

South Plains College
Common Course Syllabus: MATH 1314
Spring 2024

Department: Mathematics, Engineering, and Computer Science

Discipline: Mathematics

Course Number: MATH 1314

Course Title: College Algebra

Available Formats: conventional, hybrid, internet, and ITV

Campuses: Levelland, Plainview, Lubbock Downtown Center, and Dual Credit

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.

Prerequisite: Minimum score of 350 on the TSIA1, minimum score of 950 on the TSIA2, a diagnostic score of 6 on the TSIA2, TSI-exempt status, a successful completion with a grade of 'C' or better in MATH 0320, or successful completion of NCBM-0114.

Credit: 3 **Lecture:** 3 **Lab:** 1

Supplies: Please see the instructor's course information sheet for specific supplies.

This course partially satisfies a Core Curriculum Requirement: Mathematics Foundational Component Area (020)

Core Curriculum Objectives addressed:

- **Communications skills**—to include effective written, oral and visual communication
- **Critical thinking skills**—to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
- **Empirical and quantitative competency skills**—to manipulate and analyze numerical data or observable facts resulting in informed conclusions

Student Learning Outcomes: Upon completion of this course and receiving a passing grade, 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.

Student Learning Outcomes Assessment: A pre- and post-test questions will be used to determine the extent of improvement that the students have gained during the semester

Course Evaluation: There will be departmental final exam questions given by all instructors.

Attendance/Student Engagement Policy: Attendance and engagement are the most critical activities for success in this course. The instructor maintains records of the student's attendance and submission of assignments. The student is expected to attend at least eighty percent (80%) of the **total** class meetings **and** submit at least eighty percent (80%) of the **total** class assignments to have the best chance of success. If the student fails to meet these minimum requirements, the instructor may remove the student from the class with an X, upon their discretion, to help the student from harming their GPA. If the student cannot receive an X, the instructor will assign an F.

Academic Integrity (Plagiarism and Cheating Policy): "Complete honesty is required of the student in the presentation of any and all phases of course work. This idea applies to quizzes of whatever length as well to final examinations, to daily reports, and to term papers." (*SPC General Catalog*) Plagiarism violations include, but are not limited to, the following:

1. Turning in a paper that has been purchased, borrowed, or downloaded from another student, an online term paper site, or a mail-order term paper mill;
2. Cutting and pasting together information from books, articles, other papers, or online sites without providing proper documentation;
3. Using direct quotations (three or more words) from a source without showing them to be direct quotations and citing them; or
4. Missing in-text citations.

Cheating violations include, but are not limited to, the following:

1. Obtaining an examination by stealing or collusion;
2. Discovering the content of an examination before it is given;
3. Using an unauthorized source of information (notes, textbook, text messaging, internet, apps) during an examination, quiz, or homework assignment;
4. Entering an office or building to obtain an unfair advantage;
5. Taking an examination for another;
6. Altering grade records;
7. Copying another's work during an examination or on a homework assignment;
8. Rewriting another student's work in Peer Editing so that the writing is no longer the original student's;
9. Taking pictures of a test, test answers, or someone else's paper.

It is the aim of the faculty of South Plains College to foster a spirit of complete honesty and a high standard of integrity. The attempt of any student to present as his or her own any work which he or she has not honestly performed is regarded by the faculty and administration as a most serious offense and renders the offender liable to serious consequences, possibly suspension. (*SPC General Catalog*) Plagiarism and cheating are not tolerated in this course. Under the policies of South Plains College, punishment for cheating may include no credit (failing) on the assignment, quiz, exam, or the course.

Student Code of Conduct Policy: Any successful learning experience requires mutual respect from the student and the instructor. Neither the instructor nor the student should be subject to others' rude, disruptive, intimidating, aggressive, or demeaning behavior. Student conduct that disrupts the learning process or is deemed disrespectful or threatening shall not be tolerated and may lead to disciplinary action and/or removal from class.

Other Policies:

For information regarding official South Plains College statements about intellectual exchange, disabilities, non-discrimination, Title IX Pregnancy Accommodations, CARE Team, and Campus Concealed Carry, please visit <https://www.southplainscollege.edu/syllabusstatements/>.

South Plains College policies, return to campus plan, and protocols regarding COVID-19 can be found here: <https://www.southplainscollege.edu/emergency/covid19-faq.php>.

Note: The instructor reserves the right to modify the course syllabus and policies, as well as notify students of any changes, at any point during the semester.

