# South Plains College Common Course Syllabus: College Algebra (MATH 1314) Fall 2021

**Department:** Mathematics, Engineering, and Computer Science

**Discipline:** Mathematics

Course Number: MATH 1314

Section: 008 (Mondays and Wednesdays, 12:30-2:15pm, Technical Arts building, room TA213)

**Course Title:** College Algebra

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

**Campuses:** Levelland, Reese, Plainview, Lubbock Center, and Dual Credit. This class meets face-to-face on the Levelland campus in the Technical Arts building, room TA213.

**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, 10:45-11:30am, 2:30-3:30pm.
- Tuesdays, 1:30-2:30pm.
- Wednesdays, 10:45-11:30am, 2:30-3:30pm.
- Thursdays, 1:30-2:30pm.
- Fridays, 9:00-11:30am.
- And by appointment (scheduled in Blackboard).

**Textbook:** A textbook is <u>not</u> 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, <a href="https://www.openstax.org/details/college-algebra">www.openstax.org/details/college-algebra</a>

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.

<sup>\*</sup>Office hours may be scheduled in Blackboard.

**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 such as CamScanner, Scannable, OneDrive, etc. in order to scan your assignments/quizzes and submit them through Blackboard.

**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 <a href="https://southplainscollege.blackboard.com/">https://southplainscollege.blackboard.com/</a>. 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 <u>blackboard@southplainscollege.edu</u> 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 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 will count for 20% of the final grade, while exams count for 80% of the final grade. Expect 23 assignments 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 and 18 quizzes) = 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%.

#### 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.

Major exams will be at specified face-to-face meetings in TA213 from 12:30–2:15pm with the exception of the final exam, which is on Wednesday, December 15 from 10:15am–12:15pm.

**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. (Pdf files can be generated easily using a scanner or many freely available phone apps, like CamScanner, Scannable, or OneDrive.)

Make certain to complete and submit assignments on time (or early). Early submissions are welcomed! Late assignments will be accepted with a 10% deduction up to the time of the unit exam. Assignments submitted after the unit exam will not be accepted. Expect a quiz to be administered each class session. No late quizzes will be accepted.

**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 days in the calendar below from 12:30-2:15pm with the exception of the final exam, which is on Wednesday, Dec 15 from 10:15am–12:15pm. If there becomes a quarantine issue or movement of this class to an online setting, then adequate internet supplies will be needed, such as a webcam, microphone, and access to online collaborative tools like Blackboard Collaborate or Zoom.

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

Date	Topic(s) to be discussed (assignment is included with each lesson)	Assignment and Quiz Due Dates  • Assignments are due by noon on corresponding Thursdays.  • Quizzes are due by the end of each class meeting.
Wk1: Aug 30 – Sep 2	Course Introduction	Assignments 1 and 2
	Lsn1: Linear and Rational Equations Lsn2: Linear Applications	Quizzes 1 (Mon) and 2 (Wed)
Wk2: Sep 7 – 9	Lsn3: Complex Numbers & Quadratic Eqns (part	Assignments 3 and 4
(Mon, Sep 6, is Labor Day	1 of 2)	Quiz 3 (Wed)
holiday.)	Lsn4: Quadratic Equations (part 2 of 2)	, ,
Wk3: Sep 13 – 16	Lsn5: Other Types of Equations	Assignments 5 and 6
	Lsn6: Linear & Absolute Value Inequalities	Quizzes 4 (Mon) and 5 (Wed)
Wk4: Sep 20 – 23	Exam 1 (Wed, Sep 22)	
	The exam will begin at 12:30pm and be due by	
	2:15pm.	
Wk5: Sep 27 – 30	Lsn7: Functions and Their Graphs	Assignments 7 and 8
WII COLLA T	Lsn8: Linear Functions and Slope	Quiz 6 (Wed)
Wk6: Oct 4 – 7	Lsn9: Distance, Midpoint, Circles	Assignments 9 and 10
	Lsn10: Combinations, Compositions, and Inverses	Quizzes 7 (Mon) and 8 (Wed)
Wk7: Oct 11 – 14	Lsn11: Quadratic Functions	Assignment 11
(Fri, Oct 15, is SPC's Fall	Litti. Quadratic i unctions	Quizzes 9 (Mon) and 10 (Wed)
Break holiday.)		Quillies y (ivion) and 10 (iviou)
Wk8: Oct 18 – 21	Exam 2 (Wed, Oct 20)	
	The exam will begin at 12:30pm and be due by	
	2:15pm.	
Wk9: Oct 25 – 28	Lsn12: Polynomial Functions	Assignments 12 and 13
*****	Lsn13: Rational Functions	Quiz 11 (Wed)
Wk10: Nov 1 – 4	Lsn14: Polynomial & Rational Inequalities	Assignments 14 and 15
XXII 11 XX 0 11	Lsn15: Exponential & Logarithmic Functions	Quizzes 12 (Mon) and 13 (Wed)
Wk11: Nov 8 – 11	Lsn16: Properties of Logs	Assignments 16 and 17
	Lsn17: Exp. and Log. Equations	Quizzes 14 (Mon) and 15 (Wed)

