and Basic Math at [rpuhak@rutgers.edu](mailto:rpuhak@rutgers.edu).

Students who intend to major or minor in one of the Humanities, Social Sciences, Criminal Justice, Nursing, or Public Administration should take 21:640:107 (College Algebra for Humanities and Social Sciences.)

### **COURSE DESCRIPTION:**

Functions and operations of functions, operations on polynomials, fractions, solution of linear and quadratic equations and inequalities, graphing of linear and quadratic functions, solution of word problems, functions, polynomial and rational functions, systems of equations, algebra of matrices.

### **PREREQUISITES:**

21:640:104 (Intermediate Algebra Intensive) or 21:640:105 (Intermediate Algebra) or placement by examination.

### **IMPORTANT NOTES:**

1. Successful completion of College Algebra for Science and Business with a grade of “C” or better fulfills the mathematics proficiency requirement.
2. For College Algebra, credits will be given for JUST ONE of the two College Algebra courses (107, 109), e.g. a student cannot receive credits for BOTH Math 107 “College Algebra for Humanities” AND Math 109 “College Algebra for Science and Business”.
3. The final exam for this course is cumulative.
4. NO Calculators: This course involves computation and the development of related skills. Calculators are not ever allowed. Problems can be done with pencil and paper.
5. Although students must pass the final exam with 70% or better in order to pass the course with a minimum C grade, **passing the final exam (70% or better) does NOT guarantee that a student will pass the course.** For students achieving 70% or better on their final exam, the course grade is determined by the percentage breakdown (e.g. for quizzes, exams, and so forth) indicated on the course syllabus.
6. **FREE TUTORING** is available in the Rutgers Learning Center, Room 140 Bradley Hall. For more information, call 973.353.5608 or see related website at <http://lc.newark.rutgers.edu/tutoring.html>

**TEXTBOOK:** The following three options are available.

1. **BOUND COPY:** Algebra for College Students, 10th edition, by Jerome E. Kaufmann & Karen Schwitters.

Students must be sure their copy comes with a code/license (or obtain one) for access to the computer-based homework system Enhanced WebAssign. That license also provides access to the electronic College Algebra book.

2. **LOOSE LEAF COPY, THREE HOLE PUNCHED: Algebra for College Students, 10th edition, by Jerome E. Kaufmann & Karen Schwitters. (PREFERRED SELECTION OF THE THREE OPTIONS)**

This special discounted package of text is available ONLY at the Barnes & Noble Bookstore located at 42 Halsey Street, Newark.

It comes with a code/license for access to the computer-based homework system Enhanced WebAssign and the electronic College Algebra book. Purchasing this package results in considerable savings, relative to purchasing the bound copy of the text.

3. **ELECTRONIC COPY:** Algebra for College Students, 10th edition, by Jerome E. Kaufmann & Karen Schwitters.

Students must purchase a code/license (or obtain one) for access to the computer-based homework system Enhanced WebAssign and the e-text.

**THIS COURSE COVERS THE FOLLOWING CHAPTERS AND SECTIONS:**

Chapter 1: Basic Concepts and Properties (**Sections 1.1 thru 1.3 to be covered by student self-review, outside of class; questions to be addressed during office hours), Section 1.4 covered in class.**)

Chapter 2: Equations, Inequalities and Problem Solving (except Sections 2.6 and 2.7)

Chapter 3: Polynomials (**brief in-class review of Sections 3.1 thru 3.4), Sections 3.5 thru 3.7 covered in class**)

Chapter 4: Rational Expressions

Chapter 5: Exponents and radicals (except Sections 5.5)

Chapter 6: Quadratic equations and inequalities (except Section 6.6)

Chapter 7: Equations and inequalities in two variables (except Section 7.5)

Chapter 8: Functions (except Sections 8.2, 8.5, and 8.7)

Chapter 9: Polynomial and Rational Functions (Sections 9.4 and 9.5 ONLY)

Chapter 11: Systems of equations (except Section 11.6)

Chapter 12: Algebra of matrices (except Section 12.4)

**Department of Mathematics & Computer Science  
Smith Hall 216, 101 Warren Street, Newark, New Jersey 07102  
Phone: (973) 353-5156 Fax: (973) 353-5270  
<http://www.ncas.rutgers.edu/math>**