

Clarendon College

Clarendon, Texas

Fall 2025

Math 1314.103

College Algebra

Instructor: F r a n k V a n c e

Box 968

Clarendon, TX 79226

Office: Library TTh 11-12; Admin 101 TTh 9-11

Phone: 806-874-4822

e-mail: frank.vance@clarendoncollege.edu

Classroom Location: Rm. 101, Clarendon Admin

Office Hours: Subject to change – if changed, students will be given a printout of office hours.

Course Description:

In-depth study and applications of polynomial, rational, radical, exponential and logarithmic functions, and systems of equations using matrices. Additional topics such as sequences, series, probability, and conics may be included.

Lecture Hours: 3

Laboratory Hours: 0

Semester Hours: 3

Prerequisites: Appropriate THEA (Accuplacer) score or consent of instructor.

Statement of Purpose:

This course is intended to prepare students for further studies in mathematics and science, to meet the math requirement for an associate degree, and be a transferable credit to another institution.

Required Instructional Materials:

Textbook (optional) : Blitzer. Algebra and Trigonometry, 6th edition. Pearson, 2014. (textbook is found in your MathXL)

Supplies: Graphing scientific calculator, **computer**, internet access and Math XL access code (you will get this from your instructor)

Methods of Instruction:

1. Power points may be used in the classroom.
2. Lecture
3. Examples
4. MathXL: A study plan is located in mathxl to help students overcome problem concepts

Core Objectives:

- Critical Thinking Skills – to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.
- Communication Skills – to include effective development, interpretation and expression of ideas through written, oral and visual communication
- Empirical and Quantitative Skills – to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions

Learning Outcomes: Upon successful completion of this course, students will:

1. Demonstrate and apply knowledge of properties of functions, including domain and range, operations, compositions, and inverses. (Assesses EQS with Quiz for Student Understanding of THECB Learning Outcome One)
2. Recognize and apply polynomial, rational, radical, exponential and logarithmic functions and solve related equations. (Assesses CT, EQS, and COM with Quizzes to Demonstrate Mastery of THECB Learning Outcome Two and Learning Outcome Three B)
3. Apply graphing techniques. (Assesses CT, EQS with Quiz to demonstrate Mastery of THECB Learning Outcome 2)
4. Evaluate all roots of higher degree polynomial and rational functions. (Assesses CT and EQS with Quiz to demonstrate Mastery of THECB Learning Outcome Four)
5. Recognize, solve and apply systems of linear equations using matrices. (Assesses EQS with homework assignment followed by a quiz to check for understanding and mastery)

Exemplary Objectives:

1. To apply arithmetic, algebraic, geometric, higher-order thinking, and statistical methods to modeling and solving real-world situations.
2. To represent and evaluate basic mathematical information verbally, numerically, graphically, and symbolically.
3. To expand mathematical reasoning skills and formal logic to develop convincing mathematical arguments.
4. To use appropriate technology to enhance mathematical thinking and understanding and to solve mathematical problems and determine the reasonableness of the results.
5. To interpret mathematical models such as formulas, graphs, tables and schematics, and draw inferences from them.
6. To recognize the limitations of mathematical and statistical models.
7. To develop the view that mathematics is an evolving discipline, interrelated with human culture, and understand its connections to other disciplines.

Grading Policies: NOTE: If you are required to participate in a Lab and/or tutoring-this grade will be affected greatly if you do not attend on a regular basis.

Grading:

Quizzes: 25% Quizzes are on mathxl

Tests 50% All test are on MathXL

Final Exam 25% Taken in class on paper (NO Cell Phones)

In the MathXL grade book, assume that any assignment you did not complete or is showing past due is a zero. The current course average shown in the grade book will not be correct until I have replace the past due assignments with zeros.

IMPORTANT: NO GRADE WILL BE ACCEPTED UNTIL AFTER THE CLASS CONTRACT HAS BEEN SIGNED. ANY GRADE TAKEN BEFORE THE CLASS CONTRACT IS SIGNED WILL BE RECORDED AS A ZERO.

A simple average of the above will be used to determine the letter grade for the course based on the following:

90 – 100%	A
80 – 89.9%	B
70 – 79.9%	C
60 – 69.9%	D
59.9% or below	F

A student's final grade will be made available through the Student Portal at www.clarendoncollege.edu.
Grievance/Appeals

If you have a dispute concerning your grade or policies in this class, it is the student's responsibility to contact the instructor to discuss the matter. Should things remain unresolved, please follow the procedures described in the Clarendon College Student Handbook or College Policy Manual.

