

South Plains College
Common Course Syllabus: MATH 0314 / Math 1314
Revised December 2019

Department: Mathematics, Engineering, and Computer Science

Discipline: Mathematics

Course Number: MATH 0314

Course Title: College Algebra Support Course

Course Number: MATH 1314

Course Title: College Algebra

Available Formats: conventional and internet

Campuses: Levelland, Reese, Plainview, Lubbock Center

0314 Course Description: Math 0314 is to be taken concurrently with MATH 1314. Background topics which are necessary for a student to successfully complete MATH 1314 will be covered, with an emphasis on fractions, factoring polynomials, functions, exponents, and operating with radical and rational expressions.

1314 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 340 on the TSIA, or a successful completion with a grade of 'C' or better in MATH 0315.

0314 Credit: 3 Lecture: 3 Lab: 1

1314 Credit: 3 Lecture: 3 Lab: 1

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

This course partially satisfies a Core Curriculum Requirement: 0314 - None
1314 - 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

0314 Student Learning Outcomes: Upon completion of this course and receiving a passing grade, the student will be able to:

1. Define, represent, and perform operations on real numbers.
2. Use order of operations and exponent rules to simplify an expression.
3. Add, subtract, multiply, and divide polynomials.
4. Recognize, understand, and analyze features of a linear equation and a function.
5. Recognize and use algebraic properties, concepts, procedures (including factoring), and algorithms to combine, transform, and evaluate absolute value, polynomial, rational, and radical expressions.
6. Identify and solve linear and absolute value equations.
7. Identify and solve linear inequalities.

1314 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 Policy: Attendance and effort are the most important activities for success in this course. Records of your attendance are maintained throughout the semester. Ten (10) absences, **for any reason**, are allotted to the student for the semester. Tardies count as one-half ($1/2$) of an absence. Tardies will be applied for consistently being late to class, as deemed by the instructor and leaving class early. If this number is exceeded, the instructor has the right to drop you with a grade of F or an X, depending on their 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.

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 cgilster@southplainscollege.edu](mailto: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: <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.

Spring 2020
Support Course: Math 0314.C201
College Algebra: Math 1314.C201

Classroom: RC 219

Time: MTWR 8:30 – 10:15

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|--------------------|--------------------------------|---------------------------------|
| Instructors | Jacque Fowler | Traci Sanders |
| E-mail | jfowler@southplainscollege.edu | tsanders@southplainscollege.edu |
| Phone | 716-4640 | 716-4616 |
| Office | RC 223-E | RC 223-C |

Fowler Office Hours:

| Monday | Tuesday | Wednesday | Thursday | Friday |
|------------------------------|------------------------------|------------------------------|------------------------------|--------------|
| 8:00 – 8:30 10:15 – 11:00 | 8:00 – 8:30 10:15 – 11:30 | 8:00 – 8:30 10:15 – 11:00 | 8:00 – 8:30 10:15 – 11:30 | 8:00 – 10:00 |

Sanders Office Hours:

| Monday | Tuesday | Wednesday | Thursday | Friday |
|---------------|-------------------------------|---------------|---------------|--------------|
| 10:15 – 11:45 | 10:15 – 11:00 12:45 – 1:15 | 10:15 – 12:15 | 10:15 – 11:00 | 8:30 – 11:00 |

Text: No textbook is required.

Supplies: notebook paper (to be turned in without spiral edges), scientific or graphing calculator (cell phones, smart watches, TI-89, TI-92, TI-Nspire calculators, or other electronic devices will not be allowed during testing), pencils, straightedge

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

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|--------------|-----|
| Lab Average | 10% |
| Test Average | 70% |
| Final Exam | 20% |

Grading Scale:

- A: 90 and above
- B: 80 – 89
- C: 70 – 79
- D: 65 – 69
- F: 64 or below

A grade of E (great effort but not successful completion) may be given in Math 0314 at the discretion of the instructors.

Tests: There will be 7 tests and a final exam. Test 3 and the final will be comprehensive. There will be **NO MAKEUP TESTS!** Dates are listed for all tests, including the final exam, so **PLAN AHEAD!** On test days, students will be required to leave backpacks, cell phones, smart watches, etc. at the front of the room.

Homework: Homework will be assigned for all of the sections covered in the course. Homework should be completed on notebook paper. Write down the problems, and show your work. For most weeks, the homework will be due on Mondays at the beginning of class. Late homework will not be accepted. Any change to the Monday deadlines will be announced in class. For each completed homework assignment, one point will be added to the following test grade. Time will be given at the beginning of class to answer questions on the homework.

Labs: Excluding test days, approximately the last 30 minutes of class will be our lab time. The lowest five lab grades will be dropped. **THERE ARE NO MAKEUP LABS!** Here are the two different types of labs we will have:

1. Work on homework. As long as you participate, you will receive a 100 for these labs. If you are absent, you will receive a zero.
2. Work a few problems to be turned in for a grade. If you are absent, you will receive a zero.

Attendance: If you stop attending class, you should go through the procedure for dropping a course to obtain a grade of W. If you choose to drop one course, you must drop both the support course and College Algebra. Perfect attendance will result in 4 points added to your final grade. Having only one absence will result in 2 points added to your final grade. If you must miss, find out what the homework assignment was and stay caught up!

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| Important Dates: | January 20 | Martin Luther King Jr Day |
| | March 16 – 20 | Spring Break |
| | April 13 | Easter Holiday |
| | April 20 | Registration Opens for Spring Interim, Summer, and Fall |
| | April 23 | Last Day to Drop |
| | May 4 | Final Exam |

Math 0314 / 1314 --- Spring 2020

Course Outline

This is a tentative schedule.

