Instructor: Thomas Johnson, M.S. – Assistant Professor of Mathematics

Office: PC 101 G   **Telephone:** (806)716-4318

Email: tjohnson@southplainscollege.edu

Office Hours in Plainview, TX:

 M   2:00 PM to 3:30 PM

T/H   10:00 AM to 11:30 AM; 3:00 PM to 4:00 PM

F   9:30 AM to 11:30 AM

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. Credits (3,3,1)

    College Algebra (MATH 1314) is the study and application of common algebraic functions, including polynomial, exponential, logarithmic, and rational problems are addressed. Matrices and systems of equations & inequalities are also addressed. Credits (3,3,1)

Prerequisite:
> TSIA1: ABE 5-8 // TSIA2: Diagnostic 3 or Content Strand Level 2
> TSIA1: No ABE and score <350 // TSIA2: Diagnostic 4 or Content
> Strand Level 3

Textbook: Imbedded in Blackboard © Course
> Abramson, J., North, S.; *College Algebra with Corequisite Support 2e*; OpenStax.org; Rice University; Houston, TX; Digital Version ISBN-13: 978-1-951693-46-6, 2021; Rev. 06-22-2023.

Attendance: 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. As a Face-to-Face course, the student should attend at least 80% of the course in the classroom. Should absences exceed 20%, the instructor has the right to drop the student with a grade of F or an X, depending on the instructor's discretion. Extenuating circumstances will be considered.

Course Objectives: Successful completion of this course should reflect mastery of the preceding competencies.

Core Objectives:
Communication Skills: Effective development, interpretation, and expression of ideas through written, oral, and visual communication.
Critical Thinking: Creative thinking, innovation, inquiry, analysis, evaluation, and synthesis of information.
Empirical and Quantitative Competency Skills: The manipulation and analysis of numerical data or observable facts resulting in informed conclusions.

Supplementary Course Information: Blackboard is the online course management system that will be utilized for this course. This course syllabus, as well as any class handouts can be accessed through Blackboard. Login at http://spc.blackboard.com. The user name and password should be the same as the MySPC and SPC email.
>   User name: first initial, last name, and last 4 digits of the Student ID
>   Password: Original CampusConnect Pin No. (found on SPC acceptance letter)

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

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
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.
6. Solve inequalities.

Course Evaluation: There will be departmental FINAL EXAM questions given by all instructors.

Assignments & Grading: Homework assignments are posted in Blackboard®. Please make certain all materials accompany you to each class meeting. Daily work (homework) will count for 65%, Midterm Exam will count for 15%, and the Final Exam will count for 20% of the Final Grade. Your final average in the course will determine the letter grade posted on your transcript.

Grade is determined by the following scale: A (90-100%), B (80-89%), C (70-79%), D (60-69%), F (0-59%)

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; (continued on next page.)
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 Conduct: The Student "Code of Conduct" will be followed in this course. You are expected to be respectful to others in the classroom. Please SILENCE phones before entering class and assist in maintaining a classroom environment conducive to learning. Any student disrupting the learning environment will be asked to leave and may be dropped from the course.

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: Students with disabilities, including but not limited to physical, psychiatric, or learning disabilities, who wish to request ADA Sec. 504 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. For more information, call or visit the Disability Services Office in the Student Health & Wellness Office, 806-716-2577, or at the Plainview, TX Campus main office, 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 for assistance.

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.

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.

Week 01: 1/13 – 1/17
    1.1 Real Numbers: Algebra Essentials   odds 1 – 67.
    1.2 Exponents and Scientific Notation   odds 1 – 59.
    1.3 Radicals and Rational Exponents   odds 1 – 63.

Week 02: 1/20 – 1/24
    1.4 Polynomials   odds 1 – 51.
    1.5 Factoring Polynomials   odds 1 – 43.
    1.6 Rational Expressions   odds 1 – 49.

Week 03: 1/27 – 1/31
    2.1 The Rectangular Coordinate Systems and Graphs   odds 1 – 47.
    2.2 Linear Equations in One Variable   odds 1 – 53.
    2.3 Models and Applications   odds 1 – 53.

Week 04: 2/3 – 2/7
    2.4 Complex Numbers   odds 1 – 43.
    2.5 Quadratic Equations   odds 1 – 41.
    2.6 Other Types of Equations   odds 1 – 41.

Week 05: 2/10 – 2/14
    3.1 Functions and Function Notation   odds 1 – 83.
    3.2 Domain and Range   odds 1 – 53.
    3.3 Rates of Change and Behavior of Graphs   odds 1 – 31.

Week 06: 2/17 – 2/21
    3.4 Composition of Functions   odds 1 – 41.
    3.5 Transformation of Functions   odds1 – 29.
    3.6 Absolute Value Functions   odds 1 – 31.
    3.7 Inverse Functions   odds 1 – 21.

Week 07: 2/24 – 2/28
    4.1 Linear Functions   odds 1 – 87.
    4.2 Modeling with Linear Functions   ALL 5 – 18.

Week 08: 3/3 – 3/7
    5.1 Quadratic Functions   odds 1 – 39.
    5.2 Power Functions and Polynomial Functions   odds 1 – 45.
    5.3 Graphs of Polynomial Functions   odds 1 – 51.
    5.4 Dividing Polynomials   odds 1 – 53.

Week 09: 3/10 – 3/14
Midterm Review and Midterm Exam

                        3/17 – 3/21 Spring Break

Week 10: 3/24 – 3/28
    5.5 Zeros of Polynomial Functions   odds 1 – 55.
    5.6 Rational Functions   odds 1 – 53.
    5.7 Inverses and Radical Functions   odds 1 – 49.

Week 11: 3/31 – 4/4
    6.1 Exponential Functions   odds 1 – 49.
    6.2 Graphs of Exponential Functions   odds 1 – 45.
    6.3 Logarithmic Functions   odds 1 – 63.
    6.4 Graphs of Logarithmic Functions   odds 1 – 55.

Week 12: 4/7 – 4/11
    6.5 Logarithmic Properties   odds 1 – 37.
    6.6 Exponential and Logarithmic Equations   odds 1 - 63
    6.7 Exponential and Logarithmic Models   odds 1 – 21.

Week 13: 4/14 – 4/18
      7.1 Systems of Linear Equations: Two Variables   odds 1 – 45.
      7.2 Systems of Linear Equations: Three Variables   odds 1 – 37.
      7.3 Systems of Nonlinear Equations and Inequalities: Two Variables
                                      Only 7, 9, 25, 27, 41.
Week 14: 4/21 – 4/25
      7.5 Matrices and Matrix Operations   odds 1 – 53.
      7.8 Solving Systems with Cramer's Rule   odds 1 – 43.
Week 15: 4/28 – 5/2
      Review of equations of parabola and circles using the Complete the Square Method.
      By Mr. J

5/5 – 5/8… Final Exam Week, FINAL EXAM TBD