Wk12: Nov 15 – 18	Exam 3 (Wed, Nov 17)	
	The exam will begin at 12:30pm and be due by	
	2:15pm.	
Wk13: Nov 22 – 23	Lsn18: 2x2 and 3x3 Systems	Assignments 18 and 19
(Wed, Nov 24 – Fri, Nov	Lsn19: Matrix Solutions to Systems	
26 is Thanksgiving		
holiday.)		
Wk14: Nov 29–Dec 2	Lsn20: Partial Fractions	Assignments 20 and 21
(Thur, Dec 2 is last day to	Lsn21: Nonlinear Systems and Systems of	Quizzes 16 (Mon) and 17 (Wed)
drop a class at SPC.)	Inequalities	
Wk15: Dec 6 – 9	Lsn22: Determinants & Cramer's Rule	Assignments 22 and 23
	Lsn23: The Binomial Theorem	Quiz 18 (Mon)
Wk16: Dec 13 – 16	Exam 4 (Wed, Dec 15)	
(Semester ends Thur, Dec	This exam is the cumulative final exam that will	
16.)	be from 10:15am-12:15pm in TA213.	

#### **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, get to know the tutors, 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 tutor.com link on the left-hand tool bar and grab a session with a tutor. You can access tutor.com tutors during the following times:

Monday – Thursday: 8pm-8am 6pm Friday – 8am Monday morning

**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.

**COVID Syllabus Statement:** It is the policy of South Plains College that as a condition of on-campus enrollment, all students are required to engage in safe behaviors to avoid the spread of COVID-19 in the SPC

community. There will be no requirement for face coverings at any location on any South Plains College campus or classroom. Faculty, staff, or students may continue to wear a mask voluntarily, but there will be no requirements for face coverings in any circumstance. Students who believe they have been exposed or may be COVID-19 positive, must contact Health Services, DeEtte Edens, BSN, RN at (806) 716-2376 or <a href="mailto:dedens@southplainscollege.edu">dedens@southplainscollege.edu</a>.

If you are experiencing any of the following symptoms please do not attend class and either seek medical attention or get tested for COVID-19.

- Cough, shortness of breath, difficulty breathing
- Fever or chills
- Muscles or body aches
- Vomiting or diarrhea
- New loss of taste and smell

Please also notify DeEtte Edens, BSN, RN, Associate Director of Health & Wellness, at <a href="mailto:dedens@southplainscollege.edu">dedens@southplainscollege.edu</a> or 806-716-2376.

**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.

**Diversity Statement:** In this class, the teacher will establish and support an environment that values and nurtures individual and group differences and encourages engagement and interaction. Understanding and respecting multiple experiences and perspectives will serve to challenge and stimulate all of us to learn about others, about the larger world and about ourselves. By promoting diversity and intellectual exchange, we will not only mirror society as it is, but also model society as it should and can be.

**Disability Statement:** Students with disabilities, including but not limited to physical, psychiatric, or learning disabilities, who wish to request accommodations in this class should notify the Disability Services Office early in the semester so that the appropriate arrangements may be made. In accordance with federal law, a student requesting accommodations must provide acceptable documentation of his/her disability to the Disability Services Office. For more information, call or visit the Disability Services Office at Levelland (Student Health & Wellness Office) 806-716-2577, Reese Center (Building 8) 806-716-4675, or Plainview Center (Main Office) 806-716-4302 or 806-296-9611.

**Nondiscrimination Policy:** South Plains College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following person has been designated to handle inquiries regarding the non-discrimination policies: Vice President for Student Affairs, South Plains College, 1401 College Avenue, Box 5, Levelland, TX 79336. Phone number 806-716-2360.

**Title IX Pregnancy Accommodations Statement:** If you are pregnant, or have given birth within six months, Under Title IX you have a right to reasonable accommodations to help continue your education. To <u>activate</u> accommodations you must submit a Title IX pregnancy accommodations request, along with specific medical documentation, to the Director of Health and Wellness. Once approved, notification will be sent to the student and instructors. It is the student's responsibility to work with the instructor to arrange accommodations. Contact the Director of Health and Wellness at 806-716-2362 or email cgilster@southplainscollege.edu for assistance.

**Campus Concealed Carry**: Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in South Plains College buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code

(PC) 46.035 and South Plains College policy, license holders may not carry a concealed handgun in restricted locations. For a list of locations and Frequently Asked Questions, please refer to the Campus Carry page at: <a href="http://www.southplainscollege.edu/campuscarry.php">http://www.southplainscollege.edu/campuscarry.php</a>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all South Plains College campuses. Report violations to the College Police Department at 806-716-2396 or 9-1-1.

**SPC Bookstore Price Match Guarantee Policy:** If you find a lower price on a textbook, the South Plains College bookstore will match that price. The difference will be given to the student on a bookstore gift certificate! The gift certificate can be spent on anything in the store.

If students have already purchased textbooks and then find a better price later, the South Plains College bookstore will price match through the first week of the semester. The student must have a copy of the receipt and the book has to be in stock at the competition at the time of the price match.

The South Plains College bookstore will happily price match BN.com & books on Amazon noted as *ships from* and sold by Amazon.com. Online marketplaces such as *Other Sellers* on Amazon, Amazon's Warehouse Deals, *fulfilled by* Amazon, BN.com Marketplace, and peer-to-peer pricing are not eligible. They will price match the exact textbook, in the same edition and format, including all accompanying materials, like workbooks and CDs.

A textbook is only eligible for price match if it is in stock on a competitor's website at time of the price match request. Additional membership discounts and offers cannot be applied to the student's refund.

Price matching is only available on in-store purchases. Digital books, access codes sold via publisher sites, rentals and special orders are not eligible. Only one price match per title per customer is allowed.

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.