South Plains College
Common Course Syllabus: MATH 0314 / MATH 1314
Fall 2023

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 <u>Lubbock Downtown Center</u>

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 <u>may</u> 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 2023

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
7:45 – 10:15	8:00 – 9:00		8:00 – 9:00	7:45 – 11:15

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!

Disclaimer: The instructor reserves the right to alter any class policies/dates as deemed necessary by the instructor. If there are any changes, they will be announced **over Blackboard and via your SPC email.**

Showing Work: To receive full credit on 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.

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

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: https://southplainscollege.blackboard.com
Blackboard is an online course management system that will be used in 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 exams 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. I will check your notes from previous section as you are working on the lab.

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 in the main menu and then the section. 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. Keep your notes organized, and always bring them to class. I recommend keeping your notes in a binder. The course calendar shows which notes will be graded. The notes will be 50% of your lab grade for that day. To receive full credit, the notes need to be complete with the work shown as taught in the videos. Late notes will not be accepted.

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 20 - 30 minutes of class will be our lab time. The lowest four lab grades will be dropped. There are no make-up labs. For the days on the calendar that show notes due, the notes will be 50% of that day's lab grade. The other 50% will be one of the following:
1. Work on homework. As long as you actually work on the math homework, you receive full credit.
2. Work on an in-class assignment. You will be able to use notes and homework. I will show the solutions at the end of class, and you will check your own work and make corrections.

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.

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

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

There will be a category in the Blackboard gradebook titled Course Average. 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 2023

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 four lab grades will be dropped. There are no make-up labs.

	Monday	Tuesday	Wednesday	Thursday	Friday
1	Aug 28 Day One Checklist	Aug 29 Section 1.1	Aug 30 Section 1.2	Aug 31 Section 1.3 Lab 1 Notes: 1.2	Sept 1
2	Sept 4 **Labor Day Holiday**	Sept 5 Section 1.4 Lab 2	Sept 6 Section 1.5	Sept 7 Section 1.6 Lab 3 Notes: 1.5	Sept 8
3	Sept 11 Review	Sept 12 Test 1 (Unit 1)	Sept 13 Section 2.1	Sept 14 Section 2.2 Lab 4 Notes: 2.1	Sept 15
4	Sept 18 Section 2.3	Sept 19 Section 2.4 Lab 5 Notes: 2.3	Sept 20 Section 2.5	Sept 21 Section 2.6 Lab 6 Notes: 2.5	Sept 22
5	Sept 25 Review	Sept 26 Test 2 (Unit 2)	Sept 27 Section 3.1	Sept 28 Section 3.2 Lab 7 Notes: 3.1	Sept 29
6	Oct 2 Section 3.3	Oct 3 Section 3.4 Lab 8 Notes: 3.3	Oct 4 Section 3.5	Oct 5 Section 3.5 Lab 9 Notes: 3.5	Oct 6

7	Oct 9 Review	Oct 10 Test 3 (Units 1 – 3)	Oct 11 Section 4.2	Oct 12 Section 4.3 Lab 10 Notes: 4.2	Oct 13
8	Oct 16 Section 4.4	Oct 17 Section 4.5 Lab 11 Notes: 4.4	Oct 18 Section 5.1	Oct 19 Section 5.2 Lab 12 Notes: 5.1	Oct 20 **Fall Break**
9	Oct 23 Section 5.3	Oct 24 Section 5.4 Lab 13 Notes: 5.3	Oct 25 Review	Oct 26 Test 4 (Units 4 & 5)	Oct 27
10	Oct 30 Section 6.1	Oct 31 Section 6.2 Lab 14 Notes: 6.1	Nov 1 Section 6.3	Nov 2 Section 6.4 Lab 15 Notes: 6.3	Nov 3
11	Nov 6 Section 6.4	Nov 7 Section 6.5 Lab 16 Notes: 6.4	Nov 8 Review	Nov 9 Test 5 (Unit 6)	Nov 10 Online Registration Opens
12	Nov 13 Section 7.1	Nov 14 Section 7.2 Lab 17 Notes: 7.1	Nov 15 Section 7.3	Nov 16 Section 7.4 Lab 18 Notes: 7.3	Nov 17
13	Nov 20 Section 7.5	Nov 21 Section 7.5 Lab 19 Notes: 7.5	Nov 22 **Thanksgiving Break**	Nov 23 **Thanksgiving Break**	Nov 24 **Thanksgiving Break**
14	Nov 27 Review	Nov 28 Test 6 (Unit 7)	Nov 29 Section 8.1	Nov 30 Section 8.3 Lab 20 Notes: 8.1 Last Day to Drop	Dec 1

15	Dec 4 Section 8.3	Dec 5 Section 8.4 Lab 21	Dec 6 Review	Dec 7 Review	Dec 8
16	Dec 11	Dec 12 Final Exam 10:15 – 12:15	Dec 13	Dec 14	Dec 15

Section Titles

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

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

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

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

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

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

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

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