College Algebra (MATH 1314.9J1)

CREDIT

3 Semester Credit Hours (3 hours lecture, 0 Lab hours lab)

MODE OF INSTRUCTION: Online

LAMAR INSTITUTE OF TECHNOLOGY

PREREQUISITE/CO-REQUISITE: TSI Complete for Math

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.

COURSE OBJECTIVES

Upon completion of this 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.

CORE OBJECTIVES MEASURED

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

Approved: Initials/date

INSTRUCTOR CONTACT INFORMATION

Instructor: Guy Harwell

Email: gharwell@lit.edu

Office Phone: (409) 247-4757

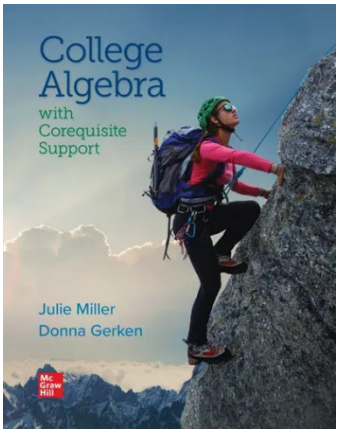
Office Location: Building T5, Room 103

Office Hours:

Monday:	9am – 11:00am, 1pm – 3pm
Tuesday:	12:30pm – 1:30pm
Wednesday:	9am – 11:00am, 2pm – 3pm
Thursday:	None
Friday:	9:00am – 10:30am

- My office hours are available on Starfish.
- To schedule an appointment please use Starfish.

REQUIRED TEXTBOOK AND MATERIALS



360 Days Access (Standard) $73.44

ISBN10: 1264198434 I ISBN13: 9781264198436

(Comes inclusive with ELE bundle for $15 per SCH or $45)

1. Paper, pencils, and a calculator, access to a computer with internet access.

ATTENDANCE POLICY

Attendance is required, online students should login and work on assignments 2-3 times per week, minimum.

DROP POLICY

If you wish to drop a course, you are responsible for initiating and completing the drop process by the specified date as listed in the College Calendar on the Student Success web page. If you stop coming to class and fail to drop the course, you will earn an "F" in the course.

COURSE CALENDAR (Dates and assignments subject to change with notice)

Week #	*Section*	*Topic Description*	
		Week of	***01/18***
1		First Day of Class: 01/20	
		Introduction	
	3.3	Complex Numbers	
		Week of	***01/25***
2	3.6	Solving Quadratic Equations by Using the Quadratic Formula	
	4.3	Rational Equations	
		Week of	***02/01***
3	!	Census Day: 02/04	
	4.5	Radical Exponents	
	4.6	Radical Equations and Equations with Rational Exponents	
		Week of	***02/08***
4	4.7	Equations in Quadratic Form	
	5.1	The Rectangular Coordinate System and Graphing Utilities	
	EXAM	Exam 01; **Open 02/13**	
		Sections on Exam 01: 3.3, 3.6, 4.3, 4.6, 4.7, 5.1	
		Week of	***02/15***
5	!	Drop Day (without academic penalty): 02/20	
	5.3	Functions and Relations	
	EXAM	Exam 01; **Due 02/17**	
		Sections on Exam 01: 3.3, 3.6, 4.3, 4.6, 4.7, 5.1	
		Week of	***02/22***
6	5.4	Linear Equations in Two Variables and Linear Functions	
	6.1	Transformations of Graphs	
		Week of	***03/01***
7	6.2	Symmetry and Piecewise-Defined Functions	
	6.4	Algebra of Functions and Function Composition	
H		***Week of***	***03/08***
	HOLIDAY	Spring Break: 03/09 – 03/ 13	

