

**Clarendon College**

Clarendon, Texas

Online

Summer II, 2024

Math 1314

College Algebra

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**Classroom Location:**

Online: MathXL.com and clarendoncollege.edu

**Required Enrollment Verification Activity**

Students who fail to complete the Syllabus Agreement EVA activity (located in the Class Orientation section of the online course) by the official census date (July 14) cannot continue in the course and will receive a W (Withdrawn) at the end of the term. Students may also not be eligible for a refund. If you are receiving financial aid you may also be required to reimburse tuition and fees.

The census date for this term can be found on the Academic Calendar located at the **Inside CC** link on Clarendon College's home page.

**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):** Algebra & Trigonometry, 6e, Blitzer. Pearson. ISBN #978-0-13-446321-6

**Supplies:** *Graphing scientific calculator*, internet access and Math XL **required!!**

**MathXL Course ID:** XL45-21N3-8020-78G2

## **Methods of Instruction:**

1. Power points are located in each unit over the concepts taught.
2. Math videos from you-tube are located in each unit for students who are visual learners
3. Discussion forms: questions in the discussion forum are there to help build critical think and communication skills.
4. MathXL: A study plan is located in mathxl to help students overcome problem concepts
5. Beside each daily work problems are examples with some problems also having videos and animations. **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)
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## **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:**

## Grading:

Quizzes: 5% Quizzes are located in Moodle and on mathxl

Discussion Questions 5% Located on Moodle (No right or wrong answer – must answer and respond to two other students to receive credit)

Daily Work (homework) 20% Homework on mathXL

Tests 30% All test are on MathXL

Final Exam 40% Located on MathXL Note: Final is due by 11:59 PM on August 13, 2024

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.

Grading Scale: 90-100 A

80-89.9 B

70-79.9 C

60-69.9 D

<59.9F

**All work is to be turned in on time.** All the assignments are already open, except for the final exam. If you know you will be busy around the due date of an assignment, then you can do the assignment early. **The final exam date cannot be changed.** (Part of the reason that I drop the lowest h/w, the lowest quiz, and reverse replace midterms is to not penalize unexpected absences due to illness, being in jail, etc.)

A student's final grade will be made available through the Student Portal at [www.clarendoncollege.edu](http://www.clarendoncollege.edu).

## New Online Attendance Policy

### Online Attendance Policy

Weekly attendance is mandatory in all online courses. Students are also expected to log into their online course(s) at least twice a week. All discussions are found on Moodle and your math assignments are found on MathXL. To determine if you have been attending, you must complete at least two assignments on your mathxl each week. For this course, I will submit an attendance report each Friday morning and on the census date. Students who are following the online attendance policy are marked "present." You can check the status of your attendance on your student portal

### Reasons for the new policy

- Financial Aid uses your Student Portal attendance reports to prevent non-attending students from receiving financial aid.
- Students can be placed on academic probation for non-attendance.

### Student Academic Integrity:

Failure to comply with lawful direction of a classroom instructor is a disruption for all students enrolled in the class. Cheating 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) using an unauthorized source of information during an examination, classroom activity, laboratory exercise, or homework assignment; (4) entering an office or building to obtain unfair advantage; (5) taking an examination for another person; (6) completing a classroom activity, laboratory exercise, homework assignment, or research paper for another person; (7) altering grade records; (8) using any unauthorized form of electronic communication device during an examination, classroom activity, or laboratory exercise; (9) Plagiarism. Plagiarism is the using, stating, offering, or reporting as one's own, an idea, expression, or production of another person without proper credit.

Disciplinary actions for cheating in a course are at the discretion of the individual instructor. The instructor of that course will file a report with the Dean of Students when a student is caught cheating in the course, whether it be a workforce or academic course. The report shall include the course, instructor, student's name, and the type of cheating involved. Students who are reported as cheating to the Dean of Students more than once shall be disciplined by the Dean. The Dean will notify all involved parties within fourteen days of any action taken.

### **Online Conduct:**

I will show you the respect you deserve as a student. I, in return, expect respectful behavior from you.

- Use language that has a clear meaning... In face to face communication 70% is non-verbal, so the meaning of one's words is communicated through their actions. In online communication words need to be clear. Before posting, ask yourself how what you wrote will sound when someone who doesn't know you reads it.
- No flaming... Don't say anything to a person that you wouldn't say face to face.
- Do not use internet slang like "ROTFL" (rolling on the floor laughing) or emotes like ";" (a wink and a smile). They are not professional and not everyone knows what they mean.
- Do not use any profane or obscene language.

### **Class Policies:**

1. All work is to be turned in on time. All the homework is already open. If you know you will be busy around the due date of an assignment, then you can do the assignment early. The final exam date cannot be changed.
2. Scholastic Honesty: I adhere to a strict policy regarding academic honesty. Anyone who is dishonest in any way will receive a zero on that assignment or exam with no opportunity to make up the zero and may be dropped from the course with a grade of F. That student, if allowed to remain in the course, will not be allowed to receive any extra credit points from the time of the infraction through the remainder of the course. Furthermore, that student will not be allowed to drop their lowest quiz grade or exam grade. A second act of dishonesty will result in an F for the course. Students who commit an act of academic dishonesty will not be allowed to withdraw from the course with a "W." Note that dishonest behavior includes both the act of copying someone else's work as well as allowing someone to copy your work. Both students are equally guilty and will be equally punished.
3. Be respectful: Participate in class activities and discussions. When posting to the discussion boards, do not distract from the material in the class. Do not use profane or inappropriate language. Refrain from using emotes--such as ;)--or acronyms such as ROTFL--"rolling on the floor laughing."

