

McLennan
C O M M U N I T Y
C O L L E G E

WACO, TEXAS

COURSE SYLLABUS
AND
INSTRUCTOR PLAN
COLLEGE ALGEBRA
MATH – 1314 – C11

SHANNA S. W. JONES

NOTE: This is a 16-week course.

NOTE: Dual Credit COVID 19 Notice:

McLennan Community College is committed to providing you with every resource you need to reach your academic goals including your safety. We will continue to monitor the evolving situation with COVID 19 and adjust our safety guidelines to make sure we offer a safe environment for you and our faculty. Please make sure to consult your faculty and the MCC website at <https://www.mclennan.edu/crisis-management/coronavirus-updates/index.html> on any changes to these guidelines.

AN EQUAL OPPORTUNITY INSTITUTION

SPRING 2022

COLLEGE ALGEBRA

MATH 1314.C11

*All information is subject to change, when necessary. *

Course Description:

Provides a study of algebraic concepts that may include: linear, quadratic, polynomial, exponential, logarithmic, and rational functions, their graphs, and applications in mathematical modeling; composition and inverses of functions, systems of linear equations and inequalities; matrices and determinants; and sequences and series. Problem solving with algebraic applications relevant to today's world is emphasized. Graphing calculator required. Semester Hours (3)

Prerequisites and/or Corequisites:

Prerequisite: MATH 0311 or TSI math score of 350 or higher or equivalent score on approved alternative test, or consent of division chair.

Course Notes and Instructor Recommendations:

Math 1314 is a face-to-face format involves class meetings as well as online homework assignments found by logging in at <https://pi.pearsoned.com>. There will be a link provided via Not only will homework be available at this site, but an electronic version of the text, class notes, and publisher lecture videos. There are review for tests and numerous other learning aids available. This course is a face to face course; however, all homework will be provided online. Class grades will be posted via Brightspace <https://brightspace.mclennan.edu>.

Prospective students should be prepared to:

1. Contribute ideas and questions during the class period.
2. Come prepared for class by reading the text and completing assignments.
3. Participate fully in class.
4. Be open to new ways of modeling the mathematics.

Instructor Information:

Instructor Name:	Shanna Jones
MCC E-mail:	ssjones@mclennan.edu (When contacting me through email, include your COURSE NUMBER and FULL NAME.)
Office Phone Number:	Cell: 254-252-5006 or Register for Remind Text by texting @m1314mcc to the number 81010 or to (254) 655-1960
Office Location:	Zoom: enter meeting ID: 451 200 8202 Please click this URL to start or join. https://mclennan.zoom.us/j/4512008202
Office/Teacher Conference Hours:	10:15am – 12:30pm on Fridays or by appointment
Other Instruction Information:	I will communicate through BrightSpace. Check your email regularly to make sure that you don't miss anything. On the first day of the semester, go to Brightspace on the McLennan website and follow the directions for this course. We will be meeting weekly either face to face in room 118 at Waco High School or via Zoom at 10:15am on Tuesdays and Thursdays.

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Required Text & Materials:

(No Hard Copy Text required, Only need MyMathLab Access Code)

College Algebra with Modeling etc(MyMathLab Standalone Acc)

Edition: 6th

ISBN: 9780134753324

Author: Rockswold

Publisher: Pearson

TI 83/84 Graphing Calculator

Free Online Calculator

- Download File: <https://sites.google.com/site/ti83interactivecalculator/calculator>
- Follow these steps: <https://sites.google.com/site/ti83interactivecalculator/Home>



MCC Bookstore Website: <http://www.mclennan.edu/bookstore/>

Methods of Teaching and Learning:

The following methods for teaching and learning will be used: lecture, online homework, written/online/group exams, in-class exit tickets, and tutorial software. A three-pronged approach is used in this course. For each instructional unit a worksheet, worked out notes for the worksheet, and video recording of the problems being worked will all be available on the website companion to this class (MyMathLab).