Week #	Section	Topic Description	
	HOLIDAY	Energy Conservation Day: 03/ 11	
8		***Week of***	***03/15***
	7.1	Quadratic Functions and Applications	
	7.2	Introduction to Polynomial Functions	
	EXAM	Exam 02; **Open 03/20**	
		Sections on Exam 02: 5.3, 5.4, 6.1, 6.2, 6.4, 7.1, 7.2	
9		***Week of***	***03/22***
	7.3	Division of Polynomials and the Remainder and Factor Theorems	
	EXAM	Exam 02; **Due 03/24**	
		Sections on Exam 02: 5.3, 5.4, 6.1, 6.2, 6.4, 7.1, 7.2	
10		***Week of***	***03/29***
	HOLIDAY	Good Friday: 04/03	
	7.4	Zeros of Polynomials	
	8.1	Introduction to Rational Functions	
11		***Week of***	***04/05***
	8.2	Graphs of Rational Functions	
	9.1	Inverse Functions	
12		***Week of***	***04/12***
	!	Drop Day (with academic penalty): 04/13	
	9.2	Exponential Functions	
	9.3	Logarithmic Functions	
	EXAM	Exam 03; **Open 04/17**	
		Sections on Exam 03: 7.3, 7.4, 8.1, 8.2, 9.1, 9.2, 9.3	
13		***Week of***	***04/19***
	9.4	Properties of Logarithms	
	EXAM	Exam 03; **Due 04/21**	
		Sections on Exam 03: 7.3, 7.4, 8.1, 8.2, 9.1, 9.2, 9.3	
14		***Week of***	***04/26***
	9.5	Exponential Equations and Applications	
	9.6	Logarithmic Equations and Applications	
15		***Week of***	***05/03***
	!	Finals week: 05/07 – 05/13	

Week #	Section	Topic Description
		Last day of class: 05/06
	11.1	Solving Systems of Linear Equations Using Matrices
	EXAM	Final Exam; **Open 05/03**
		Sections on Final Exam: All covered in course (Comprehensive)
16		***Week of*** ***05/10***
	!	Finals week: 05/07 – 05/13
	EXAM	Final Exam; **Due 05/12**
		Sections on Final Exam: All covered in course (Comprehensive)

COURSE EVALUATION

Final grades will be calculated according to the following criteria:

- Test 60%
- Assignments 20%
- Core Assessment 20%

GRADE SCALE

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

TECHNICAL REQUIREMENTS

For the latest technical requirements, including hardware, compatible browsers, operating systems, etc., review the Minimum Computer and Equipment Requirements on the LIT Online Experience page. A functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of online technology and resources.

DISABILITIES STATEMENT

The Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. LIT provides reasonable accommodations as defined in the Rehabilitation Act of 1973, Section 504 and the Americans with Disabilities Act of 1990, to students with a diagnosed disability. The Special Populations Office is located in the Eagles' Nest Room 129 and helps foster a supportive and inclusive educational environment by maintaining partnerships with faculty and staff, as well as promoting awareness among all members of the Lamar Institute of Technology community. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409)-951-5708 or email specialpopulations@lit.edu. You may also visit the online resource at Special Populations - Lamar Institute of Technology (lit.edu).

STUDENT CODE OF CONDUCT STATEMENT

It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the *LIT Catalog and Student Handbook*. The *LIT Catalog and Student Handbook* may be accessed at www.lit.edu. Please note that the online version of the *LIT Catalog and Student Handbook* supersedes all other versions of the same document.

ARTIFICIAL INTELLIGENCE STATEMENT

Lamar Institute of Technology (LIT) recognizes the recent advances in Artificial Intelligence (AI), such as ChatGPT, have changed the landscape of many career disciplines and will impact many students in and out of the classroom. To prepare students for their selected careers, LIT desires to guide students in the ethical use of these technologies and incorporate AI into classroom instruction and assignments appropriately. Appropriate use of these technologies is at the discretion of the instructor. Students are reminded that all submitted work must be their own original work unless otherwise specified. Students should contact their instructor with any questions as to the acceptable use of AI/ChatGPT in their courses.

STARFISH

LIT utilizes an early alert system called Starfish. Throughout the semester, you may receive emails from Starfish regarding your course grades, attendance, or academic performance. Faculty members record student attendance, raise flags and kudos to express concern or give praise, and you can make an appointment with faculty and staff all through the Starfish home page. You can also login to Blackboard or MyLIT and click on the Starfish link to view academic alerts and detailed information. It is the responsibility of the student to pay attention to these emails and information in Starfish and consider taking the recommended actions. Starfish is used to help you be a successful student at LIT.