**Withdrawal:** If you decide that you are unable to complete this course or that it will be impossible to complete the course with a passing grade, you may drop the course and receive a "W" on your transcript instead. Withdrawal from a course is a formal procedure that you must initiate. If you do not go through the formal withdrawal procedure, you will receive a grade of "F" on your transcript. A student is permitted to drop a course if he/she obtains an official drop slip from the office and has the instructor sign the slip before the 12<sup>th</sup> class week. **Remember, a student is only allowed to drop the same class twice before he/she will be charged triple the tuition amount for taking the class a third time or more.**

**Furthermore, beginning with the Fall 2007 semester, students in Texas may only drop a total of 6 courses throughout their entire undergraduate career. After the 6<sup>th</sup> drop, he/she will no longer be able to withdraw from any classes.**

Clarendon College Campus Carry Policy: Please click the following link to become informed about our campus carry policy: <http://www.clarendoncollege.edu/CampusCarry>

Clarendon College COVID-19 Updates: Please click the following link to become informed about our campus responses to COVID-19: <https://www.clarendoncollege.edu/CoronavirusUpdate>

### **American with Disabilities Act Statement:**

#### REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT:

In accordance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973, any student who feels that he or she may need any special assistance or accommodation because of an impairment or disabling condition should contact the Associate Dean of Enrollment Services at 806-874-4837 / [janean.reish@clarendoncollege.edu](mailto:janean.reish@clarendoncollege.edu) or visit the Clarendon campus at Clarendon College. It is the policy of Clarendon College to provide reasonable accommodation as required to afford equal educational opportunity. It is the student's responsibility to contact the Associate Dean of Enrollment Services.

### **Nondiscrimination Policy**

Clarendon College, in accordance with applicable federal and state law, prohibits discrimination, including harassment, on the basis of race, color, national or ethnic origin, religion, sex, disability, age, sexual orientation, or veteran status. It is the policy of Clarendon College not to discriminate based on gender, age, disability, race, color, religion, marital status, veteran's status, national or ethnic origin, or sexual orientation. Harassment of a student in class, i.e., a pattern of behavior directed against a particular student with the intent of humiliating or intimidating that student will not be tolerated. The mere expression of one's ideas is not harassment and is fully protected by academic freedom, but personal harassment of individual students is not permitted.

Student Rights and Responsibilities are listed on the College website at:

<http://www.clarendoncollege.edu/Resources/Student%20Services/StudentRightsResponsibilities.pdf>

## STUDENT RIGHTS & RESPONSIBILITIES

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.

Important dates: Last day to drop: July 24th  
Finals August 13 due by 11:59 PM

### **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 in Moodle before any grades will be accepted. You can check the status of your attendance in your Student Portal.

All Moodle Discussions are found at the end of each Chapter in your online Moodle class.

### **P. Prerequisites: Fundamental Concepts of Algebra** Due 7/14/2024

P.1 Algebraic Expressions, Mathematical Models, and Real Numbers

P.2 Exponents and Scientific Notation

P.3 Radicals and Rational Exponents (attendance 7/10/2024)

P.4 Polynomials

P.5 Factoring Polynomials

P.6 Rational Expressions

Pre-requisite Test (attendance 7/12/2024)

### **1. Equations and Inequalities** (Due 7/14/2024)

1.1 Graphs and Graphing Utilities

1.2 Linear Equations and Rational Equations

Due 7/21/2024

1.3 Models and Applications

1.4 Complex Numbers

1.5 Quadratic Equations (attendance 7/16/2024)

1.6 Other Types of Equations

1.7 Linear Inequalities and Absolute Value Inequalities

Chapter 1 Test (attendance 7/19/2024)

## **2. Functions and Graphs** Due 7/21/2024

2.1 Basics of Functions and Their Graphs

2.2 More on Functions and Their Graphs

Due 7/28/2024

2.3 Linear Functions and Slope

2.4 More on Slope (attendance 7/23/2024)

2.5 Transformations of Functions

2.6 Combinations of Functions; Composite Functions

2.7 Inverse Functions

2.8 Distance and Midpoint Formulas; Circles (attendance 7/26/2024)

Chapter 2 Test

## **3. Polynomial and Rational Functions** Due 7/28/2024

3.1 Quadratic Functions

3.2 Polynomial Functions and Their Graphs

Due 8/4/2024

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

Chapter 3 Test (attendance 7/30/2024)

## **4. Exponential and Logarithmic Functions** Due 8/4/2024

4.1 Exponential Functions

4.2 Logarithmic Functions (Attendance 8/2/2024)

4.3 Properties of Logarithms

4.4 Exponential and Logarithmic Equations

Due 8/11/2024

4.5 Exponential Growth and Decay; Modeling Data

Chapter 4 Test

## **8. Systems of Equations and Inequalities** Due 8/11/2024

8.1 Systems of Linear Equations in Two Variables

8.2 Systems of Linear Equations in Three Variables

8.3 Partial Fractions (attendance 8/6/2024)

8.4 Systems of Nonlinear Equations in Two Variables

8.5 Systems of Inequalities

8.6 Linear Programming

Chapter 8 Test (attendance 8/9/2024)

## **9. Matrices and Determinant** Due 8/11/2024

9.1 Matrix Solutions to Linear Systems

Final Exam – Must be taken by **11:59 pm** Tuesday, August 13, 2024. Note: If you miss the Final then you take a zero. I will **not** re-open the final. It is open the whole semester for online classes so if you finish early – you can take it early. Dual Credit Classes – I will open earlier if requested by your high school facilitator.

**Course outline and due dates are subject to change at the discretion of the instructor. Changed dates will appear on you mathxl.**