Unit 1: Functions and Graphs (19 days)
• Functions
• Graphs of Functions
• Piecewise Functions
• Twelve Basic Functions
• Graphical Transformations
• Combinations of Functions
• Inverse Functions
• Modeling with Functions

Unit 2: Polynomial, Power, and Rational Functions (19 days)
• Linear and Quadratic Functions
• Power Functions
• Polynomial Functions of Higher Degree
• Real Zeros of Polynomial Functions
• Complex Zeros and the Fundamental Theorem of Algebra
• Graphs of Rational Functions
• Solving Equations in One Variable
• Solving Inequalities in One Variable

Unit 3: Exponential, Logistic, and Logarithmic Functions (14 days)
• Exponential and Logistic Functions
• Exponential and Logistic Modeling
• Logarithmic Functions and Their Graphs
• Properties of Logarithmic Functions
• Equations Solving and Modeling

Unit 4: Trigonometric Functions (18 days)
• Angles and Their Measures
• Trigonometric Functions of Acute Angles
• Trigonometry Extended: The Circular Functions
• Trigonometric Functions of Any Angle - The Unit Circle
• Graphs of Sine and Cosine
• Graphs of Tangent, Cotangent, Secant, Cosecant
• Inverse Trigonometric Functions
• Solving Trigonometric Equations
• Solving Problems with Trigonometry

Unit 5: Analytic Trigonometry (25 days)
• Fundamental Identities
• Proving Trigonometric Identities
• Sum and Difference Identities
• Multiple Angle Identities
• The Law of Sines
• The Law of Cosines

Unit 6: Applications of Trigonometry (24 days)
• Vectors in the Plane
• Vector Applications
• Dot Products of Vectors
• Parametric Equations and Motion
• Polar Coordinates
• Graphs of Polar Equations
• DeMoivre’s Theorem and nth Roots

Unit 7: Systems and Matrices (14 days)
• Solving Systems of Two Equations
• Matrix Algebra
• Systems of Linear Equations: Matrices
• Partial Fractions
• Systems of Inequalities in Two Variables

Unit 8: Analytic Geometry in Two and Three Dimensions (10 days)
• Parabolas
• Circles
• Ellipses
• Hyperbolas

Unit 9: Discrete Mathematics (17 days)
• Basic Combinatorics
• Binomial Theorem
• Probability
• Sequences
• Series
• Mathematical Induction

Unit 10: Introduction to Calculus (8 days)
• Limits - A Graphical Approach
• Finding Limits Analytically
• Limits at Infinity and Continuity
• The Derivative and Tangent Lines
• Derivatives and the Power Rule

Grading Procedure:

Major Tests / Quizzes: 75%
Daily Grades: 25%
Extra Points: (+2)

Major Tests / Quizzes:
An exam will be given at least once every unit. Review problems, as well as, current information from the unit most recently covered will be tested. Partial credit is given when work is shown and the process is mostly correct. If a student has an unexcused absence on the day of a test, they will be required to complete the make-up test the day when they return from an absence and will be responsible for catching up on any missed work from class that day. Unit quizzes will also count as a major test grade.

Daily Grades:
Daily grades may consist of mini-quizzes (announced/unannounced, in class or take-home), homework checks, warm-ups, lesson checks, or other assignments. Homework will be assigned from the text as well as supplementary worksheets. Time will be given in class to work on these assignments, so you need to bring your textbook to class every day. It is essential to come to
class prepared with assignments.

3rd 9-weeks exam/ 4th 9-weeks exam (Notebook Test):

You are required to bring a 3-ring binder notebook to class every day. I will check your notebook at the end of each 9-weeks to make sure you are keeping up with the necessary materials. Sixty percent (60%) of the test consists of locating documents and finding answers to questions regarding those documents. Forty percent (40%) of the test consists of comprehensive exam questions related to concepts we have covered for a 9-week period. Of course, you can use your notebook as reference to respond to the exam questions. This will count as a major test grade.

Extra Points (Final Average):

Since the class is an advanced course, I have the option of adding 2 points to the final average of each 9-weeks grade. To receive these points, students must be prepared for every class with completed assignments, have good attendance, and show respect to the teacher and others in the classroom. The points are responsibility points. Students will automatically forfeit the extra points with extremely poor attendance, excessive tardies, or referrals to the office resulting in ISS (in-school suspension) or OSS (out of school suspension).

Make-up Assignments (Tests and Daily Work):

It is critical that students be present on the day of an assessment. An absence on the day of a graded assignment will result in a grade of zero (0) for that assignment. If a student must be absent due to extenuating circumstances, students have five (5) days after an EXCUSED absence to complete any make-up work. Students are required to make-up assignments during my class or after school tutoring.

Classroom Rule:

DO NOT UPSET THE TEACHER!!!

Tardies:

Four (4) tardies without a reason approved by the teacher will result in ISS referral.

Hall Pass Policy:

Students are limited to four (4) hall passes per nine weeks unless medical documentation states otherwise. You are required to sign-out before you leave the room, documenting your name, time, and destination. Daniel Boone hall pass policy states that students are not permitted to leave class for the first or last 20 minutes of each period unless called by the office. Students can earn up to 8 points on their lowest test grade with minimum use of the hall pass.
ISS and Detention Referrals:

Students are expected to follow classroom and facility rules. Failure to do this will result in consequences such as ISS or detention referrals.

Discipline Procedure:

1. First offense - warning.
2. Second offense - written referral and contact with parents via phone or email.
3. Third offense - Written referral to administrator and/or parent conference.
   ● Recall that you will lose your responsibility points (+2) if you receive referrals to the office resulting in ISS or OSS.

Tutoring Schedule:

Students have the option of attending after-school tutoring. I expect students to prepare specific questions in advance before tutoring. The tutoring schedule is subject to change due to faculty meetings or any other unforeseen circumstances.

Dishner 3:00 – 4:00 p.m. Monday - Friday

Grading Scale:

A = 93 - 100, B = 85 - 92, C = 75 - 84, D = 70 - 74, F = 0 - 69

Student Signature:_________________________

Parent Signature:_________________________