

South Plains College
Department of Mathematics & Engineering
Math 0314/1314 – College Algebra Support Course/College Algebra
Course Syllabus – Fall 2019

Instructor: Gina Becker, BSE, M Ed

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Scheduled Class Time: MATH 1314/0314 C251 MWF 9:00-9:50, TH 8:00 – 9:20;
MATH 1314/0314 C252 MWF 11:00-11:50, TH 9:30 – 10:50

Phone: 806-716-4684

Office Hours:

	Monday	Tuesday	Wednesday	Thursday	Friday
	8:45 – 9:00	7:45 – 8:00	8:45 – 9:00	7:45 – 8:00	8:45 – 9:00
	9:50 – 11:00	10:50 – 11:15	9:50 – 11:00	10:50 – 11:15	9:50 – 11:00
	11:50 – 12:15		11:50 – 12:15		11:50 – 12:15
	1:50 – 2:15		1:50 – 2:15		1:50 – 2:15

or by appointment

Textbook: Knewton Access Kit: You will be able to access the kit, when you log in to Blackboard using your SPC Student ID and password. You may also purchase the kit at the SPC Bookstore at Reese Center or online at www.knewton.com. There is no physical textbook for this course. The access kit online sells for approximately \$40. The SPC bookstore price is approximately \$58.

Supplies: Pencils, paper, straightedge, and graph paper. **Only a basic non-graphing calculator (such as a TI-30) will be allowed in class.** Graphing calculators and calculators on cell phones or other electronic devices will NOT be allowed during tests or in-class assignments.

General Education Core Objectives:

1. **Critical Thinking:** Students will develop habits of mind, allowing them to appreciate the processes by which scholars in various disciplines organize and evaluate data and use the methodologies of each discipline to understand the human experience.
2. **Communication Skills:** Students will communicate ideas, express feelings and support conclusions effectively in written, oral and visual formats.
3. **Empirical and quantitative Skills:** Students will develop quantitative and empirical skills to understand, analyze and explain natural, physical and social realms.

Course Description: The College Algebra Support Course (MATH 0314) is the study of the basic algebraic concepts necessary for success in MATH 1314, to include order of operations, graphing, polynomials, factoring, exponent rules, radical and rational expressions, and the solution of equations and inequalities. This course is not applicable toward any degree. Prerequisites: Math level 6, Reading level 7. Co-requisite: MATH 1314 (3:3:1)

In College Algebra (MATH 1314), the study and application of common algebraic functions, including polynomial, exponential, logarithmic, and rational problems are addressed. With additional instruction in matrices and systems of equations & inequalities. A grade of C or better is required from MATH 0314, MATH0324, or MATH0320. (3:3:1)

Course Requirements: To achieve success in this class, a student should attend all class meetings, take notes and participate in class, and complete all homework assignments and examinations, including the final examination. There are no exemptions for the final exam.

Attendance Policy: Your attendance and active participation is vital to your success in this class. Attendance will be taken at the beginning of each class meeting. Should you arrive after attendance has been taken you will be marked as tardy for that class. Two tardies will be considered as one absence. Leaving class for extended periods of time during class or leaving class early will result in a tardy. If you exceed 4 absences during the course of the semester, you may be dropped from this course with a grade of X or F.

Course Expectations: Attend class, be on time, do homework, and be prepared to participate. Turn off and put away all electronic devices when you enter the classroom and keep off for the duration of the class.

Student Learning Outcomes/Competencies:

Math 0314

Upon successful completion of this course, the student will be able to:

1. Perform order of operations of real numbers.
2. Perform operations using integer and rational exponents.
3. Factor and perform operations with polynomials.
4. Simplify and perform operations with rational expressions.
5. Simplify and perform operations with radical expressions.
6. Solve linear equations and equalities of a single variable.
7. Solve quadratic equations by factoring and quadratic formula.
8. Solve systems of two linear equations in two variables.
9. Graph linear and quadratic functions.

Math 1314

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.

Assignments and Grading:

Homework assignments will be given daily. For best results, work each problem on lined notebook paper. Enter your answer. If you are unsure of the answer, select the More Instruction button. **Each assignment is due by 11:00 pm on the next class day.** Any incomplete assignment will receive partial credit. Each homework assignment is worth 0.2 points.

Quizzes will be given weekly on non-exam weeks and no makeup quizzes will be offered. Each quiz is worth 1 point. Missing a quiz will result in 0 points for that quiz.

