

## MATH 1710 Course Syllabus

**Course Title:** College Algebra

**Description:** College Algebra. Three credits. This course satisfies the General Education Mathematics requirement and meets specific requirements for programs as outlined in the MTSU Undergraduate Catalog.

**Prerequisites:** Two years of high school algebra and a Math Enhanced ACT score of 19 or greater or COMPASS placement.

**Instructor:**

**Office:**

**Phone:**

**Email:**

**Office Hours:**

**Text:** *College Algebra with Modeling & Visualization*, 4<sup>th</sup> edition, by Rockswold

**Calculator:** A TI-83 or TI-84 Plus graphing calculator is required for this course.

### **General Education Mathematics Goal & Learning Outcomes:**

**Goal:** The goal of mathematics is to expand students' understanding of mathematics beyond the entry-level requirements for college and to extend their knowledge of mathematics through relevant mathematical modeling with applications, problem solving, critical thinking skills, and the use of appropriate technologies.

**Learning Outcomes:** Upon completion of this course, students will demonstrate the ability to

1. Use mathematics to solve problems and determine if the solutions are reasonable.
2. Use mathematics to model real world behaviors and apply mathematical concepts to the solution of real-life problems.
3. Make meaningful connections between mathematics and other disciplines.
4. Use technology for mathematical reasoning and problem solving.
5. Apply mathematical and/or basic statistical reasoning to analyze data and graphs.

**Course Requirements:** In order to accomplish the learning outcomes of this course, the learner is required to

- Attend class lectures
- Participate in class activities
- Read and study assignments
- Solve assigned problem sets
- Complete test, quizzes, homework, etc.
- Complete a comprehensive final exam

**Final Exam:** The final examination is a Mathematics Department, multiple-choice, comprehensive examination given to all students enrolled in MATH 1710. Students are required to have completed the final examination as per the scheduled date/time for their respective section: see Academic Calendar on MTSU Pipeline. The final examination is closed book and closed notes (except for allowed 3x5 note card).

Examination pamphlets and scratch paper are provided by the exam proctor. Unexcused absences for the final examination result in a course grade of F.

**Note:** Students are responsible for, and required to bring the following materials to the final examination: (1) a large scantron, Form No. 4521, (2) a TI 83 or 84 Plus graphing calculator, (3) a #2 pencil, and (4) a small (3 x 5) note card containing student preferred information.

**Note:** The results of the final exam may be used for departmental and University study as a part of the Tennessee Board of Regents assessment of general education. Please know that no names will appear in the study and the anonymity of all test scores is assured. Your participation in the study is voluntary, and your decision to participate or not will not affect your course grade or your standing with Middle Tennessee State University.

**Course Objectives:** Upon completion of this course the student will have

- Enhanced mathematical and problem solving skills.
- Applied algebraic methods to the solution of practical problems.
- Explored the capabilities of the graphing calculator to better understand algebraic concepts.
- Developed an understanding of functions from graphical, numeric, and symbolic viewpoints.
- Developed familiarity with polynomial, rational, exponential, and logarithmic functions including examples of their utility in modeling real-world phenomena.
- Solved systems of linear equations by a variety of methods, including matrix methods.
- Applied counting principles in the computation of probabilities.

**Course Topics:** This course consists of selected topics from Chapters 1, 2, 3, 4, 5, 6, and 8 in the required text, *College Algebra with Modeling & Visualization*, 4<sup>th</sup> edition, by Rockswold, including linear, quadratic, rational, exponential, and logarithmic functions; analysis of graphs; linear systems; inequalities; counting principles; and probability.

**Sections To Be Covered:**

Chapter 1: 1.1, 1.2, 1.3, 1.4, 1.5

Chapter 2: 2.1, 2.2, 2.3, 2.4, 2.5

Chapter 3: 3.1, 3.2, 3.4, 3.5

Chapter 4: 4.2, 4.6

Chapter 5: 5.1, 5.2, 5.3, 5.4, 5.5, 5.6

Chapter 6: 6.1, 6.2, 6.4, 6.5, 6.6, 6.7

Chapter 8: 8.3, 8.6

**Evaluation:**

[Exams include multiple choice as well as non-multiple choice formats that incorporate short answer and open-ended questions. The comprehensive departmental final will be multiple choice. All assessment tools reflect the General Education Learning Outcomes, as identified in the syllabus.]

**Grading:**

Grading Scale:

A: 90-100%

B: 80-89%

C: 70-79%

D: 60-69%

F: Below 60%

There is NO plus/minus grading in Math 1710.

**Please Note:**

- Last day to drop without a grade:
- Last day to drop with a "W":
- A grade of "I" will be given only in accordance with University policy.
  
- If you have a disability that may require assistance or accommodation, or you have questions related to any accommodations for testing, note takers, readers, etc., please speak with me as soon as possible. Students may also contact the Office of Disabled Students Services at (898-2783) with questions about such services.

**Do you have a lottery scholarship?**

To retain Tennessee Education Lottery Scholarship eligibility, you must earn a cumulative TELS GPA of 2.75 after 24 and 48 attempted hours and a **cumulative** TELS GPA of 3.0 thereafter. You may qualify with a 2.75 **cumulative** GPA after 72 attempted hours (and subsequent semesters), if you are enrolled full-time and maintain a **semester** GPA of at least 3.0. A grade of C, D, F, or I in this class may negatively impact TELS eligibility. Dropping a class after 14 days may also impact eligibility; if you withdraw from this class and it results in an enrollment status of less than full time, you may lose eligibility for your lottery scholarship. Lottery recipients are eligible to receive the scholarship for a maximum of five years from the date of initial enrollment, or until a bachelor degree is earned. For additional Lottery rules, please refer to your Lottery Statement of Understanding form, review lottery requirements on the web at <http://scholarships.web.mtsu.edu/telsconteligibility.htm>, or contact the Financial Aid Office at 898-2830.