

# Northeastern Technical College

## MAT 110

### College Algebra

**Course :** Mat 110  
**Title :** College Algebra  
**Credits:** 3 Hours

**Instructor:**

**Office:**  
**Office Hours:**

**email:**  
**Telephone Number:**

**Prerequisites:** Acceptable placement score or completion of MAT 102 with a C or better.

**Description:** This course includes the following topics: Polynomial, rational, logarithmic and exponential functions; inequalities; systems of equations and inequalities; matrices; determinants, simple linear programming; solutions to higher degree polynomials; combinatorial algebra, including the binomial theorem and introduction to probability.

**Textbook(s) or Alternative:** Algebra and Trigonometry, 3<sup>rd</sup> edition, by Blitzer.

**College Wide Competencies:** Apply mathematical/computational skills to solve problems.

**Learning Outcomes:** The student will be able to:

1. solve algebraic equations and inequalities.
2. evaluate and graph algebraic relations and functions.

**General Education Outcome:** Graduates will be able to :

1. use a systematic approach to solving problems.

**Attendance:** (Math Department) Students are expected to attend all scheduled classes and are responsible for all class work, homework, notes, etc., whether or not they are present. In the event of extenuating circumstances, the student is allowed to miss up to 8 hours. The student will be dropped after missing more than 8 hours of the scheduled classes. If an Instructor drops a student for excessive absences at any time during the semester, a grade of "F" will be assigned. If the student withdraws from the course, a grade of "W" or "WF" will be assigned as outlined in the college catalog. A student is considered tardy if he or she arrives for class after the roll has been taken. Three tardies constitute 1 hour of absence.

**Academic Dishonesty:** Students are expected to do their own work. Please refer to the NETC Student Code and Grievance Procedure for a definition of academic dishonesty and an outline of the disciplinary action that may result.

### **Student Disabilities:**

Students with disabilities are encouraged to contact the Vice-President for Student Services to discuss needs or concerns as they pursue an academic program and participate in campus life. The Vice-President for Student Services will provide guidance regarding official documentation of disabilities and/or accommodation of needs.

### **Classroom Etiquette:**

1. Electronic communication devices (pagers, cell phones, etc.) are NOT allowed in the classroom. On-call emergency personnel should see the instructor for an exemption.
2. No visible food or drinks are allowed in the classrooms.
3. No radio or headphones are allowed in the classrooms

### **ID Policy:**

It is mandatory that every student wears his/her ID at all times when on the Cheraw campus. During the first week of classes, the instructor will issue a reminder to wear the ID. This reminder is a warning. After the first week of classes, instructors are required to dismiss students without an ID from class. The student may get his/her ID (or a new one in Student Services for \$3.00) and return to class before the midpoint of the class. If the student cannot get an ID and return to class by the midpoint, the instructor will record the absence.

### **Evaluative Methods to Appraise Objectives:**

Chapter or topical tests and a final exam will be used to compute your grade for MAT 110. The final grade will be 80% of the test average plus 20% of the exam grade. If the instructor decides not to give a final exam, the student's grade will be the arithmetic average of all test grades and assignments. **No** test grades will be dropped under any circumstances.

### **Make-Up Test Procedure :**

**No make-up** tests are given except in extenuating circumstances. The **student** is responsible for contacting the instructor prior to the time the test is scheduled to arrange a meeting to discuss the process of making up the missed test.

### **Grading Scale :**

A	93 - 100
B	85 - 92
C	77 - 84
D	69 - 76
F	Below 69

# Tentative Class Outline

<u>WEEK</u>	<u>SECTIONS</u>	<u>TOPIC</u>	
1	2.1	Basics of Functions and Their Graphs	
	2.2	More on Functions and Their Graphs	
			Test 1 _____
2 - 3	2.5	Transformations of Functions	
	2.6	Combination of Functions; Composite Functions	
	2.7	Inverse Functions	
			Test 2 _____
4 – 6	3.1	Quadratic Functions	
	3.2	Polynomial Functions and Their Graphs	
	3.3	Dividing Polynomials	
	3.4	Zeros of Polynomials	
			Test 3 _____
	3.5	Rational Functions and Their Graphs	
	3.6	Polynomials and Rational Inequalities	
			Test 4 _____
7 – 9	4.1	Exponential Functions	
	4.2	Logarithmic Functions	
	4.3	Properties of Logarithms	
	4.4	Exponential and Logarithmic Equations	
			Test 5 _____
10 – 12	8.1	Systems of Linear Equations in Two Variables	
	8.2	Systems of Linear Equations in Three Variables	
	9.5	Determinants and Cramer's Rule	
	8.5	Systems of Inequalities	
	8.6	Linear Programming	
			Test 6 _____
13 - 15	9.3	Matrix Operations	
	11.5	The Binomial Theorem	
	11.6	Counting Principles, Permutations, and Combinations	
	11.7	Probability	
			Test 7 _____