Exams: Your course grade will include seven unit exams. Each exam will be worth 9 points and the final comprehensive exam will be worth 20 points. Your final exam grade will take the place of your lowest exam grade, if it is a higher score and you have fewer than 3 zeroes.

Math 0314

	Units	Points each	Total Points
Homework	34	x 0.2	17
Quizzes	3	x 1	3
Exams	3	x 20	60
Final Exam	1	x 20	20
			100

The homework assignments are support topics only.

Quizzes and exams will count for both grades

*Final Math 0314 grade may be higher if final Math 1314 grade results in a higher grade.

Your final point value will determine your letter grade for this class and will be determined by the following scale: A - 90-100 B - 80-89 C - 70-79 D - 60-69 F - 0-59

If you pass Math 0314 but not the Math 1314 portion of the course, you will be able to register for Math 1314 in future semesters.

Math 1314

	Units	Points each	Total Points
Homework	55	x 0.2	11
Quizzes	6	x 1	6
Exams	7	x 9	63
Final Exam	1	x 20	20
			100

The homework assignments are the College Algebra assignments.

Tutoring: Students may obtain free tutoring through the Learning Center in Holden Hall.

Classroom Civility: Students are expected to be respectful of their fellow classmates and maintain a classroom environment that is conducive to learning. Turn off all cell phones and other electronic devices before entering the room. The instructor reserves the right to ask a student to leave if his/her cell phone is left on and disrupts the class. Refrain from using offensive language, tobacco or vape products, or otherwise being disruptive in class. Food and/or drinks are NOT allowed in the classroom.

Academic Honesty: Students are expected to uphold the ideas of academic honesty. Academic dishonesty includes, but is not limited to, cheating on tests, collaborating with another student during a test, copying another student's work, using materials not authorized, and plagiarism. Students who do not follow the academic honesty policy will receive a grade of zero for the assignment, and may be dropped from the course with an F, or face possible suspension from the college. Math apps, smart phones, smart watches and graphing calculators are not allowed in this class.

Equal Opportunity: South Plains College strives to accommodate the individual needs of all students in order to enhance their opportunities for success in the context of a comprehensive community college setting. It is the policy of South Plains College to offer all educational and employment opportunities without regard to race, color, national origin, religion, gender, disability or age.

Diversity and Learning Environment: 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.

ADA Accommodation: Students with disabilities, including but not limited to physical, psychiatric or learning disabilities, who wish to request accommodations in this class should notify the Special 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 Special Services Coordinator. For more information, call or visit the Special Services Office in Reese Center Building 8, 806-716-4675 or call or visit the Disability Services Office in the Student Health & Wellness Office, 806-716-2577.

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, please refer to the SPC policy at: (http://www.southplainscollege.edu/human_resources/policy_procedure/hhc.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.

Sexual Misconduct: As a faculty member, I am deeply invested in the well-being of each student I teach. I am here to assist you with your work in this course. If you come to me with other non-course-related concerns, I will do my best to help. It is important for you to know that all faculty members are mandated reporters of any incidents of sexual misconduct. That means that I cannot keep information about sexual misconduct confidential if you share that information with me. Dr. Lynne Cleavinger, the Director of Health & Wellness, can advise you confidentially as can any counselor in the Health & Wellness Center. They can also help you access other resources on campus and in the local community. You can reach Dr. Cleavinger at 716-2563 or lclevinger@southplainscollege.edu or go by the Health and Wellness Center. You can schedule an appointment with a counselor by calling 716-2529.

