

COURSE SYLLABUS: MATH 103, College Algebra

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COURSE INFORMATION

Course Prefix and Number: CMU Math 103
Course Title: College Algebra
Semester Credit Hours: 3

Course Description: Study of algebraic concepts including linear and quadratic equations, inequalities and systems; polynomials, rational exponential and logarithmic functions in the natural and social sciences with emphasis on their numerical, graphical, and algebraic properties and their applications. Introduction to summation notation, sequences, and series.

Class Meeting Days & Times:
M-F, 10:00 - 10:50 a.m.

Textbook: *College Algebra*, Third edition, by Robert Blitzer

Calculator: You will need a TI-83 or a TI-83 Plus graphing calculator, which is also appropriate for use in Statistics. Most calculator manipulations demonstrated in class will use this calculator.

Course Objectives:

- To obtain critical thinking skills, to reason mathematically, to communicate mathematically, and to identify and solve mathematical problems.
- To appreciate the utility of mathematics in a variety of disciplines.
- To understand intuitively and formally the mathematical idea of a function and its real world applications.
- To use technology to enhance mathematical understanding and solve real world problems.

Topic Outline:

1. Radicals, integer and rational exponents (review)
2. Linear and Quadratic equations and inequalities
3. The Cartesian Plane and Graphs
4. Functions and the Graphs
5. Polynomial and rational functions and graphs
6. Exponential and Logarithmic functions and graphs
7. Systems of equations
8. Sequence and series

EVALUATION

Homework: A set of recommended homework problems will be given in each class period. A sampling of the homework problems will be collected and graded, but it is essential that you try them all. Math is not a spectator sport. You cannot learn mathematics without trying problems on your own. Homework problems can be a great way to determine your understanding. They can also help you determine areas of difficulty. Homework problems are chosen to represent the concepts to be mastered in the course. Thus, exams will contain problems that closely model homework problems.

Out of Class Activity: This class will require one project / paper, which incorporates how algebraic concepts are used in past or modern society. Details will be discussed in class.

Class Assignments: All assignments must be turned in before or on the indicated due date. Late assignments may or may not be accepted for reduced credit. The student is responsible for turning in all assignments on time whether or not the student is present in class.

Exams: There will be three regular exams worth 100 points each and a final exam. The final exam will be in two sections. Section A will be worth 100 points and will cover material gone over in class since taking the third exam. Section B will be the comprehensive part of the exam and will also be worth 100 points. The total exam value is 200 points.

Course Grades: Letter grades for the course will be assigned using the following grading scale:

<u>Letter Grade</u>	<u>Percentage Range</u>	<u>Total Points Range</u>
A	90-100	540-600
B	80-89	480-539
C	70-79	420-479
D	60-69	360-419
F	59% or below	359 or below

Evaluation Opportunities: There are several types of evaluation opportunities in this course. The table below shows those opportunities and the points that are possible for each.

<u>Opportunity</u>	<u>Possible Points</u>	<u>Percentage Weight</u>
Attendance	30	5 %
Homework / Quiz	35	5 5/6 %
Project / Paper	35	5 5/6 %
Exam 1	100	16 2/3 %
Exam 2	100	16 2/3 %
Exam 3	100	16 2/3 %
<u>Final</u>	<u>200</u>	<u>33 1/3 %</u>
Total Points	600	100 %

Attendance: Students should attend class in order to have the most opportunities to learn the required material. When in class, students will be expected to participate in several ways. You will be asked to work in small groups or with a partner and you will be asked to respond when the instructor is leading the class. While participating in these various activities, you should behave in a courteous manner toward the instructor and your fellow classmates. Any student distracting from the learning process may be asked to leave the classroom. Cellular phones and pages should be turned off during class.

Attendance will be taken on a regular basis. This is a highly interactive class; thus it is essential that you make every effort to attend each scheduled class period. If you must be absent for any reason, make sure to find out what you missed from a fellow classmate and turn in any missing assignments as soon as possible. Please bring documentation in order for an absence to be considered excused.

Help: Students have many options to address difficulties they may have in the course. Students may purchase the solutions manual to accompany the text from the bookstore. This manual provides complete solutions to odd-numbered exercises. One note of caution: Do not confuse your ability to follow a solution that is provided in the manual with your ability to produce that solution for yourself on a similar problem. To avoid confusion, you should try to work the problem on your own first, then use the manual as a last resort. If you are unable to solve the problem without using the manual, try the problem at a later date to see if you can work it without assistance.

Another important note: There is always more than one way to solve a problem. Just because your way is different than the manual's method (or the instructor's method or anyone else's for that matter) does not mean it is wrong.

Student Conduct: Students must conduct themselves so other students are not distracted from the pursuit of learning. Discourteous or unseemly behavior will not be tolerated. Faculty members, staff and other students are to be treated with courtesy and respect. If unacceptable behavior occurs, the student may be asked to leave the classroom and maybe subject to disciplinary action up to and including being dropped from the class with a grade of F.

ADA Policy: Students with documented disabilities who may need classroom academic adjustments, auxiliary aids, or services are required to register with the ADA Coordinator.