

South Plains College
Common Course Syllabus: MATH 0314 / MATH 1314
Fall 2024

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, hybrid, and internet

Campuses: Levelland, Plainview, and Lubbock Downtown 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 TSIA1, minimum diagnostic score of 3 on the TSIA2, a successful completion with a grade of 'C' or better in MATH 0315, or a successful completion of NCBM-0105.

0314 Credit: 3 **Lecture:** 3 **Lab:** 1

1314 Credit: 3 **Lecture:** 3 **Lab:** 1

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/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.

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.

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>.

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.

Corequisite College Algebra: Math 0314.C606 & Math 1314.C606
Fall 2024

Classroom	B011 (Basement of Downtown Center)	Time	T/Th 11:00 – 12:45 M/W – on your own time
Instructor	Traci Sanders	Phone	806-716-4616
E-mail	tsanders@southplainscollege.edu	Office	B021

Office Hours:

Monday	Tuesday	Wednesday	Thursday	Friday
10:45 – 11:30	10:45 – 11:00 12:45 – 2:30	10:45 – 11:30	10:45 – 11:00 12:45 – 2:30	8:30 – 11:00

Email Correspondence: 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!

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>

Brainfuse Live Tutoring: Log into the course in Blackboard. Find Books & Tools in the left menu bar. Click on view course and institution tools. In the pop-up box, scroll down until you see Brainfuse Live Tutoring. You may access Brainfuse tutors during the following times:

Monday – Thursday: 8pm-8am

6pm Friday – 8am Monday morning

Text: No textbook is required.

Required Materials: binder, notebook paper, pencils (please show your work in pencil), 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.

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

Blackboard Ultra 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.

Attendance: Course attendance will be taken. Per South Plains College math department policy, you may be administratively dropped from the course if your number of missed assignments or your number of missed classes goes over 20% of all assignments or classes. If you wish to drop this class, you should submit a [Student Initiated Drop Form](#) online. If possible, talk to your instructor first.

Hybrid Class Format: Half of our class time is allotted to online learning. It is your responsibility to print notes, view videos and complete homework on a daily basis. Monday and Wednesday lessons will be taught online in a video format. Tuesday and Thursday lessons will be taught during the face-to-face class. All tests will be face-to-face.

Mondays & Wednesdays (on your own time):

1. See the course calendar for which section needs to be completed on that day.
2. Print the notes, and watch the videos to fill in the notes for that section.
3. Complete the homework assignment for that section.

Tuesdays & Thursdays (class meetings from 11:00 to 12:45):

1. Bring to class: completed notes and homework from previous day's section, blank printed notes for that day's section
2. I will answer questions over notes and homework from previous section.
3. I will lecture over that day's section. Fill in your notes as I lecture.
4. Complete lab work for a grade.

Lesson Videos and Notes: There are videos and notes posted in Blackboard for each section. To find the videos and notes, click on the unit under Course Content and then the folder for the section on which you are working. All the notes will need to be printed. (I will print Section 1.1 for you.) On Mondays and Wednesdays, use the videos to fill in the notes. On Tuesdays and Thursdays, you will fill in the notes during class. If you have to miss class, you may use the videos to fill in the notes. On homework, labs, and tests, your work needs to follow the work as I have taught it. If your work comes from a math app rather than the notes I have given, you will not receive credit. Keep your notes organized, and always bring them to class. I recommend keeping your notes in a binder.

Homework: Homework assignments for each section are posted in Blackboard. Homework is located in the same folder as the videos and notes. Homework should be completed neatly 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 can't figure it out, circle the problem, and ask about it during class. The homework will help you prepare for labs and tests! Homework will be turned in on test days. You may earn one bonus point per homework assignment to be added to your test grade. To get the bonus point for the assignment, it cannot be missing more than two problems, and the work must be shown as taught in the videos and in class.

Labs: Approximately the last 30 minutes of class will be our lab time. The lowest three lab grades will be dropped. If you miss a lab, that lab grade will be a 0. There will not be any make-up or late labs. Here are the two different types of labs we will have:

1. Work on homework. As long as you actually work on the math homework, you will receive a 100 for these labs.
2. Work on an in-class assignment that will be turned in and graded. You will be able to use notes and homework. The lab may include problems from the notes.

Tests: There will be 6 tests and a comprehensive final exam. If for any reason you are going to miss a test, you must contact me PRIOR to the date of the test and arrange to take the test early. 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. Calculators are not allowed on Test 1 but may be used on the other tests.

Showing Work: To receive full credit on homework, labs, and tests, you must show all work that leads to your answers. The work must be legible, make sense and be easy to follow.

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

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

In the Blackboard gradebook, your course average will be called "Current Grade." 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

You will earn a letter grade for Math 1314. The grade for Math 0314 will be Pass/Fail. A passing grade for Math 0314 makes you TSI complete in math.

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 weekday, even if it's just a little.
- Remind yourself often of the math you have learned by looking back over your notes.
- Come to class on time and prepared to learn.
- Ask for help when needed.
- Print the notes and **focus** on the videos and lectures to take good notes. Try to understand as much as possible while taking notes.
- Thoroughly complete notes, homework, labs, and tests.
- Practice the problems repeatedly until you have full mastery of them.

Corequisite College Algebra Course Calendar Fall 2024

This is a tentative schedule. Any changes will be announced in class and posted in Blackboard. Assignments that will be graded are highlighted in yellow.

Grading Policy: Lab Average = 10%, Test Average = 70%, Final Exam = 20%
The lowest three lab grades will be dropped. There are no make-up or late labs.