STUDENT ACADEMIC INTEGRITY AND CLASSROOM ETHICS

Clarendon College is committed to a philosophy of honesty and academic integrity. It is the responsibility of all members of the Clarendon College community to maintain academic integrity at Clarendon College by refusing to participate in or tolerate academic dishonesty. Any act of academic dishonesty will be regarded by the faculty and administration as a serious offense. Academic dishonesty violations include, but are not limited to:

1. obtaining an examination, classroom activity, or laboratory exercise by stealing or collusion;
2. discovering the content of an examination, classroom activity, laboratory exercise, or homework assignment before it is given;
3. observing the work of another during an examination or providing answers to another during the course of an examination;
4. using an unauthorized source of information during an examination, classroom activity, laboratory exercise, or homework assignment;
5. entering an office, classroom, laboratory, or building to obtain an unfair advantage;
6. taking an examination for another person;
7. completing a classroom activity, laboratory exercise, homework assignment, or research paper for another person;
8. altering grade records;
9. using any unauthorized form of an electronic communication device during an examination, classroom activity, or laboratory activity; and/or,
10. plagiarism. (Plagiarism is defined as the using, stating, offering, or reporting as one's own an idea, expression, or production of another person's work without proper credit. This includes, but is not limited to, turning in a paper purchased or acquired from any source, written by someone other than the student claiming credit, or stolen from another student.)

Students are responsible for reporting known acts of academic dishonesty to a faculty member, the program

coordinator, the vice president, and/or dean. Any student with knowledge of a violation who fails to report it shall him/herself be in violation and shall be considered to have committed an act of academic dishonesty.

While academic integrity and honesty are the responsibility of the individual student, each individual faculty member, teaching assistant, and/or laboratory instructor is responsible for classroom management and for maintaining ethical behavior within the classroom and/or laboratory. Faculty who discover or suspect a violation should discuss the matter with the suspected violator(s) and attempt to resolve the case at that point. In cases of convincing evidence, the faculty member should take appropriate action. The faculty member and student should complete a Counseling Sheet regarding the violation. (The Counseling Sheet should contain at a minimum the date and time of the violation, the course, the instructor's name, the student's name, an explanation of the infraction or facts of the case, and the resolution to the incident.) This form should be signed by the student, faculty member, program coordinator, and the Vice President of Academic Affairs. The Vice President of Academic Affairs will maintain a file on all violations. If a faculty member prefers to report the case directly to Vice President of Academic Affairs, it remains his/her prerogative to do so. Additionally, if the faculty member and the accused student cannot reach a resolution or if the faculty member believes that suspension from school is the only fair sanction, the case should immediately be reported, by the faculty member, in writing, to the Vice President of Academic Affairs. If the Vice President of Academic Affairs observes any trends in student behavior which involve more than one violation or act of academic dishonesty, the Vice President of Academic Affairs is responsible for notifying all faculty members involved, for contacting the student(s) involved, and after consultation with the faculty member(s) involved for taking the appropriate action. The Vice President of Academic Affairs is responsible for the timely notification (normally within two weeks) to all parties of an action taken.

Students wishing to appeal a disciplinary decision involving academic integrity or acts of academic dishonesty may do so through the Student Appeals and Grievance Procedure.

Course Withdrawal--Students desiring to make schedule changes after their initial registration each semester must do so during the designated "Drop and Add" period as scheduled in the College Catalog. Students will be required to pay tuition and fees applicable to any class(es) added to their schedule.

Official withdrawal from a course is initiated in the Office of the Registrar. However, each student should consult with his/her academic advisor or the Associate Dean of Enrolment before officially withdrawing from a course. A student who stops attending a class without officially dropping it may receive a grade of "F" for that class.

American with Disabilities Act Statement: Clarendon College provides reasonable accommodations for persons with temporary or permanent disabilities. Should you require special accommodations, it is your responsibility to notify the Office of Student Services (806-874-3571 or 800-687-9737). We will then work with you to make whatever accommodations we need to make.