This is a face-to-face class. A community setting will be developed to insure the material is assimilated and time is afforded for check for understanding. To achieve this:

- Lectures will include use of technology such as TI 83/84 calculator, Elmo document camera, and PowerPoint.
- Pre-posted blank notes will be available on Brightspace for those who want to know lesson expectations prior to class.
 - o Students are allowed to bring laptops/tablets to follow along with notes.
- Activities involving objectives taught and technology shown will be utilized for students to work together in classroom.
- Questions are encouraged to help students grasp the concepts.
- All homework is on MyMathlab however quizzes, tests, and discussion boards will be given via Brightspace.

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Course Objectives and/or Competencies:

Upon completion of the course, the student will be able to:

1. Demonstrate and apply knowledge of properties of functions, including domain and range, operations, compositions, and inverses
2. Recognize and apply polynomial, rational, radical, exponential, and logarithmic functions, and solve related equations.
3. Apply graphing techniques.
4. Evaluate all roots of higher degree polynomial and rational functions.
5. Recognize, solve and apply systems of linear equations using matrices.
6. Graph the following functions: linear, quadratic, piecewise-defined, absolute value, polynomial, rational, exponential, and logarithmic
7. Recognize and use transformations of functions such as shifting, stretching, shrinking, and reflecting
8. Solve quadratic equations in one variable by factoring, using the square root property, completing the square, using the quadratic formula, and by graphing
9. Solve both linear and non-linear inequalities and state the solution in interval notation
10. Find the zeros and extrema of polynomials both algebraically and by graphing
11. Solve exponential and logarithmic equations
12. Perform operations with matrices, find determinants of matrices, and use matrices to solve systems of equations
13. Interpret mathematical models such as formulas, graphs, and tables, and draw inferences from them
14. Use appropriate technology to enhance mathematical thinking and understanding and to solve mathematical problems and judge the reasonableness of the results, such as deriving functions which model sets of data.
15. Use critical thinking and problem-solving techniques to solve real-world application Problems

Upon successful completion of the course, students will:

- Demonstrate and apply knowledge of properties of functions, including domain and range, operations, compositions, and inverses.
- Recognize and apply polynomial, rational, radical, exponential and logarithmic functions and solve related equations.
- Apply graphing techniques.
- Evaluate all roots of higher degree polynomial and rational functions.
- Recognize, solve and apply systems of linear equations using matrices
- Critical Thinking: *Students use inductive and deductive reasoning, explore problems using logical process of inquiry, analysis evaluation and synthesis. Assessment will use discussion, independent practice, collaborative experience, instructional technology. (Use of departmental test bank and CAAP test.)*
- Communications: *Students turn in written assignment involving topics related to College Algebra or other mathematics. They then share their result with their instructor and/or colleagues in class via written, oral, and/or visual methods. Assessment will use at least one of the following: board work, class time explanation, case study presentation, poster board presentation, or small group presentation. Evaluation process will use departmental rubric for communication assessment.*
- Empirical/Quantitative: *Students work on various mathematical problem-solving skills throughout the course. The course focuses on the manipulation and analysis of numerical data or observable facts as presented in application problems and/or problem skill sets in which students demonstrate their ability to reach informed conclusions using mathematical process. Assessment will include discussion, independent practice, collaborative experience, or instructional technology to include questions from a departmental test bank and the CAAP test.*

Course Outline or Schedule:

Students will be notified by email and an Announcement posted in Brightspace if any changes are made to the schedule.

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Course Grading Information:

Scale: 90-100 A 80-89 B 70-79 C 60-69 D 0-59 F

Online Homework average (15): 20%	<ul style="list-style-type: none"> Homework assignments are due WEEKLY. Any Incomplete assignments will result in a "0". Your homework unit grade is an average of the individual assignments. Homework can be turned in 1 day late with a 5% penalty.
Weekly Quizzes average (10): 20%	<ul style="list-style-type: none"> Timed/open note assessments. No make-up quizzes given. Lowest 2 will be dropped at the end of the semester.
Discussion Board average (5): 10%	<ul style="list-style-type: none"> Students have 2 weeks to complete assigned discussion boards. No late discussion boards will be accepted. Follow the discussion board instructions to receive full credit.
Unit Test average (6): 40%	<ul style="list-style-type: none"> It is encouraged to have all homework assignments completed with at least a 75% score for that unit. Encouraged to make a notecard for the test. Strongly suggested you complete the online review to receive extra credit on test. There are no make up test given. Your Final Exam can replace a missing or low test grade.
Final Exam grade: 10%	Cumulative and can replace a low or missing Unit Test Grade.