	Monday	Tuesday	Wednesday	Thursday	Friday
1	Aug 26 Day One Checklist	Aug 27 Section 1.1	Aug 28 Section 1.1	Aug 29 Section 1.2 Lab 1	Aug 30
2	Sept 2 Labor Day Holiday	Sept 3 Section 1.3 Lab 2	Sept 4 Section 1.4	Sept 5 Section 1.5 Lab 3	Sept 6
3	Sept 9 Section 1.6	Sept 10 Section 2.1 & Review Lab 4	Sept 11 Review	Sept 12 Test 1 (Unit 1)	Sept 13
4	Sept 16 Section 2.2	Sept 17 Section 2.3 Lab 5	Sept 18 Section 2.4	Sept 19 Section 2.5 Lab 6	Sept 20
5	Sept 23 Section 2.6	Sept 24 Section 3.1 & Review Lab 7	Sept 25 Review	Sept 26 Test 2 (Unit 2)	Sept 27
6	Sept 30 Section 3.2	Oct 1 Section 3.3 Lab 8	Oct 2 Section 3.4	Oct 3 Section 3.5 Lab 9	Oct 4
7	Oct 7 Section 3.5	Oct 8 Section 4.2 & Review Lab 10	Oct 9 Review	Oct 10 Test 3 (Units 1 – 3)	Oct 11

8	Oct 14 Section 4.3	Oct 15 Section 4.4 Lab 11	Oct 16 Section 4.5	Oct 17 Section 5.1 Lab 12	Oct 18 Fall Break
9	Oct 21 Section 5.2	Oct 22 Section 5.3 Lab 13	Oct 23 Section 5.3 & Section 5.4	Oct 24 Section 6.1 & Review Lab 14	Oct 25
10	Oct 28 Review	Oct 29 Test 4 (Units 4 & 5)	Oct 30 Section 6.2	Oct 31 Section 6.3 Lab 15	Nov 1
11	Nov 4 Section 6.4	Nov 5 Section 6.4 Lab 16	Nov 6 Section 6.5	Nov 7 Section 7.1 & Review Lab 17	Nov 8 Online Registration Opens
12	Nov 11 Review	Nov 12 Test 5 (Unit 6)	Nov 13 Section 7.2	Nov 14 Section 7.3 Lab 18	Nov 15
13	Nov 18 Section 7.4	Nov 19 Section 7.5 Lab 19	Nov 20 Section 7.5	Nov 21 Section 8.1 & Review Lab 20	Nov 22
14	Nov 25 Review	Nov 26 Test 6 (Unit 7)	Nov 27 Thanksgiving Break	Nov 28 Thanksgiving Break	Nov 29 Thanksgiving Break
15	Dec 2 Section 8.3	Dec 3 Section 8.4 Lab 21	Dec 4 Review Last Day to Drop	Dec 5 Review	Dec 6
16	Dec 9	Dec 10 Final Exam 10:15 – 12:15	Dec 11	Dec 12	Dec 13

Section Titles

Unit 1: Algebra Basics

- 1.1 Integers, Exponents, and Order of Operations
- 1.2 Fractions and Order of Operations
- 1.3 Polynomials: Exponent Rules
- 1.4 Polynomials: Add, Subtract, Multiply, and Divide
- 1.5 Solve Linear and Absolute Value Equations
- 1.6 Solve Linear Inequalities

Unit 2: Factoring; Rational Expressions; Rational Equations

- 2.1 Factoring: GCF, Grouping, and Trinomials with $a = 1$
- 2.2 Factoring: Trinomials with $a \neq 1$ and Special Products
- 2.3 Summary of Factoring and Solve Quadratic Equations by Factoring
- 2.4 Simplify, Multiply, and Divide Rational Expressions
- 2.5 Find LCD and Solve Rational Equations
- 2.6 Add and Subtract Rational Expressions

Unit 3: Radicals; Quadratic Equations

- 3.1 Properties of Roots and Complex Numbers
- 3.2 Simplify and Rationalize Radical Expressions
- 3.3 Rational Exponents and Solve Radical Equations
- 3.4 Solve Quadratic Equations by Factoring and the Square Root Property
- 3.5 Solve Quadratic Equations by Completing the Square and Quadratic Formula

Unit 4: Functions

- 4.1 Distance, Midpoint, and Circles
- 4.2 Basics of Functions and Analyzing Graphs
- 4.3 Evaluating Functions and Symmetry
- 4.4 Increasing, Decreasing, and Piecewise Functions
- 4.5 Graphs and Transformations

Unit 5: Composition; Inverses; Linear Functions

- 5.1 Functions: Operations and Composition
- 5.2 Functions: Composition and Inverses
- 5.3 Slope and Graph Linear Functions
- 5.4 Equations of Lines; Parallel and Perpendicular Lines

Unit 6: Quadratic, Polynomial, & Rational Functions

- 6.1 Graph Quadratic Functions
- 6.2 Synthetic Division and Solve Polynomial Equations
- 6.3 Graph Polynomial Functions
- 6.4 Graph Rational Functions
- 6.5 Solve Polynomial and Rational Inequalities

Unit 7: Exponential & Log Functions

- 7.1 Exponential and Log Functions: Basics and Evaluating
- 7.2 Properties of Logs
- 7.3 Solve Exponential Equations
- 7.4 Solve Log Equations
- 7.5 Solve Systems of Equations in Two Variables

Unit 8: Systems of Equations

- 8.1 Solve Systems of Equations in Three Variables
- 8.2 Solve Nonlinear Systems
- 8.3 Solve Systems Using Matrices
- 8.4 Solve Systems Using Cramer's Rule