**Online College Algebra: Math 1314.151
Spring 2024**

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|-------------------|---------------------------------|---------------|----------------------|
| Instructor | Traci Sanders | Phone | 806-716-4616 |
| E-mail | tsanders@southplainscollege.edu | Office | Downtown Center B021 |

Office Hours:

| Monday | Tuesday | Wednesday | Thursday | Friday |
|--------------|-----------------------------|-----------|-----------------------------|--------------|
| 8:15 – 11:00 | 8:15 – 9:00 12:45 – 1:15 | | 8:15 – 9:00 12:45 – 1:15 | 8:15 – 11:00 |

To arrange a time to meet on zoom, just send me an email.

Communication: Email is the best form of communication to reach me. All email correspondence should come from your SPC email address. If you need help with your SPC email, you can call the Help Desk at 806-716-2600. Please give me up to 24 hours to respond via email. If you email about a specific math question, please attach a picture of the question and the work that you have tried. When I post an announcement in Blackboard, the announcement will also be sent to your SPC email address. Please check your SPC email daily!

Disclaimer: The instructor reserves the right to alter any class policies/dates as deemed necessary by the instructor. If there are any changes, they will be announced **over Blackboard and via your SPC email**.

Academic coach: Jeffrey Fortner

Email: jfortner5644@southplainscollege.edu

The Academic Coach will work directly with our class to create an inviting, engaging, and collaborative learning environment by tutoring, coaching, and mentoring students. The Academic Coach functions as a tutor, providing in-time tutoring services in a small group setting or one-on-one tutoring. He may also provide students with academic tips and skills for success in the academic setting.

SPC Tutors: Tutoring is FREE for all currently enrolled students. Make an appointment or drop-in for help at any SPC location or online! Visit the link below to learn more about how to book an appointment, view the tutoring schedule, and view tutoring locations.

<https://www.southplainscollege.edu/exploreprograms/artsandsciences/teacheredtutoring.php>

Tutor.com: You also have 180 FREE minutes of tutoring with Tutor.com each week, and your hours reset every Monday morning. Log into Blackboard, click on the tools option from the left-hand menu bar. Click on the Tutor.com link and you will automatically be logged in for free tutoring. You may access tutor.com tutors during the following times:

Monday – Thursday: 8pm-8am

6pm Friday – 8am Monday morning

Text: No textbook is required.

Required Materials: computer access, good internet connection, printer, webcam, method of scanning, notebook paper, pencils, straightedge, scientific or graphing calculator

If you use a graphing calculator, it cannot be a TI-89 or TI-Nspire.

If you do not already have a calculator, I recommend the TI-30XIIS scientific calculator.

Phone / tablet / laptop / smart watch calculators will not be allowed.

I recommend keeping your notes in a binder to stay organized.

Blackboard: <https://southplainscollege.blackboard.com>

Blackboard is the online course management system that we will use for this course. For technical support, call 806-716-2180 or email blackboard@southplainscollege.edu.

Scanning Assignments: Your work will have to be scanned as a pdf file to be uploaded to Blackboard. There are many free mobile apps available for scanning. Some of these are the Notes App (on iPhones), OneDrive (free to SPC students), Scannable, and CamScanner. You do not have to choose one of these, but please determine an app you want to use for scanning and then practice scanning multiple pages as one pdf file. The app will allow you to name the file and save it. When you upload to Blackboard, you will click on Browse Local Files and then find the file where you saved it.

Attendance: Your attendance is monitored through completion of assignments. If you miss 7 assignments, the instructor may withdraw you from the course with a grade of X. If you wish to drop this class, you should submit a [Student Initiated Drop Form](#) online. Students will not be required to obtain an instructor signature to drop, however, students should communicate with instructors or advisors prior to dropping a course when they are able.

Lesson Videos and Notes: There are videos and notes posted in Blackboard for each section. To find the videos and notes, click on Course Content in the main menu and then the week and then the section. Print the notes. Watch the videos to fill in the notes and learn the material. The deadlines for submitting notes are given in the course calendar. Scan all pages of the notes as one pdf file and upload the notes to Blackboard by clicking on Course Content and then the correct week according to the course calendar. **On homework, quizzes, and tests, your work needs to follow the work in the videos. If your work does not follow the work in the videos, you will not receive credit.**

Homework: There is a homework assignment posted in Blackboard for each section. Homework is located in the same folder as the videos and notes. Homework should be completed on notebook paper with work shown. The answers are given. Carefully check all of your answers immediately after completing the problems. Figure out what you did wrong if you missed a problem. This is one of the best ways to learn math! If you cannot figure it out, you can ask me, the academic coach, or a tutor for help. Homework is for practice and will not count as a grade. The homework will help you prepare for quizzes and tests! Doing the homework is a key to success in this course, so make sure you are keeping up with the homework!

