Instructor: Laura Morris
Room: D-145
Conference: 6th period
Email: lmorris@burnetcisd.net
Tutorials:

7:45 – 8:04, T – F
3:45 – 4:15, M, T, & Th
Or by appointment

** All rules and procedures outlined in the Student Handbook apply to this classroom, as well as the expectations and procedures that follow.

Contact Information:
Email is the best way to contact me for almost any need. There will also be class information posted on google classroom. Some of the topics will have videos posted on google classroom so that students may watch them at home. The classroom code is hd5rsvw. My teacher webpage is located on the Burnet school website. I will also be posting calendars, the syllabus, solutions, and other pertinent announcements on ASU’s Blackboard site. Please ensure you have access.

Student Learning Outcomes

1. The students will demonstrate an understanding of factual knowledge including the mathematical notation and terminology used in this course. Students will read, interpret, and use the vocabulary, symbolism, and basic definitions used in precalculus pertaining to the real numbers; exponents and radicals; polynomials, factoring, and rational expressions; equations and inequalities; functions; polynomial and rational functions; inverse functions; exponential and logarithmic functions; graphs and their transformations; six trigonometric functions; types of angle measure and notation; parts of triangles and circles; parabolas, ellipses, and hyperbolas; asymptotes; and vectors.

2. The students will describe the fundamental principles including the mathematical rules and theorems arising from the concepts covered in this course. Students will identify and apply the laws and formulas that result directly from the definitions; for example, rules of exponents, exponential and logarithmic properties, the quadratic formula, slope and formulas for the equations of lines, the fundamental trigonometric identities, properties of angles and triangles, characteristics of the trigonometric functions and inverse trigonometric functions, formulas of the conic sections, translation of axes, and formulas relating polar and rectangular coordinates.

3. The students will apply course material using techniques and procedures covered in this course to solve problems. Students will utilize the facts, formulas, and the techniques learned in this course to simplify algebraic expressions; graph functions; solve equations; prove trigonometric identities; solve trigonometric equations; solve various types of triangle
problems; and recognize and graph trigonometric and inverse trigonometric functions, conic sections, algebraic curves, polar equations, and parametric equations.

4. **The students will develop specific skills, competencies, and thought processes sufficient to support further study or work in this field or related fields.** Students will acquire a level of proficiency in the fundamental concepts and applications in precalculus necessary for success in calculus.

**Course Content**

**Textbook:** Precalculus – OpenStax; Senior contributing author: Jay Abramson, Arizona State University. The following chapters including the particular sections listed are covered.

**Topics from Algebra:** Exponents and Radicals; Algebraic Expressions; Equations; Inequalities.

3. **Polynomial and Rational Functions:** Complex Numbers; Quadratic Functions; Power Functions and Polynomial Functions; Graphs of Functions; Zeros of Polynomial Functions; Rational Functions; Inverses and Radical Functions; Modeling Functions.

4. **Inverse, Exponential, and Logarithmic Functions:** Inverse Functions; Exponential Functions and their Graphs; The Natural Exponential Function; Logarithmic Functions; Properties of Logarithms; Exponential and Logarithmic Equations; exponential and Logarithmic Models.

5. **The Trigonometric Functions:** Angles; Unit Circle; Trigonometric Functions of Angles; Trigonometric Functions of Real Numbers; Sine and Cosine Functions; The other Trigonometric Functions; Right Triangle Trigonometry.

6. **Periodic Functions:** Graphs of the Sine and Cosine Functions; Graphs of other Trigonometric Functions; Inverse Trigonometric Functions.

7. **Trigonometric Identities and Equations:** Solving Trigonometric Equations with Identities; The Sum and Difference Identities; Multiple-Angle Formulas; Modeling with Trigonometric Equations.

8. **Applications of Trigonometry:** The Law of Sines; The Law of Cosines; Vectors; The Dot Product; Polar Coordinates and their Graphs.

10. **Analytic Geometry:** Parabolas; Ellipses; Hyperbolas; Plane Curves and Parametric Equations.

11. **Sequences, Probability and Counting Theory:** This chapter is for students transitioning to AP Statistics next year.

12. **Introduction to Calculus:** This chapter is for students transitioning to AP Calculus next year.

**Class Rules:**

- Bring your own supplies every day and follow all directions given.
- Cell phones and electronics are not to be heard or seen unless otherwise stated. 
  
  *1st offense, I take it for the class period, 2nd offense, I take it for class and issue a detention. 3rd (or more) offense and your electronic devise will be given to the office.*
- Be in your seat when the bell rings, working on the “Warmup” in your journal.
- Model respect for others by listening when others are talking, using appropriate language, and controlling your own behavior.
Tardy Policy:  
Students who are late to class will be sent to the office to get the tardy slip that will allow them to come to class. If you do not return to class promptly, you will be marked absent and are then considered truant.

Academic Honesty Policy  
Cheating will NOT be tolerated. Any student caught on or with their phone during a test, or cheating in any way on any assignment will receive a 0 for that grade. All personal items will be kept in a safe place in the classroom during tests.

Warm-up Expectations:  
Warm-ups are done daily and are not a choice. The question and answer need to be written in your journal every day. If you are absent, write the date you were absent and the word “absent” before you complete the current day’s warm-up. This will be at least 1 daily grade each 6 weeks.

Homework Policy:  
You will be assigned homework daily (with a few exceptions). A quiz will be given daily based on the assigned homework. If a student misses the quiz, they are to turn in the assigned homework on the date they return.

Make-up Work:  
Students are responsible for obtaining and completing his/her own make-up work. Please ask me questions over the missed work outside of the regular class period. I do not want you to get behind in class, so if you need help please ask!!

Grading Policy:  
Students or parents may view grades online. I will try my best to input grades into the system at least once a week so that parents and students may actively monitor the grades. The student’s average grade will consist of daily grades and major grades.

**Daily grades will be 30 percent of the average.**  
This will consist of homework checks and warm-ups.

**Major Grades will make up the other 70 percent.**  
This will consist of test at least 2 tests per 6 weeks.

Assignments are expected to be completed by the due date. A student must arrange IN ADVANCE with Mrs. Morris if an assignment will be late.

If your accommodations require extra time for assignments and/or tests, please talk to me within the 1st two weeks of class so we can come to an agreed upon arrangement for your accommodations.