ADDITIONAL COURSE POLICIES/INFORMATION

Artificial Intelligence (AI)

Artificial Intelligence (AI) tools (e.g., ChatGPT, Wolfram Alpha, Photomath, Copilot, etc.) can be useful for exploring concepts and checking your understanding. However, in this course, **your own reasoning and problem-solving skills are essential**.

Permitted Uses

- Asking AI tools for help understanding a mathematical concept (e.g., asking for clarification of the Fundamental Theorem of Algebra or solving polynomials) while studying.
- Using AI to check your work **after** completing it independently while studying.
- Generating practice problems for self-study.

Prohibited Uses

- Using AI to complete (or on) homework, problem sets, projects, exams, quizzes, assignments, assessments, discussions, etc.
- Copying answers or solutions directly from AI tools.
- Using AI during quizzes, exams, or any individual assessment.
- Relying on AI without understanding the steps or logic behind the solution.

Disclosure Requirement

If you use an AI tool on any assignment, you must include a brief note explaining:

- Which tool you used.
- What you used it for.
- How it helped (or didn't help) you're learning.

Example:
"Used Wolfram Alpha to verify the final solution to Problem 3 after completing it on my own."

Remarks

- **No AI tools, apps, software, etc. is/ are to be used on any work that is scored, graded, assessed, etc.**
    - **This includes all homework, exams, tests, projects, assessments, quizzes, discussions, etc.**
- **Failure to follow these guidelines (as deemed by the instructor) may be considered academic dishonesty and will be handled according to college's policies including failure of the assignment, exam, homework, project, assessment, quiz, discussion, etc.**
- I reserve the right to use an AI detector on student's work.
- If the instructor has any concerns about AI being used, you can be asked to work out the problems in front of the instructor (this also includes online courses).
- If you refuse to do so in a timely manner you can lose points for every question the instructor has concerns about.
- If you have any questions, please ask the instructor.

Attendance

Online Courses

Information

- You must complete the following before the census date to show that you are actively engaged in the course during the first week:
    - Practice Exam
- Note that attendance is not "taken" as in a face-to-face class, but you will need to actively participate in the course each week.
- Active participation includes things such as completing discussions, completing quizzes, completing exams, other course activities for that week.
    - Note that just logging into the course is **not** considered active participation.

Assignments

Homework Assignments

- Homework assignments are assigned for every topic that we cover in the course.
- Homework is not optional and must be completed by their respective due dates.
- Failure to complete the homework assignment by its due date will result in a loss of points.
- We will be using ALEKS for our homework for the course.

Homework Assignment Due Dates

- To find the due dates for the homework assignments please refer to ALEKS and/or our online course site (Blackboard).

Other Assignments

- We can have other assignments during our course.
- Other assignments can include activities such as projects, worksheets, papers, etc.
- They will be announced via our online course website (Blackboard) and/ or by the instructor in class (if applicable).
- Please see our online course website (Blackboard) and/ or the instructor.

Class Etiquette

Information

- Please be respectful of the other people and me in class.
- If you have any questions or concerns about the class, please come and talk with me outside of class (I am always concerned with how you are doing in the class).

Online Courses

- Please do not take pictures, video recordings, snapshots, etc. of the exams/ quizzes.
- If you have a question about a problem, please email me and let me know which exam/ quiz, which problem and your question.

Remarks

- Please remember that mathematics can be a difficult subject and I am here to help you, but we need to be respectful of everyone (including me) and address concerns outside of class.
- If I ask to meet with you (by video conference for online courses), please be respectful and meet with me.

Communication

Information

- The best way to reach me is by email (gharwell@lit.edu) or my office hours (see Starfish).
    - For email, please allow 24 – 48 hours
    - Emails at or after 5:00 pm on Friday might not be answered before the following Monday.
    - When emailing me please use your college email address and put the class subject and section in the subject line.
        - Example class subject and section: MATH 1314.2A4
- Please check our online class website (Blackboard) daily for announcements.
- Any announcements about the class will be on our online class website (Blackboard).