Quizzes: There will be 14 quizzes. The deadlines for the quizzes are given in the course calendar. You may turn quizzes in early. The quizzes are located in Blackboard. To find a quiz, click on Course Content and then click on the week in which you are working. Click on the quiz link to open the quiz. The quizzes will be multiple choice, and you will click on your answer choice in Blackboard. Some of the problems will require work to be shown. For those problems, you will write down your work on notebook paper. All pages of your work will need to be scanned and saved as **one pdf file** and uploaded to Blackboard by clicking on the quiz work link and then Browse Local Files. Blackboard will show your unofficial quiz grade after you submit the quiz. I will grade your work. If you chose the correct answer in Blackboard, but your work is not correct, you will lose credit for that problem. The work needs to follow what I have taught in the videos. You are not allowed to use a math app to show you how to do the work! Once I have graded your work, then you will see your official quiz grade. You will be able to see which problems you missed once the deadline has passed. You are allowed to use notes and homework on the quizzes but no electronic devices other than a calculator. Quizzes are due at 10:00 pm. There will be **NO MAKEUP QUIZZES!**

Tests: There will be 3 tests and a comprehensive final exam. There will be **NO MAKEUP TESTS!** Dates for all tests are given in the course calendar, so **PLAN AHEAD!** You will be allowed one 8.5" by 11" sheet of notes (front only) on the tests. You will not be allowed any electronic devices other than a calculator. You have two options for test-taking. One option is to take the tests online in Blackboard and be proctored using an online proctoring program called Proctorio. This option requires you to have a webcam. The other option is to come to the Downtown Center campus and take the tests on paper in the classroom. As shown on the course calendar, all tests are due on Mondays. If you choose to take the tests in the classroom, the time will be 9:00 – 11:00 am on February 12, March 4, April 15, and May 6.

Showing Work: To receive full credit on quizzes and tests, you must show all work that leads to your answers on the problems that require work to be shown. The work must be legible and easy to follow.

Proctorio: For students who choose to test online, Proctorio will be used to record you as you take tests. You will be required to have a webcam. You must use Chrome to take your tests, and you will need to download the Proctorio Chrome Extension. The instructions for downloading and using Proctorio are posted in Blackboard under Course Resources.

Guidelines for using Proctorio:

- You must show your workspace. Your workspace is your desk area, not your face. You may have to slide your computer back or to the side so that the camera picks up your writing space.
- You must put your cell phone on the corner of your workspace in the camera view and you are not allowed to use it during the test. Your calculator also needs to be in camera view.
- You are not allowed to have another person in the camera view or talk to another person.
- You must show your ID right side up. It cannot be sideways or the computer will tag it.
- You must have good light so you and your workspace can be seen clearly.
- You are not allowed to move out of the camera view at any time during your test.
- Once you are finished with the test, BEFORE you hit submit, grab your cell phone and take pictures of your work using a mobile scanning app. Once you take the pictures, you are NOT allowed to write anything else on your paper.
- After you click submit, you have 15 minutes to upload your work to Blackboard.
- If any one of these guidelines are not followed, you will receive a zero on your test.

Grading Policy: Grades will be averaged according to the following percentages:

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|--------------------|-----|
| Quiz/Notes Average | 10% |
| Test Average | 70% |
| Final Exam | 20% |

There will be a category in the Blackboard gradebook titled Course Average. This is the number you should look at throughout the semester to see your current average in the course.

Grading Scale:

A: 90 and above, B: 80 – 89, C: 70 – 79, D: 60 – 69, F: 59 or below

Academic Dishonesty:

Academic dishonesty will not be tolerated. Please see the list of things that constitute plagiarism and cheating in the general syllabus. If you violate anything on those lists, you will receive a zero on the assignment and could be subject to other actions outlined in the South Plains College Student Code of Conduct. Please note that these actions could include failing the course and being expelled from the college.