Discussion Boards: You will have bi-weekly discussion boards ranging from Getting to know you topics, to collaborative problem solving, activities, and article reviews. You are expected to follow the discussion board instructions provided and participate weekly.

Homework: All Homework is assigned via MyMathLab and is due each Sunday at 11:59pm. Homework is graded on accuracy and you have unlimited tries on the homework.

Weekly Quizzes: Quizzes will be given towards the end of a week typically on Thursday over topics learned earlier during the week or the end of the previous week.

Tests: There are 6 test, and they will be given via Brightspace, Face to Face or MyMathLab. No make up tests are given.

Final Exam: The final is cumulative and will be administered via Brightspace or Face to Face. The final exam is how you can replace a missing or low test grade.

- Copying another person's written work, exams, or projects is plagiarism/cheating and will earn you a 0. These cases will also be turned in for student disciplinary action.

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Late Work, Attendance, and Make Up Work Policies:

- Tests may be made-up for documented illness or school activity only. Otherwise, your comprehensive final can replace your missing test grade.
- Daily work is due on a weekly bases. If not turned in on time you can turn in 1 day late for a 10% grade penalty.
- Discussion Board and Weekly Class Participation can not be made up and grade will remain a 0.
- **Attendance:** Plan to miss **no more than 20% of** classes. Attendance will be taken by signing in for F2F class, weekly discussion boards, and synchronous Zoom meetings.

Student Behavioral Expectations or Conduct Policy:

- Be here to learn.
- Obtain assignments and other materials for classes from which you are absent.
- Seek help when it's needed. Come to my office or email. Go to the Math Lab.
- PUT YOUR PHONE AWAY! It is a distraction!
- We are kind to others in my classroom.
- *Students are expected to maintain classroom decorum that includes respect for other students and the instructor, prompt and regular attendance, and an attitude that seeks to take full advantage of the education opportunity. Students are expected to come to class prepared and with supplies necessary to participate actively in each class meeting.*
- *All cell phones should be placed on VIBRATE. Should an important call/text come in that you are needing to address, walk outside of the classroom to answer/respond.*
- *Students are expected to do their own online assignments. Having someone else do your online homework assignment and cheating on a test are both violations of the academic integrity policy and either may result in failing grades and/or being dropped from the class. Infractions such as these will be reported to the administration for tracking and possible college action.*

BE PRESENT – BE PREPARED – BE RESPECTFUL

[Click Here for the MCC Attendance/Absences Policy](https://www.mclennan.edu/highlander-guide/policies.html)

(<https://www.mclennan.edu/highlander-guide/policies.html>)

Click on the link above for the college policies on attendance and absences. Your instructor may have additional guidelines specific to this course.

