

**Rowan University**  
**Department of Mathematics**

**Syllabus Fa'10**

**Math 01.123 College Algebra**

**Instructor: Sam Mazahreh, email: Mazahreh@rowan.edu**

**Office Hours: 6:00 – 6:30 (Monday), or arranged time in the Adjunct room**

**Catalog Description:** Math 01.123-6 College Algebra (CRN 43296)

3 S.H.

**Class Meeting:** Monday, 6:30-9:00 pm in Wilson 212.

**Syllabus:** This course is designed to help students who are weak in algebra prepare for Statistics I or Calculus T&A. The contents include: a brief review of intermediate algebra, structure and analysis of the real number system, elementary analytic geometry, and algebraic, exponential and logarithmic functions (including their inverses and related functions). Graphs of functions are also studied. A graphing calculator is required. Prerequisite is Intermediate algebra or its equivalent.

**A) Objectives:**

At the end of this course, students will demonstrate the ability to:

- (i) Perform different operations involving algebraic expressions including exponential expressions,
- (ii) Graph linear and quadratic functions,
- (iii) Solve equations and inequalities algebraically and graphically,
- (iv) Graph polynomial, rational, algebraic, exponential and logarithmic functions,
- (v) Solve exponential and logarithmic equations, and apply exponential and logarithmic models in different applications.
- (vi) Use technology, calculator or otherwise, in achieving the above objectives

**B) Topical Outline:**

**Contents:**

**Chapter 1:** Introduction:

Real numbers, absolute value, exponents and radicals, laws of exponents, polynomials and factoring, elementary analytic geometry.

**Chapter 2:** Functions and their graphs:

Functions, graphs of functions, combinations of functions, inverses of functions, graphs of linear and quadratic functions.

**Chapter 3:** Solving equations and inequalities:

Intercepts and zeros of functions, solving equations algebraically and graphically, solving inequalities, algebraically and graphically.

**Chapter 4:** Polynomials and rational functions:

Polynomial functions of higher degree, rational functions and asymptotes, graphs of polynomial and rational functions.

**Chapter 5:** Exponential and logarithmic functions:

Exponential functions and logarithmic functions and their graphs, properties of logarithms, solving exponential and logarithmic equations, exponential and logarithmic models.

**C) Student Evaluation:**

Students will be evaluated based on class participation and activities, homework –which will be assigned weekly-, quizzes and tests.

D) **Grading:** A-F determined by the quizzes 25%, tests 60%, and Homework, attendance and participation 15%.

E) **Numerical grades** will be converted to letter grades by the following scale:

A: 90 and above, B: 80-89, C: 70-79, D:60-69 and F: below 60

E) **Course Texts:** \*Hungerford, **Contemporary College Algebra:** A graphing Approach with Student Solutions Manual: Brooks/Cole, 2nd Ed, 2005.

You can purchase the electronic material for the course from the publisher [ichapters.com](http://ichapters.com) .

F) **Attendance:** Required and mandatory, check with the instructor for special circumstances.

G) **Students with disability and special needs:** Your academic success is important. If you have a documented disability that may have an impact upon your work in this class, please contact me. Students must provide documentation of their disability to the Academic Success Center in order to receive official University services and accommodations. The Academic Success Center can be reached at 856-256-4234. The Center is located on the 3rd floor of Savitz Hall. The staff is available to answer questions regarding accommodations or assist you in your pursuit of accommodations. We look forward to working with you to meet your learning goals.

H) **Classroom rules:** Students will abide by Rowan's student code of conduct and policy and academic honesty, see [www.rowan.edu/studentaffairs/infoguide](http://www.rowan.edu/studentaffairs/infoguide) . Improper behavior will not be allowed. Students are not to leave the classroom during class period except for emergencies or prior arrangement have been made with the instructor. Students are encouraged to ask questions during class, before and after class.