To maximize your potential for successfully completing this course:

- Get in the habit of thinking and saying positive things about math every time you work on it. Your brain will learn much easier that way.
- Do math every day if possible, even if it's just a little.
- Remind yourself often of the math you have learned by looking back over your notes.
- Ask for help when needed.
- Print the notes. Engage your brain and take good notes during the video lectures.
- Thoroughly complete notes, homework, quizzes, and tests.
- Practice the problems repeatedly until you have full mastery of them.

Online College Algebra Course Calendar
Spring 2024

This calendar shows which sections need to be completed each week. The material for each week is located in Blackboard under Course Content. For each section, you should print the notes for that section, watch the videos to fill in the notes, and then do the homework on that section. Deadlines are given in the third column and are non-negotiable. **The time for all the deadlines is 10:00 pm.** I recommend working on this course a little bit each day. Do not wait until the deadline to do the work! Excellent time management is critical to successful course completion!

| Dates | Sections | Deadlines |
|--|---|--|
| Week 1: Jan 16 – 20 <i>Jan 15 MLK Jr Holiday</i> | Factoring Review Section 1.1 | Tues, Jan 16, 10:00 pm – Day 1 Checklist Due Wed, Jan 17, 10:00 pm – Factoring Review Notes Due Thurs, Jan 18, 10:00 pm – Notes 1: 1.1 Due Fri, Jan 19 – Finish Factoring & 1.1 Homework <i>(Homework is for practice and does not need to be turned in.)</i> Sat, Jan 20, 10:00 pm – Quiz 1: Factoring,1.1 Due |
| Week 2: Jan 21 - 27 | Section 1.2 Section 1.3 | Thurs, Jan 25, 10:00 pm – Notes 2: 1.2,1.3 Due Fri, Jan 26 – Finish 1.2 & 1.3 Homework Sat, Jan 27, 10:00 pm – Quiz 2: 1.2,1.3 Due |
| Week 3: Jan 28 – Feb 3 | Section 1.4 Section 1.5 | Mon, Jan 29, 10:00 pm – Proctorio Practice Test Due Thurs, Feb 1, 10:00 pm – Notes 3: 1.4,1.5 Due Fri, Feb 2 – Finish 1.4 & 1.5 Homework Sat, Feb 3, 10:00 pm – Quiz 3: 1.4,1.5 Due |
| Week 4: Feb 4 – 10 | Section 1.6 Review Unit 1 | Thurs, Feb 8, 10:00 pm – Notes 4: 1.6 Due Fri, Feb 9 – Finish 1.6 Homework & Work on Review Sat, Feb 10, 10:00 pm – Quiz 4: 1.6 Due Sun, Feb 11 – Study! |
| Week 5: Feb 11 – 17 | Section 2.1 Section 2.2 | Mon, Feb 12, 10:00 pm – Test 1 Due – Covers Unit 1 (offered in person 9:00 – 11:00, Downtown Center) Thurs, Feb 15, 10:00 pm – Notes 5: 2.1,2.2 Due Fri, Feb 16 – Finish 2.1 & 2.2 Homework Sat, Feb 17, 10:00 pm – Quiz 5: 2.1,2,2 Due |
| Week 6: Feb 18 – 24 | Section 2.3 Section 2.4 Section 2.5 | Thurs, Feb 22, 10:00 pm – Notes 6: 2.3, 2.4,2.5 Due Fri, Feb 23 – Finish 2.3, 2.4 & 2.5 Homework Sat, Feb 24, 10:00 pm – Quiz 6: 2.3 2.4,2.5 Due |
| Week 7: Feb 25 – Mar 2 | Section 2.6 Section 2.7 Review Unit 2 | Thurs, Feb 29, 10:00 pm – Notes 7: 2.6,2.7 Due Fri, Mar 1 – Finish 2.6 & 2.7 Homework, Work on Review Sat, Mar 2, 10:00 pm – Quiz 7: 2.6,2.7 Due Sun, Mar 3 – Study! |