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Course Schedule			
Week	Monday	Topic	Due Dates
1.	8/22	Introduction to class, syllabus and expectations <u>Algebra Assessment and Review</u> Sec 1.1 Numbers, Data, and Problem Solving Sec 1.2 Visualizing and Graphing data	<ul style="list-style-type: none"> All Homework is assigned via MyMathLab and is due each Sunday at 11:59pm. Weekly Discussion Board posts are due typically on Saturdays at 11:59pm. Test Reviews are due the day before each test in order to receive extra credit. Test Dates are TBD Final Exam is Not Optional: If you failed or missed a Unit Test the only way to make it up is to take the Final Exam.
2.	8/29	Sec 1.3 Functions & Their Representation Sec 1.4 types of Functions and Their Rates of Change Unit 1 Test – Online	
3.	9/5	Sec 2.1 Equations of Lines Sec 2.2 Linear Equations	
4.	9/12	Sec 2.3 Linear Inequalities Sec 2.4 More Modeling with Functions Sec 2.5 Absolute Value Equations	
5.	9/19	Unit 2 Test – In Class Sec 3.1 Quadratic Functions and Models Sec 3.2 Quadratic Equations and Problem Solving	
6.	9/26	Sec 3.3 Complex Numbers Sec 3.4 Quadratic Inequalities Sec 3.5 Transformations of Graphs	
7.	10/3	Unit 3 Test – In Class Sec 4.1 More Nonlinear Functions and Their Graphs Sec 4.2 Polynomial Functions and Models	
8.	10/10	Sec 4.3 Division of Polynomials Sec 4.4 Real Zeros of Polynomial Functions Sec 4.5 The Fundamental Theorem of Algebra	
9.	10/17	Sec 4.6 Rational Functions and Models Sec 4.7 More Equations and Inequalities Sec 4.8 Radical equations and Power Functions	
10.	10/24	Unit 4 Test – In Class Sec 5.1 Combining Functions Sec 5.2 Inverses Functions & Their Representations	
11.	10/31	Sec 5.3 Exponential Functions & Models Sec 5.4 Logarithmic Functions	
12.	11/7	Sec 5.5 Properties of Logarithms Sec 5.6 Exponential and Logarithmic Equations and Inequalities Unit 5 Take – In Class	
13.	11/14	Sec 6.1 Functions and Systems of Equations in Two Variables Sec 6.2 Systems of Inequalities in Two Variables Sec 6.3 Systems of Linear Equations in Three Variables	
14.	11/21	Sec 6.4 Solutions to Linear Systems Using Matrices THANKSGIVING	
15.	11/28	Sec 6.5 Properties and Applications of Matrices Sec 6.6 Inverses of Matrices Sec 6.7 Determinants by Calculator Unit 6 Test – Online	
16.	12/5	FINAL EXAM REVIEW <u>CUMMULATIVE FINAL EXAM</u>	



ACADEMIC RESOURCES/POLICIES

Accommodations/ADA Statement:

Any student who is a qualified individual with a disability may request reasonable accommodations to assist with providing equal access to educational opportunities. Students should contact the Accommodations Coordinator as soon as possible to provide documentation and make necessary arrangements. Once that process is completed, appropriate verification will be provided to the student and instructor. Please note that instructors are not required to provide classroom accommodations to students until appropriate verification has been provided by the Accommodations Coordinator. For additional information, please visit www.mclennan.edu/disability.

Students with questions or who require assistance with disabilities involving physical, classroom, or testing accommodations should contact:

disabilities@mclennan.edu

254-299-8122

Room 319, Student Services Center

Title IX:

We care about your safety, and value an environment where students and instructors can successfully teach and learn together. If you or someone you know experiences unwelcomed behavior, we are here to help. Individuals who would like to report an incident of sexual misconduct are encouraged to immediately contact the Title IX Coordinator at titleix@mclennan.edu or by calling Dr. Drew Canham (Chief of Staff for Diversity, Equity & Inclusion/Title IX) at (254) 299-8645. Individuals also may contact the MCC Police Department at 299-8911 or the MCC Student Counseling Center at MCC at (254) 299-8210. The MCC Student Counseling Center is a confidential resource for students. Any student or employee may report sexual harassment anonymously by visiting <http://www.lighthouse-services.com/mclennan/>.

Go to McLennan's Title IX webpage at www.mclennan.edu/titleix/. It contains more information about definitions, reporting, confidentiality, resources, and what to do if you or someone you know is a victim of sexual misconduct, gender-based violence or the crimes of rape, acquaintance rape, sexual assault, sexual harassment, stalking, dating violence, or domestic violence.

Student Support/Resources:

MCC provides a variety of services to support student success in the classroom and in your academic pursuits to include counseling, tutors, technology help desk, advising, financial aid, etc. A listing of these and the many other services available to our students is available at <http://www.mclennan.edu/campus-resource-guide/>

College personnel recognize that food, housing, and transportation are essential for student success. If you are having trouble securing these resources or want to explore strategies for balancing life and school, we encourage you to contact a Success Coach by calling (254) 299-8226 or emailing SuccessCoach@mclennan.edu. Students may visit the Completion Center Monday-Friday from 8 a.m.-5 p.m. to schedule a meeting with a Success Coach and receive additional resources and support to help reach academic and personal goals. Paulanne's Pantry (MCC's food pantry) provides free food by appointment to students, faculty and staff based on household size. Text (254) 870-7573 to schedule a pantry appointment. The Completion Center and pantry are located on the Second Floor of the Student Services Center (SSC).