Communication Etiquette

Make sure that all communications are polite and respectful. Please use professional communication etiquette. Remember, email is formal written communication and should be treated as such.

Electronic Devices

Information

Online Courses

- Electronic devices include laptops, iPads, all phones, tablets, headphones, etc.
- For online courses electronic devices are not allowed on exams/ quizzes.

Calculators

- No calculators on phones, laptops, tablets, etc. are to be used in the class at all.
- Only approved calculators are allowed on exams/ quizzes.
    - Approved calculators are TI-83 series, TI-84 series, scientific, and four-function calculators.
- For Online: You should show the webcam your calculator before taking the exam/ quiz and make sure that it can be seen by the webcam during the entire exam.
- Failure to adhere to the policy can result in a loss of points.
- If you have any questions, you should contact me before the exam/ quiz.

Exams/ Final Exam

Online Courses

Information

- We will be having several major exams and a cumulative final exam (this means that the final exam is over everything in the course).
- You can find our exam schedule on the course calendar.
- Note that the exam/quiz will have an open date and a due date that you can find on our course calendar and/or course website (Blackboard).
- You will have a certain amount of time to start the exam/ quiz.
    - The time the exam/quiz is open can be 1 to 7 days depending on the semester, class, etc.
    - You can find this on our course calendar and/or course site (Blackboard).
- Once the due date has passed the exam/quiz will no longer be available to take and it will not reopen.
    - If you miss an exam/quiz you should contact me immediately.
- You will be expected to complete the exam/quiz in a single sitting.
    - That is to say that once you start the exam/quiz you must finish in a single session.
- You won't be able to take the exam/ quiz again if you leave the exam/ quiz after starting it.
    - If you start it and **exit it for any reason** (including technical reasons) every question you did not complete will be marked wrong and you will lose points.
    - You should contact me as soon as possible if this happens.
    - Note this does not mean that I will automatically reopen the exam/ quiz as you will be expected to have all the technical issues worked out before ever taking the exam/ quiz.
- Our exams/ quizzes will be taken online using our online class site (Blackboard).
    - This is to say that you can find them on our online class site (Blackboard).
    - Please see the instructions on our class website (Blackboard).

Acceptable and Unacceptable Items on Exams/ Quizzes

- Acceptable Items
    - Paper: Blank loose-leaf paper only (no notebooks, etc.).
    - Calculator: TI-83 series, TI-84 series, scientific, four-function
- Unacceptable Items
    - No electronic (phones, electronic watches, iPads, tablets, headphones, etc.) are allowed on exams/ quizzes.

Calculators on Online Exams

- Approved calculators (TI-83 series TI-84 series, scientific, four-function) are allowed and must be shown to the webcam at the beginning and end of the exam/ quiz.
- The calculator must be visible on the webcam for the entire exam/ quiz.

Respondus Browser and Webcam

- You will be required to use the Respondus Browser.
    - The Respondus Browser must be set up correctly before taking the exam/ quiz.
    - You can find detailed steps on how to do this on our online course website (Blackboard).
        - Please see our class website (Blackboard) for more information as you will be expected to have this correctly set-up before taking any exam/ quiz
    - **!!!! Failure to have the Respondus Browser correctly set up before the exam will result in a zero for the exam!!!!**
- The exam will not open unless the Respondus Browser has been correctly set-up before you take the exam and you may not even see the exam on our class site (Blackboard) at all if you do not have it set-up.
- We will have a Practice Exam on our course site (Blackboard) to make sure we have the Respondus Browser set up correctly.
- Note that you should set up the Respondus Browser on the computer that you will be taking your exams on.
    - This should be a desktop or laptop, no iPads, phones, or tablets are allowed.
- The browser should be one of the following: MS Edge, Chrome, or Firefox.
- Mac and Apple computers can have issues and should not be used. Please contact me ASAP.

Remarks

- The best scenario is a windows desktop or laptop the Edge, Chrome, or Firefox browser. Otherwise, there could be issues, and this could lead to a delay in taking the exams/ quizzes and can lead to a loss of points.
- If you do have issues, please contact me as soon as possible and we can get IT involved to help.