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| Week 8: Mar 3 – 9 | Section 3.1 Section 3.2 | Mon, Mar 4, 10:00 pm – Test 2 Due – Covers Unit 2 (offered in person 9:00 – 11:00, Downtown Center) Thurs, Mar 7, 10:00 pm – Notes 8: 3.1,3.2 Due Fri, Mar 8 – Finish 3.1 & 3.2 Homework Sat, Mar 9, 10:00 pm – Quiz 8: 3.1,3.2 Due |
| Week 9: Mar 10 – 16 | | <i>Spring Break</i> |
| Week 10: Mar 17 – 23 | Section 3.3 Section 3.4 | Thurs, Mar 21, 10:00 pm – Notes 9: 3.3,3.4 Due Fri, Mar 22 – Finish 3.3 & 3.4 Homework Sat, Mar 23, 10:00 pm – Quiz 9: 3.3,3.4 Due |
| Week 11: Mar 24 – 30 | Section 3.5 Section 4.1 | Thurs, Mar 28, 10:00 pm – Notes 10: 3.5,4.1 Due Fri, Mar 29 – Finish 3.5 & 4.1 Homework Sat, Mar 30, 10:00 pm – Quiz 10: 3.5,4.1 Due |
| Week 12: Mar 31 – Apr 6 | Section 4.2 Section 4.3 | Thurs, Apr 4, 10:00 pm – Notes 11: 4.2,4.3 Due Fri, Apr 5 – Finish 4.2 & 4.3 Homework Sat, Apr 6, 10:00 pm – Quiz 11: 4.2,4.3 Due |
| Week 13: Apr 7 – 13 <i>Apr 12 Registration Opens</i> | Section 4.4 Review Unit 3 Review Unit 4 | Thurs, Apr 11, 10:00 pm – Notes 12: 4.4 Due Fri, Apr 12 – Finish 4.4 Homework, Work on Reviews Sat, Apr 13, 10:00 pm – Quiz 12: 4.4 Due Sun, Apr 14 – Study! |
| Week 14: Apr 14 – 20 | Section 5.1 | Mon, Apr 15, 10:00 pm – Test 3 Due – Covers Units 3 & 4 (offered in person 9:00 – 11:00, Downtown Center) Thurs, Apr 18, 10:00 pm – Notes 13: 5.1 Due Fri, Apr 19 – Finish 5.1 Homework Sat, Apr 20, 10:00 pm – Quiz 13: 5.1 Due |
| Week 15: Apr 21 – 27 <i>Apr 25 Last Day to Drop</i> | Section 5.2 Section 5.3 | Thurs, Apr 25, 10:00 pm – Notes 14: 5.2, 5.3 Due Fri, Apr 26 – Finish 5.2 & 5.3 Homework Sat, Apr 27, 10:00 pm – Quiz 14: 5.2,5.3 Due |
| Week 16: Apr 28 – May 4 | Section 5.4 Review for Final | Tues, Apr 30, 10:00 pm – Notes 15: 5.4 Due Wed, May 1 – Finish 5.4 Homework Thurs, May 2, 10:00 pm – Quiz 15: 5.4 Due Fri – Sun – Study for the Final Exam!! |
| Week 17: May 5 – 8 | | Mon, May 6, 10:00 pm – Final Exam Due (offered in person 9:00 – 11:00, Downtown Center) |

Section Titles

- 1.1 Linear & Absolute Value Equations
- 1.2 Linear Inequalities
- 1.3 Complex Numbers & Simplifying Radical Expressions
- 1.4 Quadratic Equations: Factoring & Square Root Property
- 1.5 Quadratic Equations: Completing the Square & Quadratic Formula
- 1.6 Rational Equations & Radical Equations

- 2.1 Distance, Midpoint, & Circles
- 2.2 Basics of Functions & Analyzing Graphs
- 2.3 Evaluating Functions & Symmetry
- 2.4 Increasing, Decreasing, & Piecewise Functions
- 2.5 Graphs & Transformations
- 2.6 Functions: Operations & Composition
- 2.7 Functions: Composition & Inverses

- 3.1 Linear Functions: Slope, Graph, Parallel, & Perpendicular
- 3.2 Graph Quadratic Functions
- 3.3 Synthetic Division & Polynomial Equations
- 3.4 Graph Polynomial Functions
- 3.5 Graph Rational Functions

- 4.1 Polynomial & Rational Inequalities
- 4.2 Exponential & Log Functions: Basics & Graphs
- 4.3 Properties of Logs
- 4.4 Exponential & Log Equations

- 5.1 Solve Systems in Two Variables & Three Variables
- 5.2 Nonlinear Systems
- 5.3 Solve Systems Using Matrices
- 5.4 Solve Systems Using Cramer's Rule

Test 1 will cover the following sections: 1.1, 1.2, 1.3, 1.4, 1.5, 1.6.

Test 2 will cover the following sections: 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7.

Test 3 will cover the following sections: 3.1, 3.2, 3.3, 3.4, 3.5, 4.1, 4.2, 4.3, 4.4.

The final exam will cover major topics from the three tests as well as 5.1, 5.2, 5.3, and 5.4.