

South Plains College
Common Course Syllabus: MATH 1314
Revised December 2019

Department: Mathematics, Engineering, and Computer Science

Discipline: Mathematics

Course Number: MATH 1314

Course Title: College Algebra

Available Formats: conventional, internet, and ITV

Campuses: Levelland, Reese, Plainview, Lubbock 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 TSIA, TSI-exempt status, or a successful completion with a grade of 'C' or better in MATH 0320.

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

Textbook/ Supplies: Please see the instructor's course information sheet.

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 effort are the most important activities for success in this course. The instructor maintains records of the student's engagement throughout the semester. The student will be allowed to miss twenty percent (20%) of class assignments for the

semester, *for any reason*. Should this number be exceeded, the instructor has the right to drop the student with a grade of F or an X, depending on the instructor's discretion.

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: It is the policy of South Plains College for the Spring 2021 semester 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. Such behaviors specifically include the requirement that all students properly wear CDC-compliant face coverings while in SPC buildings including in classrooms, labs, hallways, and restrooms. Failure to comply with this policy may result in dismissal from the current class session. If the student refuses to leave the classroom or lab after being dismissed, the student may be referred to the Dean of Students on the Levelland campus or the Dean/Director of external centers for Student Code of Conduct Violation. 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 dedens@southplainscollege.edu.

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 [activate](#) 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 cqilster@southplainscollege.edu](mailto:cqilster@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: <http://www.southplainscollege.edu/campuscarry.php> 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.

SPC COVID 19 Response: [Return to Campus Plan](#)

Exams will cover material from previous sections. Four exams and the required comprehensive final exam will be worth 10 points each. There are no makeup exams. If you miss an exam, your final exam grade may be used to replace a missed exam. You will scan and save your exam as a pdf and then upload your completed exam into Gradescope.

Grade

Your final point value will determine your letter grade for this class and will be determined by the following scale:

| | | |
|------------|-------------|------------------------|
| A - 90-100 | Homework | 10 |
| B - 80-89 | Quizzes | 40 |
| C - 70-79 | Exams | 40 |
| D - 60-69 | Final Exam | 10 |
| F - 0-59 | <hr/> Total | <hr/> 100 points <hr/> |