Important dates: Last day to drop: Thursday August 28, 2025

Friday November 13, 2025 Last day to drop with a W

Final Exam: Tuesday December 9, 2025 at 8:00 AM

Final Exams: The schedule of final exams times is published at the beginning of the semester. You can find the schedule for final exams at: <https://www.clarendoncollege.edu/insideCC>. Do not make plans to leave school before your scheduled final exam. Faculty members cannot on their own authorize a student to take a final exam early. In exceptional circumstances if a student needs to take a final exam early, he/she may request early final

exams by filling out the form at:

<https://www.clarendoncollege.edu/Resources/Admin/Request%20for%20Early%20Final%20Exams.pdf>.

The full details of **Student Rights and Responsibilities** policies can be viewed on Clarendon College's website at: [www.clarendoncollege.edu/Resources/Legal/24-25/FLA\(LEGAL\).pdf](http://www.clarendoncollege.edu/Resources/Legal/24-25/FLA(LEGAL).pdf)

The role of Clarendon College is to encourage individuals of all ages to develop their skills and talents based on their abilities and interests, so that collectively they may contribute to the growth and development of this democracy. College policies, procedures, and regulations are formulated to promote an appropriate teaching and learning environment where each student has the freedom to learn and where the constitutional rights of others are protected.

The concept of rights and freedom, no matter how basic or widely accepted, carries with it corresponding responsibilities. Students, as well as other members of the college community, enjoy the same constitutional and civil rights guaranteed all citizens; at the same time, they are subject to the laws of the nation, the State of Texas, and the local community. All members of the college community have a strong responsibility to protect and maintain an academic climate in which the freedom to learn can be enjoyed by all. To this end, certain basic regulations and policies have been developed to govern the behavior of students as members of the college community.

Violations of student conduct regulations will be handled through the Office of the Vice President of Student Services. Violations of federal, state, and/or local laws make a student subject to civil or criminal action in addition to disciplinary action by the College. Each student is responsible for knowing the policies and regulations of the College.

Freedom of Expression

The rights of free speech and peaceable assembly are fundamental to the democratic process. The College supports the rights of students of the college community to express their views and opinions on actions or ideas, to associate freely with others, and to assemble peacefully.

Whether expressing themselves as individuals or in organized groups, members of the college community are expected to conduct themselves responsibly, according to law, and to respect the basic educational goals of the College. Accordingly, the College insists that free expression not violate the rights of others. Disruption of the educational process and functions of the College, or violation of law, would constitute such a violation.

Students wishing to assemble must complete an official request with the Vice-President of Student Services. The institution reserves the right to determine the time and location of such assemblies in order to ensure that the educational process is not disrupted. The use of amplified equipment is prohibited in student assembly and speech. The institution will not tolerate hate speech, defined as "...the lewd and obscene, the profane, the libelous, and the insulting or 'fighting' words – those which by their very utterance inflict injury or tend to incite and immediate breach of the peace." (Chaplinsky vs State of New Hampshire, 315 U.S. 568, 1942)

Freedom of Access

Within the limits of its resources, Clarendon College shall be open to all applicants who are qualified according to current admission requirements. Clarendon College does not discriminate on the basis of race, creed, color, national origin, mental or physical disabilities, age, or sex in any of its policies, practices, or procedures. This includes, but is not limited to, admissions, employment, financial aid, and educational services, programs, and activities.

Freedom of Association

Students are free to associate to promote their common interests. They have the right to seek, through official procedures, and establish organizations of their choosing so long as such are not in conflict with the educational purposes of the College. Students have the right to affiliate with officially recognized campus organizations of their choice, within the requirements of those organizations relative to membership.

Academic Rights of Students

The College has the responsibility of providing a program of quality education in keeping with its financial resources; students have protection through campus-designed procedures against prejudiced or capricious academic evaluation. Student performance shall be evaluated solely on an academic basis, not on opinions or conduct in matters unrelated to academic standards. Students are responsible for completing their academic program, being familiar with all requirements of the College Catalog, and for maintaining their grade point average for degree requirements.

Student Records

Student records are maintained in confidence and in compliance with the Texas State Library and Archives Commission retention schedule. Student records are used to promote the instruction, career development, guidance, and educational progress of the student. In accordance with the Family Educational Rights and Privacy Act of 1974, Public Law 93-380, as amended, the student has access to specific information contained in his or her official records as specified by that act. Student records may be released to other persons, agencies, or institutions with a demonstrated interest in the student only if a written release has been signed by the student. College staff shall have access to student records when there is a demonstrated educational interest in the student.

