

## COURSE SYLLABUS: MATH 103, College Algebra Fall 2017

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### COURSE INFORMATION

**Course Prefix and Number:** MATH 103  
**Course Title:** College Algebra  
**Semester Credit Hours:** 3

**Textbook:** *College Algebra*, 4th edition, by Robert Blitzer

### MISSION

**CENTRAL METHODIST UNIVERSITY** prepares students to make a difference in the world by emphasizing academic and professional excellence, ethical leadership, and social responsibility.

### CREED

The **CENTRAL METHODIST UNIVERSITY** community believes in:

- Seeking knowledge, truth, and wisdom;
- Valuing freedom, honesty, civility, and diversity;
- Living lives of service and leadership; and
- Taking responsibility for ourselves and the communities in which we live.

### COURSE DESCRIPTION

College Algebra is a study of equations and inequalities, functions and graphs, polynomial and rational functions, exponential and logarithmic functions, and systems of equations and inequalities.

### COURSE OBJECTIVES

Upon successful completion of this course, students will be able to understand and solve problems involving:

- Radicals, integers and rational exponents (review)
- Linear and quadratic equations, inequalities, and absolute values
- Relations, functions, and graphs
- Polynomial and rational functions

- Sequences and series
- Matrices and determinants, if time

#### GENERAL EDUCATION COMPETENCIES:

This course meets the following competency in the CMU General Education Core Value: Foundations: Math Literacy; students will demonstrate mathematical reasoning by applying appropriate methods and procedures.

#### METHODS OF INSTRUCTION

1. Independent Practice/Homework will be given. Homework will be collected on a random basis. All the steps taken to arrive at a solution should be shown.
2. Three (3) exams will be given worth 100 points each. Exam3 will come near end of course and cover material covered since last exam. A final exam worth 100 points will cover the remaining material from the beginning of the course.
3. At the end of the semester, the total points earned divided by the total number of points possible will yield your percentage for the course.
4. Participation, cooperation, attendance and scores on the semester exam may be taken into consideration with borderline grades.

#### **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 from Chapter P)
  2. Linear and Quadratic equations and inequalities
  3. Polynomial and rational functions and graphs
  4. Exponential and Logarithmic functions and graphs
  5. Systems of equations and inequalities
  6. Matrices and determinants, if time

## EVALUATION

### COURSE SCHEDULE:

This instructor will be posting a projected outline of study and assignments on MYCMU. Please note: this instructor reserves the right to alter this schedule at any time.

**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.

**Class Assignments:** The student is responsible for completing assignments on time and having them available for collection during each class meeting.

**Make-Up Examinations:** Tests are to be taken on the date and time scheduled. No make-up tests will be given unless the instructor feels that the absence was justified. If the absence was unavoidable or otherwise justified, the student may arrange with the instructor to make up the exam.

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

<u>Letter Grade</u>	<u>Percentage Range</u>
A	90-100
B	80-89
C	70-79
D	60-69
F	59% or below

**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 pagers should be turned off during class.

Attendance will be taken on a regular basis. 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.

**Help:** Students have many options to address difficulties they may have in the course.

There is always more than one way to solve a problem. Just because your way is different than 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 may be subject to disciplinary action up to and including being dropped from the class with a grade of F.

**Use of Electronic Devices:**

As a member of the learning community, each student has a responsibility to other students who are members of the community. When cell phones or pagers ring and students respond in class or leave class to respond, it disrupts class. Therefore, the use of cell phones, pagers or similar communications is prohibited during class. This includes texting. All devices must be turned off or put on silent and ordinarily should not be taken out during class.

**Expectations, class etiquette and student contact:**

All students are expected to behave in a manner appropriate to the learning environment. You are a college student now, and preparing for your chosen field. I expect you to behave as a professional in this class as well. I expect you to attend class, be on time, complete assignments on time, be respectful, act with integrity, participate in discussions and follow the rules. Everyone in the classroom is to be treated with respect. Please avoid rude and disrespectful behavior. Examples of student misconduct include excessive chitchat, sleeping, disturbing another student or becoming engaged in activities that are deemed distracting by the instructor. Students engaging in distracting, or inappropriate behavior will be asked to leave the class and may be dropped from the course should the behavior be repeated. Students sleeping in class will be asked to leave and counted absent. Take your earbuds out, including ear cell phones and put them away.

**Final Exam:**

It is the policy of the university to require all classes to meet during their scheduled final exam time allotment. You will be required to attend class at that time. No exceptions. The final exam day/time is listed on the complete course schedule.

**Academic Honesty Policy:**

Academic and personal honesty is expected at all times. Cheating on homework or tests/quizzes will not be tolerated. If you are caught cheating, you will receive an automatic F for that assignment or test.

**Academic Property:**

All work (original or copy) submitted by the student to satisfy the requirements of the course may be retained at the discretion of the instructor for non-profit and educational purposes. Such work is generally used for assessing the course and providing evidence of student accomplishment for review by accrediting agencies. Any student wishing to prohibit such use of their work may do so by notifying the instructor in writing.

**Nondiscriminatory Policy:**

Central Methodist University does not discriminate on the basis of race, color, religion, sex, national origin, age, or federally defined disability in its recruitment, admission, and retention of students.