Week	Monday	Tuesday	Wednesday	Thursday	Friday
1	August 26 Syllabus Intro to Knewton Test	August 27 0314.1 Order of Operations and Simplifying Expressions 0314.2 Adding and Subtracting Integers	August 28 0314.3 Multiplying and Dividing Integers 0314.4 Multiplying and Dividing Fractions	August 29 0314.5 Adding and Subtracting Fractions 0314.6 The Distributive Property	August 30 0314.7 Application Problems and the Subtraction and Addition Properties of Equality 1.1 Solve Linear Equations in One Variable
2	September 2 HOLIDAY	September 3 0314.8 Application Problems and the Division and Multiplication Properties of Equality 1.2 Distance, Rate, and Time and Literal Equations	September 4 1.3 Word Problems with Linear Equations	September 5 0314.9 Introduction to Integers and Absolute Value 0314.10 Inequalities, the Number Line, and Interval Notation	September 6 Exam 1
3	September 9 1.4 Absolute Value Equations and Inequalities 0314.11 Order of Operations and Simplifying Expressions	September 10 0314.12 Adding and Subtracting Polynomials 0314.13 Multiplying Polynomials	September 11 12th Class Day 2.1 Relations and Functions 2.2 Domain and Range of Functions	September 12 2.3 Combinations of Functions 0314.14 Reading Graphs and the Rectangular Coordinate System	September 13 0314.15 Graphing Linear Equations 2.4 Cartesian Coordinates and Distances
4	September 16 0314.16 Intercepts on the Coordinate Plane 0314.17 Understanding Slope 0314.18 The Slope Formula	September 17 0314.19 Slope- Intercept Form 0314.20 Parallel and Perpendicular Lines 2.5 Identify Slopes and Intercepts	September 18 2.6 Find Linear Equations 2.7 Interpretations of Linear Functions	September 19 0314.21 The Greatest Common Factor and Factoring by Grouping 0314.22 Factoring Trinomials with a Leading Coefficient of 1	September 20 Exam 2
5	September 23 0314.23 Factoring Trinomials with a Leading Coefficient Other than 1	September 24 0314.24 Factoring Special Products 3.1 Solve Quadratic Equations by Factoring	September 25 3.2 Complete the Square 3.3 Quadratic Formula	September 26 4.1 Solving Systems of Linear Equations 0314.25 Domain of Rational Expressions and Simplifying Rational Expressions	September 27 0314.26 Multiplying and Dividing Rational Expressions
6	September 30 Exam 3	October 1 0314.27 Adding and Subtracting Rational Expressions with a Common Denominator 0314.28 Adding and Subtracting Rational Expressions with Unlike Denominators	October 2 4.2 Solve Rational Equations	October 3 0314.29 Square Roots and the Real Number System 4.3 Basics of Complex Numbers	October 4 4.4 Operations on Complex Numbers

7	October 7 4.5 Solve Radical Equations	October 8 4.6 Piecewise Functions 4.7 Graphical Properties of Functions	October 9 4.8 Symmetry Transformations of Functions	October 10 0314.30 Parabolas and Their Properties 0314.31 Graphing Quadratic Equations	October 11 Exam 4
8	October 14 5.1 Characteristics of Parabolas 5.2 Graphs of Quadratic Functions	October 15 5.3 Graphs of Circles 6.1 Adding and Subtracting Polynomials	October 16 0314.32 Multiplying Polynomials 6.2 End Behavior of Polynomial Functions	October 17 6.3 Local Behavior of Polynomial Functions	October 18 6.4 Write and Graph Polynomial Functions
9	October 21 6.5 Long Division of Polynomials	October 22 6.6 Synthetic Division and Remainder Theorem 0314.33 Domain of Rational Expressions and Simplifying Rational Expressions	October 23 6.7 Asymptotic Behavior of Rational Functions	October 24 6.8 Graphs and Applications of Rational Functions	October 25 Exam 5
10	October 28 0314.34 Solving One-Step Linear Inequalities	October 29 6.9 Rational and Quadratic Inequalities	October 30 7.1 Combinations of Functions	October 31 7.2 Evaluate Composite Functions 7.3 Properties of Composite Functions	November 1 7.4 Inverse Function Values 7.5 Find Inverse Functions
11	November 4 0314.35 Product Properties of Exponents 8.1 Evaluate and Write Exponential Functions	November 5 8.2 Applications of Exponential Functions and Base e 0314.36 Product Properties of Exponents	November 6 Exam 6	November 7 8.3 Exponential Function Graphs 8.4 Relate Logarithms and Exponents	November 8 8.5 Evaluate Logarithmic Expressions
12	November 11 8.6 Logarithmic Function Graphs	November 12 0314.37 Quotient Properties of Exponents and Dividing Monomials 8.7 Basic Properties of Logarithms	November 13 8.8 Rewrite Logarithmic Expressions Using Properties	November 14 Last Day to Withdraw 8.9 Solve Exponential Equations 8.10 Solve Logarithmic Equations	November 15 8.11 Applications of Exponential and Logarithmic Functions
13	November 18 9.1 Systems of Linear Equations in Three Variables	November 19 9.2 Systems of Two Nonlinear Equations	November 20 Exam 7	November 21 9.3 Linear Inequalities in Two Variables 9.4 Graphing Nonlinear Inequalities and Systems of Inequalities	November 22 10.1 Introduction to Matrices 10.2 Matrix Multiplication
14	November 25 10.3 Matrices and Gaussian Elimination	November 26 Review	November 27 Thanksgiving	November 28 Holiday -----	November 29
15	December 2 10.4 Solving Systems with Cramer's Rule	December 3 Review	December 4 TTU Last Class Day Review		