

MAT 95 Elementary Algebra

**Department of Mathematics
Southern Connecticut State University**

I. Catalog Description

Linear equations, polynomials, straight lines, graphing, exponents, and word problems. Graphing calculator approved by the instructor is required. Credits count toward the calculation of the students GPA but not toward graduation. 3 credits.

II. Purpose

The purpose of this course is to provide students with the algebraic skills and concepts needed for MAT 100 and MAT 102 (Intermediate Algebra Extended). Students who pass MAT 095 with a D-, D or D+ must take MAT 102E next. Students who pass MAT 095 with a C- or better have the choice of either taking MAT 100 or MAT 102 next.

III. Credit

MAT 095 carries no credit toward graduation. However, MAT 095 counts as 3 credits toward the calculation of a student's GPA. This course does not satisfy the University requirement in Mathematics.

IV. Prerequisite

This course has no prerequisites.

IV. Format

MAT 095 is offered in the lecture-discussion format. This course will meet for 2.5 contact hours per week and carry a faculty teaching load of three credits.

V. Technology

A TI-83 Plus or TI-84 Graphing Calculator is required. An online Course Management System will be utilized for doing homework problems.

VI. Course Objectives

Students should be able to:

- (A) Set up and use simple mathematical models. In particular, students should be able to translate "word problems" into corresponding mathematical problems and then interpret the results in terms of the conditions of the word problems.

- (B) Solve linear equations and inequalities in one variable.
- (C) Solve systems of linear equations in two variables.
- (D) Graph linear equations in two variables using their understanding of linear equations, slope and y-intercept of a line.
- (E) Understand and apply the properties of whole number and integer exponents.
- (F) Recognize and complete operations on polynomial expressions including addition, subtraction, multiplication, division and factoring.
- (G) Solve polynomial equations by factoring.

VII. Current Text

Hall and Mercer, Beginning and Intermediate Algebra, the Language and Symbolism of Mathematics, 2nd Ed., McGraw-Hill, 2008.

Sections covered :

- Chapter 1 : Sections 1.1 - 1.7.
- Chapter 2 : Sections 2.1 - 2.8.
- Chapter 3 : Sections 3.1 - 3.6.
- Chapter 4 : Sections 4.1 - 4.2.
- Chapter 5 : Sections 5.1 - 5.7.
- Chapter 6 : Sections 6.1 - 6.6.

VIII. Outline

- (A) Operations with Real Numbers.
- (B) Linear Equations and Patterns.
- (C) Linear and Systems of Linear Equations in Two Variables.
- (D) Linear Inequalities.
- (E) Exponents and Operations with Polynomials.
- (F) Factoring Polynomials.

IX. Other

The common final exam is to be counted as 25 % of the final course grade.

X. Waiver Exam

There is no waiver for MAT 95.