South Plains College
Common Course Syllabus: College Algebra (MATH 1314)
Spring 2025

Department: Mathematics, Engineering, and Computer Science

Discipline: Mathematics

Course Number: MATH 1314

Section: 010 (Tuesdays and Thursdays, 12:30-2:15pm, Mathematics-Engineering building, room 108)

Course Title: College Algebra

Available Formats: conventional/flex, internet, and ITV. This class will be the conventional/flex format.

Campuses: Levelland, Plainview, Lubbock Downtown Center, and Dual Credit. This class meets face-to-face on the Levelland campus in the Mathematics-Engineering building, room 108.

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 (Intermediate Algebra), or successful completion of NCBM 0114.

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

Instructor: Jay Driver
Telephone: (806) 716-2780
Office: Math and Engineering building, office 114
Email: The instructor may be emailed through Blackboard or at jdriver@southplainscollege.edu.

Email Policy: All students at South Plains College are assigned a standardized SPC e-mail account. Although personal email addresses will continue to be collected, the assigned SPC e-mail account will be used as the official channel of communication for South Plains College. The Student Correspondence Policy can be found at www.southplainscollege.edu. To access the SPC student e-mail account, log in to portal.office.com. (Copied from SPC Student Guide) Since all students have an assigned SPC email, the instructor will only acknowledge, respond, and send emails to your assigned SPC email. This ensures all correspondence from the instructor is received by the intended recipient.

Virtual/Face-to-Face Office Hours:
- Mondays and Wednesdays, 10:45am-12:00pm;
- Tuesdays and Thursdays, 10:45-11:30am, 2:30-3:00pm;
- Fridays, 9:00am-12:00pm;
- And by appointment (contact me).

Textbook: A textbook is not required for this course; however, a recommended and freely available textbook for this course may be: College Algebra from OpenStax, Print ISBN 1938168380, Digital ISBN 1947172123, www.openstax.org/details/college-algebra
This textbook is also embedded in your Blackboard course for easier referencing. However, if you prefer a print copy as a reference tool, the ISBN is located at the web link above.

Supplies: Besides pencils (please show your work in pencil) and paper, you will need a scientific calculator and a small supply of graph paper. Calculators on cell phones, TI-89, TI-92, or TI-Inspire calculators, or any other

electronic devices will not be allowed during testing without permission from the instructor. Make certain you have access to a scanner or scanning app. <u>Gradescope is the recommended app.</u>

Blackboard: Blackboard is the online course management system that will be utilized for this course. This course is supplemented online, so all access to course information and your instructor is through the Internet. This course syllabus, as well as <u>all</u> course materials can be accessed through Blackboard. Login at https://southplainscollege.blackboard.com/. The user name and password should be the same as the MySPC and SPC email.

> User name: first initial, last name, and last 4 digits of the Student ID
> Password: Original CampusConnect Pin No. (found on SPC acceptance letter)

Questions regarding Blackboard support may be emailed to blackboard@southplainscollege.edu or by telephone to 806-716-2180.

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: Pre- and post-test questions (assignments, quizzes, and major exams) 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. Assignments, quizzes, and exam corrections will count for 20% of the final grade, while exams count for 80% of the final grade. Expect 23 assignments, approximately 18 quizzes, and 4 scheduled exams throughout the course. Your final average in the course will determine the letter grade posted on your transcript. This grade is determined by the following scale: A (90-100%), B (80-89%), C (70-79%), D (60-69%), F (0-59%).

- Assignments/Quizzes (23 assignments, 18 quizzes, exam corrections) = 20%
- Exam 1 (covering Assignments 1-6) = 20%
- Exam 2 (covering Assignments 7-11) = 20%
- Exam 3 (covering Assignments 12-17) = 20%
- Exam 4 (covering Assignments 18-23 and major topics from previous exams) = 20%.

Assignments and Exams: The following is a sequential list of the assignments and exams.
1. Linear and Rational Equations
2. Linear Applications
3. Complex Numbers and Quadratic Equations (part 1 of 2)
4. Quadratic Equations (part 2 of 2)
5. Other Types of Equations

6. Linear and Absolute Value Inequalities

Exam 1 (20%)

7. Functions and Their Graphs
8. Linear Functions and Slope
9. Distance, Midpoint, and Circles
10. Combinations, Compositions, and Inverse Functions
11. Quadratic Functions

Exam 2 (20%)

12. Roots and Graphs of Polynomial Functions
13. Rational Functions and Their Graphs
14. Polynomial and Rational Inequalities
15. Exponential and Logarithmic Functions
16. Properties of Logarithms
17. Exponential and Logarithmic Equations

Exam 3 (20%)

18. 2x2 and 3x3 Linear Systems
19. Matrix Solutions to Systems
20. Partial Fractions
21. Nonlinear Systems and Systems of Inequalities
22. Determinants and Cramer's Rule
23. The Binomial Theorem

Exam 4 (20%)

Assignment Format and Policy: Assignments are given after each lesson and are collected according to the calendar below. Expect a quiz to accompany each assignment. For each question on each assignment:

- Write the question number.
- In solving the problem, show <u>all</u> necessary work.
- Clearly mark your answer.
- Check your answers in Blackboard to make certain you are practicing the exercises correctly.
- Write your name at the top of each page of your work.
- Submit the assignment in Blackboard as a single pdf file using the Gradescope app.

Make certain to complete and submit assignments on time (or early). Early submissions are welcomed! Late assignments will be accepted with a 15% deduction up to the time of the unit exam. Assignments may not be submitted after the unit exam.