Any changes will be announced in class and posted in Blackboard.

| Week | Dates | Day | Topic | Lab | Assignment |
|------|---------------|------------|---|-----|------------|
| 1 | Jan 13 | Mon | Signed Numbers, Exponents, Order of Ops | | 1.1 |
| | Jan 14 | Tues | Fractions, Order of Ops | | 1.2 |
| | Jan 15 | Wed | Polynomials: Exponent Rules | | 1.3 |
| | Jan 16 | Thurs | Polynomials: Add, Subt, Mult, and Div | | 1.4 |
| 2 | Jan 20 | Mon | Holiday | | |
| | Jan 21 | Tues | Solve Linear and Absolute Value Equations | | 1.5 |
| | Jan 22 | Wed | Solve Linear Inequalities | | 1.6 |
| | Jan 23 | Thurs | Review 1 | | |
| 3 | Jan 27 | Mon | EXAM 1 | | |
| | Jan 28 | Tues | Factor: GCF, Grouping, and Trinomials with $a = 1$ | | 2.1 |
| | Jan 29 | Wed | Factor: Trinomials with $a \neq 1$ and Special Products | | 2.2 |
| | Jan 30 | Thurs | Summary of Factoring / Solve Quadratics by Factoring | | 2.3 |
| 4 | Feb 3 | Mon | Simplify, Multiply, and Divide Rational Expressions | | 2.4 |
| | Feb 4 | Tues | Find LCD and Solve Rational Equations | | 2.5 |
| | Feb 5 | Wed | Add and Subtract Rational Expressions | | 2.6 |
| | Feb 6 | Thurs | Review 2 | | |
| 5 | Feb 10 | Mon | EXAM 2 | | |
| | Feb 11 | Tues | Properties of Roots and Complex Numbers | | 3.1 |
| | Feb 12 | Wed | Simplifying and Rationalizing Radical Expressions | | 3.2 |
| | Feb 13 | Thurs | Rational Exponents and Solving Radical Equations | | 3.3 |
| 6 | Feb 17 | Mon | Solve Quadratics by Factoring and the Square Root Prop | | 3.4 |
| | Feb 18 | Tues | Solve Quadratics by Comp the Square and Quad Form | | 3.5 |
| | Feb 19 | Wed | Review 3 | | |
| | Feb 20 | Thurs | EXAM 3 | | |
| 7 | Feb 24 | Mon | Distance, Midpoint, Circles | | 4.1 |
| | Feb 25 | Tues | Basics of Functions, Analyzing Graphs | | 4.2 |
| | Feb 26 | Wed | Evaluating Functions, Symmetry | | 4.3 |
| | Feb 27 | Thurs | Increasing, Decreasing, Piecewise Functions | | 4.4 |
| 8 | Mar 2 | Mon | Graphs and Transformations | | 4.5 |
| | Mar 3 | Tues | Review 4 | | |
| | Mar 4 | Wed | EXAM 4 | | |
| | Mar 5 | Thurs | Functions: Operations and Composition | | 5.1 |

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|---------------------------------|---|------------|--|--|-----|
| 9 | Mar 9 | Mon | Functions: Compositions and Inverses | | 5.2 |
| | Mar 10 | Tues | Functions: Slope and Graphing | | 5.3 |
| | Mar 11 | Wed | Functions: Equations, Parallel and Perpendicular Lines | | 5.4 |
| | Mar 12 | Thurs | Review 5 | | |
| Mar 16 - 20 Spring Break | | | | | |
| 10 | Mar 23 | Mon | EXAM 5 | | |
| | Mar 24 | Tues | Graph Quadratics | | 6.1 |
| | Mar 25 | Wed | Synthetic Division, Solve Polynomial Equations | | 6.2 |
| | Mar 26 | Thurs | Graph Polynomial Functions | | 6.3 |
| 11 | Mar 30 | Mon | Graph Polynomial Functions - part 2 | | |
| | Mar 31 | Tues | Graph rational functions | | 6.4 |
| | Apr 1 | Wed | Graph rational functions - part 2 | | |
| | Apr 2 | Thurs | Solve Polynomial and Rational Inequalities | | 6.5 |
| 12 | Apr 6 | Mon | Review 6 | | |
| | Apr 7 | Tues | EXAM 6 | | |
| | Apr 8 | Wed | Exponential and Log Functions: Basics and Evaluating | | 7.1 |
| | Apr 9 | Thurs | Properties of Logs | | 7.2 |
| 13 | Apr 13 | Mon | Holiday | | |
| | Apr 14 | Tues | Solve Exponential Equations | | 7.3 |
| | Apr 15 | Wed | Solve Log Equations | | 7.4 |
| | Apr 16 | Thurs | Solve Systems of Equations in 2 variables | | 7.5 |
| 14 | Apr 20 | Mon | Review 7 | | |
| | Apr 21 | Tues | EXAM 7 | | |
| | Apr 22 | Wed | Solve Systems of Equations in 3 Variables | | 8.1 |
| | Apr 23 | Thurs | Non-Linear Systems | | 8.2 |
| 15 | Apr 27 | Mon | Matrices | | 8.3 |
| | Apr 28 | Tues | Cramer's Rule | | 8.4 |
| | Apr 29 | Wed | Review for Final Exam | | |
| | Apr 30 | Thurs | Review for Final Exam | | |
| 16 | Final Exam: Monday, May 4, 8:00 - 10:00 AM | | | | |