Student Participation in Institutional Decision-Making

The primary route of Clarendon College students in decision-making is through participation in the Student Government Association (SGA). Students also may be invited to serve on one of the various institutional committees. Student opinion of food services, student housing, student activities, etc., are gathered from a number of surveys. All student input, whether it be through organized clubs, committees, or questionnaires, is given serious consideration as suggestions for change in and improvement of the College.

Student Responsibilities

The Board of Regents of Clarendon College expects employees, students, visitors, and guests of the College to accept the following responsibilities:

- (1) Compliance with and support of duly constituted civil authority,

- (2) Respect for the rights of others and cooperation to ensure that such rights are maintained, whether or not one agrees with the views of those exercising such rights.
- (3) Cooperation to ensure that the will of the majority is implemented after due consideration, but not to include the suppression of the minority,
- (4) To exercise disagreement in a responsible manner and within a framework compatible with the orderly resolution of differences.
- (5) Knowledge of and active support of college regulations.
- (6) A person who is required to register under the Code of Criminal Procedures 62.152 must register not later than the seventh day after the date on which the person begins to attend school to the Director of Student Life as well as any other local law enforcement agencies as required by Chapter 62, Code of Criminal Procedure.

Recommended Readings

Flatland by Edwin A. Abbott

Number: The Language of Science by Tobias Dantzig

Mathematics: From the Birth of Numbers by Jan Gullberg

The Language of Mathematics: Making the Invisible Visible by Keith Devlin

Democracy: The God that Failed by Hans Herman Hoeppe

An Inconvenient Book by Glenn Beck

Let Freedom Ring: Winning the War of Liberty over Liberalism by Sean Hannity

Course Schedule/Outline: Exact homework and test dates are posted on your “MathXL”. **No late assignments will be accepted.** Student must sign class contract before any grades will be accepted. All students must attend class in order to be counted present. You can check the status of your attendance in your Student Portal.

P. Prerequisites: Fundamental Concepts of Algebra

Algebraic Expressions, Mathematical Models, and Real Numbers

Exponents and Scientific Notation

Radicals and Rational Exponents

Polynomials

Factoring Polynomials

Rational Expressions

1. Equations and Inequalities

1.1 Graphs and Graphing Utilities

1.2 Linear Equations and Rational Equations

1.3 Models and Applications

1.4 Complex Numbers

1.5 Quadratic Equations

1.6 Other Types of Equations

1.7 Linear Inequalities and Absolute Value Inequalities

2. Functions and Graphs

2.1 Basics of Functions and Their Graphs

2.2 More on Functions and Their Graphs

- 2.3 Linear Functions and Slope
- 2.4 More on Slope
- 2.5 Transformations of Functions
- 2.6 Combinations of Functions; Composite Functions
- 2.7 Inverse Functions
- 2.8 Distance and Midpoint Formulas; Circles

3. Polynomial and Rational Functions

- 3.1 Quadratic Functions
- 3.2 Polynomial Functions and Their Graphs
- 3.3 Dividing Polynomials; Remainder and Factor Theorems
- 3.4 Zeros of Polynomial Functions
- 3.5 Rational Functions and Their Graphs
- 3.6 Polynomial and Rational Inequalities

4. Exponential and Logarithmic Functions

- 4.1 Exponential Functions
- 4.2 Logarithmic Functions
- 4.3 Properties of Logarithms
- 4.4 Exponential and Logarithmic Equations
- 4.5 Exponential Growth and Decay; Modeling

8. Systems of Equations and Inequalities

- 8.1 Systems of Linear Equations in Two Variables
- 8.2 Systems of Linear Equations in Three Variables
- 8.3 Partial Fractions
- 8.4 Systems of Nonlinear Equations in Two Variables
- 8.5 Systems of Inequalities
- 8.6 Linear Programming

9. Matrices and Determinant

- 9.1 Matrix Solutions to Linear Systems

Finals - Schedule will be posted by Administration. All finals must be taken on the day and at the time posted unless you have a permission slip from the Vice President of Academic Affairs or the College President to take it early.

The final exam will be taken in the lab on MathXL. Final Exam schedules are posted in the classroom and on the internet.

Look for due dates in the mathxl.

If 75% is attained on all homework in a chapter insures 70 on chapter test.

If 95% is attained on all homework in a chapter insures 80 on chapter test.

DO NOT MISS CLASS: You will see most all problems discussed during class time.