MCC Foundation Emergency Grant Fund:

Unanticipated expenses, such as car repairs, medical bills, housing, or job loss can affect us all. Should an unexpected expense arise, the MCC Foundation has an emergency grant fund that may be able to assist you. Please go to <https://www.mclennan.edu/foundation/scholarships-and-resources/emergencygrant.html> to find out more about the emergency grant. The application can be found at https://www.mclennan.edu/foundation/docs/Emergency_Grant_Application.pdf.

MCC Academic Integrity Statement:

Go to www.mclennan.edu/academic-integrity for information about academic integrity, dishonesty, and cheating.

Minimum System Requirements to Utilize MCC's D2L|Brightspace:

Go to <https://www.mclennan.edu/center-for-teaching-and-learning/Faculty-and-Staff-Commons/requirements.html> for information on the minimum system requirements needed to reliably access your courses in MCC's D2L|Brightspace learning management system.

Minimum Technical Skills:

Students should have basic computer skills, knowledge of word processing software, and a basic understanding of how to use search engines and common web browsers.

Backup Plan for Technology:

In the event MCC's technology systems are down, you will be notified via your MCC student email address. Please note that all assignments and activities will be due on the date specified in the Instructor Plan, unless otherwise noted by the instructor.

Email Policy:

McLennan Community College would like to remind you of the policy (<http://www.mclennan.edu/employees/policy-manual/docs/E-XXXI-B.pdf>) regarding college email. All students, faculty, and staff are encouraged to use their McLennan email addresses when conducting college business.

A student's McLennan email address is the preferred email address that college employees should use for official college information or business. Students are expected to read and, if needed, respond in a timely manner to college emails. For more information about your student email account, go to www.mclennan.edu/student-email.

Instructional Uses of Email:

Faculty members can determine classroom use of email or electronic communications. Faculty should expect and encourage students to check the college email on a regular basis. Faculty should inform students in the course syllabus if another communication method is to be used and of any special or unusual expectations for electronic communications.

If a faculty member prefers not to communicate by email with their students, it should be reflected in the course syllabus and information should be provided for the preferred form of communication.

Email on Mobile Devices:

The College recommends that you set up your mobile device to receive McLennan emails. If you need assistance with set-up, you may email Helpdesk@mclennan.edu for help.

You can find help on the McLennan website about connecting your McLennan email account to your mobile device:

- [Email Setup for iPhones and iPads](https://support.microsoft.com/en-us/office/set-up-an-outlook-account-in-the-ios-mail-app-b2de2161-cc1d-49ef-9ef9-81acd1c8e234?ui=en-us&rs=en-us&ad=us) (<https://support.microsoft.com/en-us/office/set-up-an-outlook-account-in-the-ios-mail-app-b2de2161-cc1d-49ef-9ef9-81acd1c8e234?ui=en-us&rs=en-us&ad=us>)
- [Email Setup for Androids](https://support.microsoft.com/en-us/office/set-up-email-in-android-email-app-71147974-7aca-491b-978a-ab15e360434c?ui=en-us&rs=en-us&ad=us) (<https://support.microsoft.com/en-us/office/set-up-email-in-android-email-app-71147974-7aca-491b-978a-ab15e360434c?ui=en-us&rs=en-us&ad=us>)

Forwarding Emails:

You may forward emails that come to your McLennan address to alternate email addresses; however, the College will not be held responsible for emails forwarded to an alternate address that may be lost or placed in junk or spam filters.

For more helpful information about technology at MCC, go to [MCC's Tech Support Cheat Sheet](#) or email helpdesk@mclennan.edu.

Disclaimer:

The resources and policies listed above are merely for informational purposes and are subject to change without notice or obligation. The College reserves the right to change policies and other requirements in compliance with State and Federal laws. The provisions of this document do not constitute a contract.