

Sarah Kidd
Graham High School and South Plains College
Fall 2018 Math1314 College Algebra Syllabus**Contact Information**

Instructor: Sarah Kidd

Room Number: 216 - GHS

Conference Period: 1st period 8:00 – 8:45

Phone: 940-549-4030 x 1216

E-mail: sarah.kidd@grahamisd.com**Course Description**

This is a standard course in college algebra. Quadratic equations; ratio and proportion; variation; binomial theorem; inequalities; complex numbers; theory of equations; determinants and matrices.

Course Purpose

The purpose of the course is to provide a fundamental background in algebra to meet the mathematics requirement for the core curriculum and to provide a basis for further study in mathematics.

Student Learning Outcomes/Competencies

Successful completion of this course should reflect mastery of the following objectives. The course objectives the student will be able to meet are:

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.

Supplies

- 1.) Pencil
- 2.) Notebook Paper or spiral for Notes and Homework
- 3.) Laptop
- 4.) Highlighter and/or colored pencils for annotating your notes
- 5.) Textbook: *Texas Algebra 2*, Holliday, 2007, McGraw-Hill/Glencoe
- 6.) _____

Class Rules

- 1.) Follow directives.
- 2.) Be prepared.
- 3.) Be respectful.
- 4.) Participate in class.

Consequences

- 1.) Verbal warning
- 2.) One-on-one conference in hallway and parent contact
- 3.) Office Referral

Tardies

If you are tardy to class, it will be recorded in the attendance system. Once you have reached 3-5 you will be assigned lunch detention, 6-7 will be 3 days of lunch detention, and 8 or more will be ISS.

Grading

- 1.) Your six weeks grades will consist of the following:
 - a. Tests.....30% (one test per six weeks)
 - b. Quizzes.....50% (one per week)
 - c. Notes and Reflection check.....20% (one per week)
- 2.) The semester average and final SPC grade will be the 3 six weeks of the semester and the final averaged together.
 - a. Expect to put in an average of 45 minutes of studying and homework every night for this class.
 - b. Notes and reflections are due the day of the quiz.
 - c. There will always be a quiz on Tuesdays unless a test is scheduled.
 - d. I will drop your lowest quiz grade each six weeks.

Class Procedures

In order for the class to operate smoothly and to use time wisely, I have prepared a list of class procedures.

Food and Drink

No food or drink is allowed in class except for bottled water.

Agenda

The agenda for the day will be posted on the calendar board along with the date and other important information. It will always be in the same place.

Keeping Notebooks

****VERY IMPORTANT**** *DO NOT THROW AWAY ANY OF YOUR WORK, QUIZZES, HANDOUTS, TESTS, OR NOTES FOR THIS CLASS!!!* You will need them to study for quizzes and tests.

- Date and Title all of your notes, homework, quizzes, tests, etc. to make organizing the notebook easier.
- Put Titles and Subtitles on your notes as you are taking them.
- Every day after taking notes annotate them before you start on homework assignments
 - Write possible quiz questions in the margin of your notes. Highlight their answers in the notes.
 - Write your own questions about things you do not understand from the notes in the margin with a checkbox to be checked when you get the question answered.
 - Finally, annotate and reflect over the class/video notes BEFORE starting on the homework problems. To annotate your notes, you will fill in needed missing words, complete your thoughts in writing, and clarify your abbreviations. It includes adding on to the notes the ideas you remember having discussed that you didn't have time to write. **THIS NEEDS TO BE DONE THE SAME DAY BEFORE YOU FORGET THOSE IDEAS!!!** Finally write a 3-5 sentence reflection of the topics covered at the end of your notes.

Quizzes

Be prepared for a quiz every Tuesday we meet unless a test is scheduled. Prepare by Annotating, Condensing, and Studying your notes and completing homework assignments.

Make-up work

Students who are absent are responsible for picking up their own makeup work from the labeled folders on the cabinet and checking on the google classroom site. It is your responsibility to turn in work on time and to ask questions if you are unclear about your assignment or the notes. You will be allowed one week from the day of absence to make up any missed quizzes. It is your responsibility to turn in work on time and to ask questions if you are unclear about your assignment or the notes.

DON'T FORGET TO MAKE UP QUIZZES!! YOU KNOW YOU HAVE THEM!

Borrowing Supplies

If you find yourself without the necessary supplies for class, first ask a friend if you can borrow, but I do have some available to you for in class use. To borrow supplies, you must leave a shoe at my desk and may get it back when you return the borrowed item.

How to Be Successful

The homework is not a means of torture, but rather an opportunity for you to practice the skills you will be responsible for demonstrating on quizzes and tests. To do well on quizzes and tests (80% of your grade), you will need to complete the homework. Simply writing the problem and the answer, copying from a friend, or using a solutions app that shows you the steps and copying them down are not methods of “doing homework”. **Remember your effort is key to your success. You have to focus your effort on being able to complete the problems on a quiz/exam without any outside resources.**

Where to Get Help:

- Me!!!! – I am happy to help during “office hours” which would be during lunch and flex period.
- Each other!!! – I strongly recommend forming study groups so that you can work with others. Networking is an essential tool both in the classroom and in the workforce.
- Your book is a great resource.
- You can also seek videos from www.patrickjmt.com and www.khanacademy.org.

Academic Honesty: You are expected to uphold the ideals of academic honesty. All work that is graded must be your own. This policy applies to all work attempted in this course. If this policy is violated the student will receive an F for the assignment and will be dropped with an F. For more details on what is considered cheating, see the South Plains College catalog.

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.

Disability 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 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 the Student Services Building, 894-9611 ext. 2529, 2530

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. (copied from current South Plains College Faculty Handbook)

Reference Textbook: *Texas Algebra 2*, Holliday, 2007, McGraw-Hill/Glencoe

Topics to be covered in this course may include:

1. Review of Algebra I topics: Arithmetic with Polynomials, Factoring techniques, Properties of Reals and Equality, Language of Relations and Functions, etc.
2. Using Sign Charts
3. Set Theory
4. Composition and Inverses of Functions
5. Absolute Value: properties, definition, graphs involving, etc.
6. Linear Functions
7. Transformations of Parent Graphs (Including Greatest Integer and Absolute Value)
8. Linear Systems of Equalities and Inequalities (Determinants, Cramer's Rule, Inverse Matrices)
9. Definitions and Properties of Polynomials and Polynomial functions (Descartes Rule of Sign's, end behavior, multiple roots property, etc.)
10. Synthetic Division
11. Rational exponents
12. Solving equations and inequalities with radical expressions
13. Working with Complex numbers
14. Applications of Quadratic Functions
15. Analysis of Rational Functions
16. Solving equations and inequalities involving rational expressions
17. Properties of Exponential and Logarithmic functions
18. Solving equations with exponentials and logs
19. Distance, Midpoint, and Equation of a Circle
20. Fundamental Theorem of Algebra
21. Binomial Theorem and Probability