

South Plains College
Mathematics Department
College Algebra – MATH 1314-376
Olton High School Dual Credit Class
Course Syllabus
Fall 2020

Instructor: Charles Tabor
Email: ctabor@oltonisd.org
Office Hours: Call (806) 240-5591

Course Description: MATH 1314. COLLEGE ALGEBRA. (3:3:1) Prerequisite: Two units of high school algebra or MATH 0320. A standard course in college algebra. Quadratic equations; ratio and proportion; variation, binomial theorem; progressions; inequalities; complex numbers; theory of equations; determinants and matrices; linear programming; mathematical induction; permutations and combinations. (copied from the current SPC catalog)

Core Objectives:

Communication Skills: Effective development, interpretation, and expression of ideas through written, oral, and visual communication.

- Develop, interpret, and express ideas through written communication.
- Develop, interpret, and express ideas through oral communication.
- Develop, interpret, and express ideas through visual communication.

Critical Thinking: Creative thinking, innovation, inquiry, analysis, evaluation, and synthesis of information.

- Generate and communicate ideas by combining, changing, and reapplying existing information.
- Gather and assess information relevant to a question.
- Analyze, evaluate, and synthesize information.

Empirical and Quantitative Competency Skills: The manipulation and analysis of numerical data or observable facts resulting in informed conclusions.

- Manipulate and analyze numerical data and arrive at an informed conclusion.
- Manipulate and analyze observable facts and arrive at an informed conclusion.

Student Learning Outcomes/Competencies*:

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

(Textbook sections indicated in parentheses.)

1. Demonstrate and apply knowledge of properties of functions, including domain and range, operations, compositions and inverses. (2.1-2.4, 2.7)
2. Recognize and apply polynomial, rational, radical, exponential and logarithmic functions and solve related equations. (1.2-1.7, 3.1-3.6, 4.1-4.4)
3. Apply graphing techniques. (2.5-2.6, 3.1-3.6)
4. Evaluate all roots of higher degree polynomial and rational functions. (3.1-3.3)
5. Recognize, solve and apply systems of linear equations using matrices. (5.1-5.2, 5.4-5.5, 6.1, 6.5)

**Developed by the Texas Coordinating Board and the Faculty of South Plains College's Math and Engineering Department.*

Course Objectives: Successful completion of this course should reflect mastery of the following objectives. Chapter and section numbers are indicated in parentheses.

1. Solve and graph problems involving linear, quadratic, exponential, and logarithmic functions; (1.2, 1.3, 1.5, 1.6, 2.1, 2.2, 2.3, 2.4, 3.1, 4.1, 4.2, 4.3, 4.4)

2. Solve and graph linear, quadratic, and rational inequalities; (1.7, 3.6, 5.5)
3. Identify and simplify complex numbers; (1.4)
4. Apply midpoint, distance, and circle formulas; (2.8)
5. Analyze and graph polynomial functions; (3.2, 3.3, 3.4)
6. Analyze and graph rational functions; (3.5)
7. Create and solve systems of equations with algebraic techniques, with matrix techniques, and with determinants; (5.1, 5.2, 5.4, 6.1, 6.5)
8. Apply the Binomial Theorem to expand binomials of higher degree. (8.5)

Textbook: The textbook needed for this course may be any one of the following:

- Blitzer, R. (2017). College Algebra, 5th ed. New Jersey: Pearson Prentice Hall.

Attendance: Attendance and effort are the most important activities for success in this course. Class attendance may be taken at any time during the class period, so please do not be late or leave early. You may be dropped from this course with a grade of X or F if you are absent four consecutive classes or if you exceed six absences throughout the semester. Be on time and turn off any cell phones or pagers before entering the classroom.

Assignments & Grading: Homework assignments will be made at each class meeting. Quizzes may be administered at any time. Keep all class materials (notes, handouts, homework, quizzes, and exams) organized in a folder. These materials are subject to be turned in for grading at any time. Please make certain all materials accompany you to each class meeting. No late assignments will be accepted. Daily work (homework, quizzes, notebook) will count for 40% of the final grade, while all exams count for 60% of the final grade. Expect major exams (15% each) throughout the course and a cumulative final exam (20%) at the end of the course. Your final average in the course will determine the letter grade posted on your transcript. This grade is determined by the following scale: A (90-100%), B (80-89%), C (70-79%), D (60-69%), F (0-59%).

Supplies: You will need a scientific or graphing calculator, graph paper, and a folder..

Student Conduct: You are expected to be respectful to others in the classroom. Please 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.

Disabilities 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.

Non-Discrimination Statement

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.