The grading rubric for weekly assignments is as follows:

100%	All notes and the practice exercises from class are submitted.
50%	Notes from the Blackboard lesson are included, but not sufficient evidence of the practice exercises was submitted.
50%	Practice exercises are included, but no evidence of notes from the Blackboard lesson was submitted.
–15%	The assignment was submitted past the due date.

Quiz Format and Policy: Expect a face-to-face quiz to be administered at most every class session. <u>No late quizzes will be accepted</u>, as quizzes are to be taken during the class time.

Exam Format and Policy: There are four (4) units of study in this course. At the conclusion of each unit is a face-to-face examination on specified Thursdays in the calendar below from 12:30-2:15pm with the exception of the final exam, which is on Thursday, May 8 from 10:15am–12:15pm.

To maximize your potential for successfully completing this course:

- login to Blackboard daily;
- watch the lecture videos and take notes on them;
- thoroughly complete and submit the assignments on time;
- practice the exercises <u>repeatedly</u> until you have full mastery of them.

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 throughout the semester. 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.

- Before arriving for the class meeting, make certain you have:
  1. worked through the notes and videos for that day's lessons;
  2. completed some of the assigned exercises.

- Upon arriving at the class meeting, we will:
  1. answer questions over exercises;
  2. work through lab exercises;
  3. submit assignments and quizzes.

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.
http://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

For questions regarding tutoring, please email tutoring@southplainscollege.edu or call 806-716-2538.

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 on the part of the student and the instructor. Neither instructor nor student should be subject to others' behavior that is rude, disruptive, intimidating, aggressive, or demeaning**.** 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.

COVID Response: South Plains College policies, return to campus plan, and protocols regarding COVID-19 can be found here: COVID Response (southplainscollege.edu).

Diversity, disabilities, non-discrimination, Title IX Pregnancy Accommodations, Campus Concealed Carry: South Plains College policies concerning diversity, disabilities, non-discrimination, Title IX Pregnancy Accommodations, and Campus Concealed Carry Statements can be found here: Syllabus Statements (southplainscollege.edu).

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.

Tentative Course Calendar: Below is a calendar view of assignment and exam due dates and times.

Date (Mon-Fri)	Topic(s) to be discussed (assignment is included with each lesson)	Assignment and Quiz Due Dates • Assignments are due by <u>noon</u> on corresponding Fridays. • Quizzes are due by the end of each class meeting.
Wk1: Jan 13-17	Course Introduction Lsn1: Linear and Rational Equations Lsn2: Linear Applications	Assignments 1 and 2
Wk2: Jan 20-24 (Mon, Jan 20, is a holiday)	Lsn3: Complex Numbers & Quadratic Eqns (part 1 of 2) Lsn4: Quadratic Equations (part 2 of 2)	Quizzes 1 (Tue) and 2 (Thur) Assignments 3 and 4
Wk3: Jan 27-31	Lsn5: Other Types of Equations Lsn6: Linear & Absolute Value Inequalities	Quizzes 3 (Tue) and 4 (Thur) Assignments 5 and 6
Wk4: Feb 3-7	Exam 1 (Thur, Feb 6) The exam will begin at 12:30pm and be due by 2:15pm.	
Wk5: Feb 10-14	Lsn7: Functions and Their Graphs Lsn8: Linear Functions and Slope	Quiz 5 (Thur) Assignments 7 and 8 Exam 1 corrections are due by noon, Friday, Feb 14.
Wk6: Feb 17-21	Lsn9: Distance, Midpoint, Circles Lsn10: Combinations, Compositions, and Inverses	Quizzes 6 (Tue) and 7 (Thur) Assignments 9 and 10
Wk7: Feb 24-28	Lsn11: Quadratic Functions	Quizzes 8 (Tue) and 9 (Thur) Assignment 11
Wk8: Mar 3-7	Exam 2 (Thur, Mar 6) The exam will begin at 12:30pm and be due by 2:15pm.	
Wk9: Mar 10-14 (Mar 17-21 is spring break)	Lsn12: Polynomial Functions Lsn13: Rational Functions	Quiz 10 (Thur) Assignments 12 and 13 Exam 2 corrections are due by noon, Friday, Mar 14.
Wk10: Mar 24-28	Lsn14: Polynomial & Rational Inequalities Lsn15: Exponential & Logarithmic Functions	Quizzes 11 (Tue) and 12 (Thur) Assignments 14 and 15
Wk11: Mar 31-Apr 4	Lsn16: Properties of Logs Lsn17: Exp. and Log. Equations	Quizzes 13 (Tue) and 14 (Thur) Assignments 16 and 17
Wk12: Apr 7-11 (registration opens Fri, Apr 11)	Exam 3 (Thur, Apr 10) The exam will begin at 12:30pm and be due by 2:15pm.	
Wk13: Apr 14-18 (Fri, Apr 18, is a holiday)	Lsn18: 2x2 and 3x3 Systems Lsn19: Matrix Solutions to Systems	Quiz 15 (Thur) Assignments 18 and 19 Exam 3 corrections are due by noon, Thursday, Apr 17.
Wk14: Apr 21-25 (Thur, Apr 24, is last day to drop a class)	Lsn20: Partial Fractions Lsn21: Nonlinear Systems and Systems of Inequalities	Quizzes 16 (Tue) and 17 (Thur) Assignments 20 and 21
Wk15: Apr 28 – May 2	Lsn22: Determinants & Cramer's Rule Lsn23: The Binomial Theorem	Quiz 18 (Tue) Assignments 22 and 23
Wk16: May 5-8	Exam 4 (Thur, May 8) This exam is the cumulative final exam that will be from 10:15am-12:15pm in M108.	