Instructor: Mrs. Stacey Bowser
Room: G207
Work: (480) 987-5973
E-mail: sbowser@qcusd.org
Office Hours:
MWF 6:30-7:30 and by appointment
Office hours may change periodically due to other scheduled meetings.

Bowser’s Daily Schedule (7:00 am to 3:00 pm)
1st
2nd
3rd
4A
4B
5th
6th
Precalculus
Precalculus
Precalculus
Lunch
Prep/Plan
Precalculus
Math Apps

Textbook

Course Description / Content
Prerequisites: Algebra 2 with Trigonometry (high school credit) and a satisfactory score on the college placement exam
The course will emphasize trigonometry and mathematical modeling of real world settings, regression analysis, rates of change and the use of current technology in a team setting. Major topics will include linear and quadratic equations, relations and functions, exponential, power, rational logarithmic and logistic functions, transformations, systems of equations and inequalities, trigonometry, sequences, series and limits, conic sections, matrices, vectors, polar coordinates, probability, and an introduction to calculus and limits.

Semester 1 Topics
I. Behavior and Nature of Functions
a. Graph, numeric, and algebraic representations
b. Characteristics of basic functions
II. Properties, operations, transformations, and inverses of functions
a. Polynomial and Rational Functions
b. Polynomial and rational equations
c. Graphs of polynomial and rational functions
d. Applications
III. Exponential and Logarithmic Functions
a. Exponential and logarithmic equations
b. Graphs of exponential and logarithmic equations
c. Applications
IV. Systems of Equations and Inequalities
a. Linear systems
b. Applications
V. May include one or more of the following topics (time allowing)
a. Matrices
b. Combinatorics
c. Sequences and series
d. Conics

Semester 2 Topics
I. Definition and properties of trigonometric functions
a. Trigonometric functions of acute angles
b. Solving right triangles
II. Circular functions
a. Radian measure
b. Length of an arc
c. Area of a sector
d. Linear and angular velocity
III. Graphs of trigonometric functions
a. Phase shift
b. Addition of ordinates
IV. Inverse trigonometric functions
V. Trigonometric identities
a. Fundamental identities
b. Verifying trigonometric identities
c. Sum and difference identities for cosine
d. Double-angle identities
e. Half-angle identities
VI. Conditional equations
VII. Trigonometric formulas
a. Law of sines
b. Law of cosines
VIII. Vectors in the Plane
a. Component form of a vector
b. Vector Operations
c. Unit Vector
d. Direction Angles
IX. Complex numbers (time allowing)
a. Trigonometric form of complex numbers
b. De Moivre’s theorem
c. Roots of complex numbers
**Calculator**

A Texas Instruments TI-84 series graphing calculator is required. Students will receive instruction (in most cases) for solving problems both with and without a graphing calculator; however use of a graphing calculator will definitely enable students to better apply most lessons. The TI-84 series from Texas Instruments are the graphing calculators that our text refers to and gives keystroke instructions for. Please do not buy another model or brand of calculator without contacting me first. Using mobile phones in place of graphing calculators is not permitted. QCHS does have a rental program through the bookstore. Please see me for information.

**Attendance**

Regular attendance is expected. If you know you will be absent, the work is due prior to the absence. Absences are not a valid reason for being unprepared for class, not turning in assignments on time or for missing a test or quiz. Students will receive 50% of their score on tests and quizzes if they have an unexcused absence the day of the exam. Students which have excused absences and are unable to participate in a group assignment, activity or assessment will either complete that assignment individually or be offered an alternative assignment to be determined by the instructor.

**Homework**

Expect daily homework assignment. These assignments extend and re-enforce the daily lesson. All assignments are expected to be completed in full and on time. Students are responsible for coming to class with homework prepared in order to share and discuss solutions with a group or with the entire class. Students can only be a contributing member of the discussion if their work is complete prepared. Students will be given extra time if they are out for an excused absence. However, in accordance with the QCHS Student Handbook, students not present due to field trips or school sponsored events are expected to complete assignments prior to missing class and are not given extra time to complete assignments or make-up tests.

**Electronic Devices**

QCHS does not permit the use of electronic devices during class time. This includes but is not limited to mobile phones, personal listening devices, laptops (unless prior approval for taking notes or presentations), gaming device, Kindles, or any other distracting electronic device. Also, I do not allow headphones to be worn or visible while in class. If any electronic device is visible during class time it is assumed to be in use.

**Projects and Class Activities**

There will be several projects and/or group activities assigned that are designed to enhance the study of the course material. These projects/activities will help develop critical thinking skills and will require graphing calculators and/or computer applications. Research has shown that achievement levels are higher and retention greater when learning takes place in a cooperative environment. Students which have excused absences and are unable to participate in a group assignment, activity or assessment will either complete that assignment individually or be offered an alternative assignment to be determined by the instructor.

**Tests and Quizzes**

There will be a cumulative test at the end of each unit (100 points). Some units may have a quiz (10-20 points) or a mid-chapter test worth 50 points.

**Make-Up Exams**

Exams MUST be taken on the scheduled date unless prior arrangements have been made with the instructor. If you miss an exam and cannot take it before they are returned to class (usually the next class period), you must take a make-up exam.

**Grading Procedure**

Grades are weighted using the grading scale provided:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90 – 100%</td>
</tr>
<tr>
<td>B</td>
<td>80 – 89%</td>
</tr>
<tr>
<td>C</td>
<td>70 – 79%</td>
</tr>
<tr>
<td>D</td>
<td>60 – 69%</td>
</tr>
<tr>
<td>F</td>
<td>0-59% or excessive absences</td>
</tr>
</tbody>
</table>

**Expectation of Student**

- I expect you to attend every class.
- I expect you to be in class on time.
- I expect you to be prepared for every class by doing the assignment and bringing required materials, including graphing calculator.
- I expect you to participate in class activities.
- I expect you to contact the teacher or another student when you are absent to find out your assignments.
- I expect you to be courteous and respectful to me and to your classmates.
- I expect you to maintain a positive attitude.
- I expect you to understand the course will be meaningful to you according to your attitude and the effort you put forth.
- I expect you to follow all school rules.

**Consequences**

If a student chooses to break a rule (exception to this plan is the school policy on consequences for being tardy to class and for inappropriate use of electronic devices), then:

- **1st Offense:** Warning/Conference with student
- **2nd Offense:** Parent Notification
- **3rd Offense:** Written Referral/Parent Notification
- **Severe Offense:** Security will remove student/Parent Notification