**Academic Honesty Policy:**

Central Methodist University believes that honesty throughout life is a significant foundation of character and personal integrity. The University's Policy on Academic Honesty applies to all forms of academic work, including but not limited to quizzes and examination, essays and papers, lab reports, oral presentations, surveys, take home tests, etc. Every student is responsible for understanding this policy. By registering at the university, every student accepts the obligation to abide by this policy. Students are also responsible for understanding the particular policy applications required by each of their instructors and to ask the instructor for clarification of any areas of uncertainty. Academic honesty requires that each person accept the obligation to be truthful in all academic endeavors. To help members of the community understand the implications of academic honesty; the University provides the following explanation of academic dishonesty.

**Academic dishonesty is any conduct that has either as its intent or its effect (independent of intent) the false representation of a student's academic performance.**

Academic dishonesty includes but is not limited to the following:

1. Cheating in any form (e.g., ghost-written papers, cheat sheets or notes, copying during exams, quizzes or other graded class work, etc.)
2. Collaborating with others on work to be presented contrary to the stated rules of the course.
3. Stealing or having unauthorized access to examination or course materials.
4. Falsifying records, or laboratory or other data.
5. Submitting work previously presented in another course without the advance consent of the instructor.
6. Knowingly and intentionally assisting any other student in any act of academic dishonesty (this includes intentionally allowing any other student to use or submit your academic work or performance, or other academic work supplied by you, under a name different from the author of the work).
7. Plagiarism. Plagiarism is a form of cheating and stealing. It is morally unacceptable as well as against academic policy. Plagiarism includes but is not limited to (1) representing as one's own work a paper, speech, or report written in whole or in part by someone else (from the unaccredited use of significant phrases to the unaccredited use of larger portions of materials), (2) failing to provide appropriate recognition of the sources of borrowed material through the proper use of quotation marks, proper attribution of paraphrases and proper citations. Paraphrase is the direct use of others' ideas, data, or structures of thought stated in language substantially different from the source upon

which they depend, and therefore not requiring quotation marks even though the substance of the material is borrowed. In borrowed material, appropriated recognition of the source must be given. The University will discipline students for infractions of the Academic Honesty Policy with various sanctions, which it deems appropriate, up to and including suspension or expulsion from the University. Penalties internal to a course, including grades and expulsion from the course, are at the discretion of the instructor. Students can appeal instructor's internal course penalties to the Committee on Academic Standards and Admissions, whose decision is final. Instructors must report all penalties they impose for academic dishonesty, with a brief account of the offense, to the Dean of the University, so that all violations are recorded. For serious or repeated offenses, the Dean may impose further penalties beyond the course penalty. These penalties include, but are not limited to notations in the student's file, notations on the student's transcript, probation, suspension and expulsion. A decision by the Dean of the University can be appealed to the Faculty Committee on Academic Standards and Admission, whose decision is final.

**MATH 103****College Algebra  
Fall 2017**

<b>Date</b>	<b>Topic</b>	<b>Section</b>	
23 Aug 2017	Algebraic Expressions and Real Numbers	P.1	
25 Aug 2017	Exponents and Scientific Notation	P.2	
28 Aug 2017	Radicals and Rational Exponents	P.3	
30 Aug 2017	Polynomials	P.4	
01 Sep 2017	Factoring Polynomials	P.5	
04 Sep 2016	LABOR DAY		
06 Sep 2017	Rational Expressions	P.6	
08 Sep 2017	<b>QUIZ P – Chap P</b>		
11 Sep 2017	Graphs and Graphing Utilities	1.1	
13 Sep 2017	Linear Equations and Rational Equations	1.2	
15 Sep 2017	Models and Application	1.3	
18 Sep 2017	Complex Numbers	1.4	
20 Sep 2017	Quadratic Equations	1.5	
22 Sep 2017	Other Types of Equations	1.6	
25 Sep 2017	Linear Inequalities and Absolute Values Inequalities	1.7	
27 Sep 2017	<b>QUIZ 1 – Chap 1</b>		
29 Sep 2017	Basics of Functions and Their Graphs	2.1	
02 Oct 2017	More on Functions and Graphs	2.2	
04 Oct 2017	Linear Functions and Slopes	2.3	
06 Oct 2017	More on Slope	2.4	
09 Oct 2017	Transformations of Functions	2.5	
11 Oct 2017	Combination of Functions; Composite Functions	2.6	
13 Oct 2017	Inverse Functions	2.7	
16 Oct 2017	<b>QUIZ 2 – Chap2</b>		
18 Oct 2017	Quadratic Functions	3.1	
20 Oct 2017	Polynomial Functions and Their Graphs	3.2	
23 Oct 2017	Dividing Polynomials; Remainder and Factor Theory	3.3	
25 Oct 2017	Zeros of Polynomial Functions	3.4	
27 Oct 2017	Rational Functions and Their Graphs	3.5	
30 Oct 2017	Polynomials and Rational Functions	3.6	
01 Nov 2017	<b>QUIZ 3 – Chap3</b>		
03 Nov 2017	Exponential Functions	4.1	
06 Nov 2017	Logarithmic Functions	4.2	
08 Nov 2017	Properties of Logarithms	4.3	
10 Nov 2017	Exponential and Logarithmic Functions	4.4	
13 Nov 2017	Exponential Growth and Decay	4.5	
15 Nov 2017	<b>QUIZ 4 – Chap4</b>		
17 Nov 2017	System of Linear Equations in Two Variables	5.1	
20 Nov 2017	Systems linear Equations in Three Variables	5.2	
	<b>Thanksgiving Break</b>		
27 Nov 2017	Partial Fractions	5.3	
29 Nov 2017	Systems of Nonlinear Equations in Two Variables	5.4	
01 Dec 2017	System of Inequalities	5.5	