Written Work for Exams

Information

- For all exams you will need to show your fully written solution to each problem.
- You will need to write your fully written solutions to the problems on paper, scan the written work to a single pdf file, and upload this single pdf file to our course website (Blackboard).

- Instructions on this process (what to do) can be found on our course website (Blackboard).
- You will have up to 10 minutes after you submit your exam to scan your written work into a single pdf file and upload this file to our course website (Blackboard).
- Once the 10-minute deadline to submit the single pdf file has passed you will not be able to submit your written work to the course website (Blackboard) and you should contact me immediately.
- Failure to submit your work by the deadline can result in a loss of points.

Extra Credit Opportunities

Information

- We will be having extra credit opportunities during the course.
- The extra credit opportunities will be announced during the normal course of the semester and will be on our course website (Blackboard).
- To receive points for the extra credit, you must follow all instructions completely and completely complete the opportunity.
- The instructor will determine how much if any points are awarded for the extra credit opportunity.

Remarks

- Please remember that extra credit is a reward for extra work that contributes to your learning.
- It is not to replace an exam, quiz, assessment and it is not points given to you to bring up a poor score or poor performance.
- Extra credit opportunities are above and beyond your normal course work. That is to say that you should focus on your normal coursework and then extra credit.

Late Work

Information

- Late work can be accepted up to a week late (with penalty).
- The expectation is that you talk with me before the due date.
    - You don't need to let me know if you are going to be late for the homework assignments this is set up already in ALEKS.
    - If you have any questions about this, please feel free to contact me.
- Please remember that if you do not turn in your work before the due date, you can receive a zero for the assignment.
- It is the instructor's decision whether late work is accepted or not.

- If you have questions about this, please feel free to contact me.
- If the work is accepted after the due date, it can take several weeks to get back.
    - This means that you may not get the assignment grade or feedback until several weeks after you turn in the work late.

Late Assignments

- Homework assignments can be accepted late for up to one week.
    - The late assignments will have a per day penalty assessed or an overall penalty depending on the assignment.
- You can find the due dates for homework on ALEKS.
- Other assignment due dates can be found on our course calendar and/or class website (Blackboard).

Late Written Work (Online Courses)

- Written work (see Exams section) not submitted within 10 minutes completing the exam will be considered late.
- The folder that you submit the work to on our course website (Blackboard) will close after the due date/time has passed and you won't be able to submit it.
- You should contact me as soon as possible and send me the single pdf file of your work.

Project/ Core Assessment

Information

- A project or core assessment is a part of the course to assess the learning and comprehension in the course.
- It generally consists of working on more involved questions that require many of the skills and knowledge that the course covers (for example an application problem).
- You can find more information on the projects/ core assessment for the course on our course website (Blackboard).
- You can find the due dates on our course calendar and/or our course website (Blackboard).

Make-up Assignments, Exams, Quizzes, Etc.

Information

- Make-ups assignments, exams, quizzes, etc. are not given without the approval of the instructor.
- You will need to provide documented evidence for the reason you need to take the make-up assignment, exam, quiz, etc.
    - This can take the form of a doctor's note, jury summons, etc.

- Make-up is not given without acceptable reason and evidence.
- It is the instructor's decision whether to accept the reason and evidence provided and to give the make-up or not.

Quizzes

Information

- Quizzes are given to assess students learning.
- They can be in-class or online.
- They can be announced or not.
- For online quizzes you can find them on our course calendar and/or class website (Blackboard).
- Sections on the quiz can be found on the course calendar.
- **You do not need to upload** your written work for quizzes.
- Once you begin a quiz, you must **complete it in one sitting**.
- **Respondus LockDown Browser and Webcam are required** for all quizzes.
- Weekly quizzes are required to show active participation in the class.
- To succeed in the course, you should be participating every week.
- Because quizzes count as active participation, **you must take them each week**.
- Missed quizzes will **not** be reopened.
- Quizzes count for **10% of your assignment grade**.
- If you have any questions, please contact me.

Retakes

- **There are no retakes of any exams and quizzes.**
- If you have any questions, please feel free to contact me.