If I receive notification that you are unable to attend class on a quiz or exam date, a quiz may be taken using Blackboard Collaborate at the stated class time. Any exam absence will require the use of Proctorio and the exam must be taken at the stated class time.

~~~The instructor reserves the right to make any changes to the syllabus as needed. Written notification will be given if any changes are made. ~~~

## Tentative Course Schedule

| Week | Monday                      |                                                                                                        | Wednesday   |                                                                    |
|------|-----------------------------|--------------------------------------------------------------------------------------------------------|-------------|--------------------------------------------------------------------|
| 1    | January 18                  | MLK Holiday                                                                                            | January 20  | <b>Introduction</b><br>1.1 – Integers, Order of Operations         |
| 2    | January 25                  | 1.2 – Exponents, Operations on Polynomials<br>1.3 – Linear Equations                                   | January 27  | 1.4 – Linear Inequalities<br>Quiz 1                                |
| 3    | February 1                  | 1.5 Absolute-Value Equations and Inequalities<br>2.1 – Factoring Summary                               | February 3  | 2.2 – Properties of Roots and Complex Numbers<br>Quiz 2            |
| 4    | February 8                  | 2.3 – Radical Expressions<br>2.4 – Solving Quadratic Equations                                         | February 10 | <b>Exam 1</b>                                                      |
| 5    | February 15                 | 2.5 – Solving Rational Equations<br>2.6 – Solving Radical Equations                                    | February 17 | 3.1 Linear Functions: Slope and Graphing<br>Quiz 3                 |
| 6    | February 22                 | 3.2 Linear Functions: Equations, Parallel and Perpendicular Lines<br>4.1 Basics of Functions           | February 24 | 4.2 Evaluating Functions, Symmetry<br>Quiz 4                       |
| 7    | March 1                     | 4.3 Increasing, Decreasing and Piecewise Functions<br>4.4 Graphs and Transformations                   | March 3     | <b>Exam 2</b>                                                      |
| 8    | March 8                     | 5.1 Functions: Domain and Operations<br>5.2 Functions: Compositions                                    | March 10    | 5.3 Functions: Inverses<br>Quiz 5                                  |
|      | March 15                    | Spring Break                                                                                           | March 17    | Spring Break                                                       |
| 9    | March 22                    | 6.1 Graphing Quadratics<br>6.2 Synthetic Division, Solve Polynomial Equations                          | March 24    | 6.3 Graphing Polynomial Functions<br>Quiz 6                        |
| 10   | March 29                    | 6.4 Graphing Rational Functions                                                                        | March 31    | <b>Exam 3</b>                                                      |
| 11   | April 5                     | 6.5 Solve Polynomial and Rational Inequalities                                                         | April 7     | 7.1 Exponential and Log Functions: Basics and Evaluating<br>Quiz 7 |
| 12   | April 12                    | 7.2 Log Functions: Basics and Evaluating<br>7.3 Properties of Logs                                     | April 14    | 7.4 Exponential Equations<br>Quiz 8                                |
| 13   | April 19                    | 7.5 Logarithmic Equations                                                                              | April 21    | <b>Exam 4</b>                                                      |
| 14   | April 26                    | 8.1 Systems of Linear Equations in Two Variables<br>8.2 Systems of Linear Equations in Three Variables | April 28    | 8.3 Determinants and Cramer's Rule<br>Quiz 9                       |
| 15   | May 3                       | 8.4 Matrices and GJE                                                                                   | May 5       | <b>Review</b>                                                      |
| 16   | May 10<br><b>Final Exam</b> | Sect.203– 8:00 – 10:00                                                                                 | May 12      |                                                                    |

## Tentative Course Schedule

| Week | Tuesday                     |                                                                                                        | Thursday    |                                                                    |
|------|-----------------------------|--------------------------------------------------------------------------------------------------------|-------------|--------------------------------------------------------------------|
| 1    | January 19                  | <b>Introduction</b><br>1.1 – Integers, Order of Operations                                             | January 21  | 1.2 – Exponents, Operations on Polynomials                         |
| 2    | January 26                  | 1.3 – Linear Equations                                                                                 | January 28  | 1.4 – Linear Inequalities<br>Quiz 1                                |
| 3    | February 2                  | 1.5 Absolute-Value Equations and Inequalities<br>2.1 – Factoring Summary                               | February 4  | 2.2 – Properties of Roots and Complex Numbers<br>Quiz 2            |
| 4    | February 9                  | 2.3 – Radical Expressions<br>2.4 – Solving Quadratic Equations                                         | February 11 | <b>Exam 1</b>                                                      |
| 5    | February 16                 | 2.5 – Solving Rational Equations<br>2.6 – Solving Radical Equations                                    | February 18 | 3.1 Linear Functions: Slope and Graphing<br>Quiz 3                 |
| 6    | February 23                 | 3.2 Linear Functions: Equations, Parallel and Perpendicular Lines<br>4.1 Basics of Functions           | February 25 | 4.2 Evaluating Functions, Symmetry<br>Quiz 4                       |
| 7    | March 2                     | 4.3 Increasing, Decreasing and Piecewise Functions<br>4.4 Graphs and Transformations                   | March 4     | <b>Exam 2</b>                                                      |
| 8    | March 9                     | 5.1 Functions: Domain and Operations<br>5.2 Functions: Compositions                                    | March 11    | 5.3 Functions: Inverses<br>Quiz 5                                  |
|      | March 16                    | Spring Break                                                                                           | March 18    | Spring Break                                                       |
| 9    | March 23                    | 6.1 Graphing Quadratics<br>6.2 Synthetic Division, Solve Polynomial Equations                          | March 25    | 6.3 Graphing Polynomial Functions<br>Quiz 6                        |
| 10   | March 30                    | 6.4 Graphing Rational Functions                                                                        | April 1     | <b>Exam 3</b>                                                      |
| 11   | April 6                     | 6.5 Solve Polynomial and Rational Inequalities                                                         | April 8     | 7.1 Exponential and Log Functions: Basics and Evaluating<br>Quiz 7 |
| 12   | April 13                    | 7.2 Log Functions: Basics and Evaluating<br>7.3 Properties of Logs                                     | April 15    | 7.4 Exponential Equations<br>Quiz 8                                |
| 13   | April 20                    | 7.5 Logarithmic Equations                                                                              | April 22    | <b>Exam 4</b>                                                      |
| 14   | April 27                    | 8.1 Systems of Linear Equations in Two Variables<br>8.2 Systems of Linear Equations in Three Variables | April 29    | 8.3 Determinants and Cramer's Rule<br>Quiz 9                       |
| 15   | May 4                       | 8.4 Matrices and GJE                                                                                   | May 6       | <b>Review</b>                                                      |
| 16   | May 11<br><b>Final Exam</b> | Sect.206 – 8:00 – 10:00<br>Sect.208 – 5:30 – 7:30                                                      | May 13      |                                                                    |