Trig./Pre-Calculus
09-10 Course Syllabus
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school notes page: http://new.schoolnotes.com/bdubsrebels/

Course Description:

Trigonometry/Pre-Calculus includes topics in trigonometry, analytic geometry and beginning calculus. Major topics include solutions of triangles, conic sections, distance formulas, functions, zeros of a function, graphing functions, limits and derivatives. Any student attending a college or post secondary training should find this course very helpful.
This year we have purchase a separate text for Trigonometry. We will be using the Trig. book the 1st Semester and the Pre-Calculus book during the 2nd Semester to tie it all together.

Instructional Philosophy: This course will be broken up into two semesters. During the 1st semester, we will be focusing on Trigonometry and teaching from the Trigonometry book. During the 2nd semester, we will be focusing on Pre-Calculus and using the Pre-Calculus textbook. While in each book, we will break everything up into chapters. Each chapter will include homework assignments, quizzes, and at least one authentic assessment activity. Classroom activities will include reading, writing, research, projects, labs, problem solving, and assignments dealing with algebraic concepts. There will be a major test at the end of each chapter and a quarter final at the end of each quarter, which will be over all material covered in the given quarter. It is expected that all students will show their steps in the solution process of every problem, essentially **STUDENTS MUST SHOW WORK!** Students are given an opportunity to work on assignments in class. This is a privilege and if abused can and will be taken away, meaning no time in class for assignments. An emphasis will be made in this class to focus on the MAP exam, ACT and all things leading to our students being successful on this all-important test as well as in high school.

Major Course Goals:

- **Solve equations and inequalities Algebraically, Graphically, or Numerically**
- **Explore Functions and Graphs**
- **Examine Exponential, Logistic, and Logarithmic Functions**
- **Explore and Graph Trigonometric Functions**
- **Examine Analytic Trigonometry**
- **Apply Trigonometry by exploring vectors, and Polar Coordinates**
- **Explore and Solve Systems of Equations by using Matrix Algebra**
- **Explore Analytic Geometry in Two and Three Dimensions**
- **Explore Limits, Derivatives, and Integrals**

Major Course Objectives/Benchmarks by Quarter:.

1st Quarter:

- Basic concepts of Trigonometric Functions
- Angle relationships and similar triangles
- Trigonometric functions of acute angles.
- Solving and applications of Right Triangles
- Applications of Radian Measure
- Circular Functions of Real Numbers
- Linear and Angular Velocity

2nd Quarter

- Graphs and Translations of Sine and Cosine Functions
- Graphs of Circular Functions
- Fundamental Identities
- Sum and Difference Identities for Sine, Cosine, and Tangent

- Double-Anlge and Half-Angle Identities
- Inverse Trigonometric Functions
- Trigonometric Equations

3rd Quarter:
- Identify quantitive relationship sand determine the type of functions that might model the situation.
- Analyzing functions graphically
- Modeling with functions
- Linear and quadratic functions and modeling
- Graph of rational functions
- Real zeros of polynomial functions

4th Quarter:
- Exponential and logistic functions and models
- Properties and graphs of logarithmic functions
- Trigonometric functions, including circular functions
- Graphs of transformations and sinusoids
- Graphs of tangent, cotangent, secant, and cosecant
- Graphs of composite trigonometric functions
- Inverse trigonometric functions

Major Course Projects and Instructional Activities: Instructional activities will include but are not limited to: lecture, homework assignments, authentic assessments, quizzes, chapter tests, quarter finals, reading assignments, and writing assignments. There will be a major project each semester. These projects will show how math can be applied in real-world situations.

Required Readings: You are required to read the pages included with each lesson. Items from this reading will appear on your homework and may appear on quizzes/tests. You may also be required to read various articles and report on them.

Recommended Readings:

- Algebra Unplugged
- The Book of Think: Or, How To Solve a Problem Twice Your Size
- Jack Buck-Remembered
- A Case for Christ
- I Hate Mathematics Book
- Math for Smarty Pants
- A Beautiful Mind

Course Assessment Plan:

A. There will be a test after each chapter. Each test will be worth 100 points. These problems will consist of problems similar to problems from the assignments, pre-test, or activities within the chapter.

B. Pop quizzes and bonus work will be given periodically at the teacher's discretion and will vary in points. Pop quizzes and bonus work cannot be made up if the student is absent

C. Each student will need a notebook with all of the algebra notes taken from the class. The students can use their notes on the test and a grade will be taken on the notebook approximately every 3-4 weeks. (If you are absent, you are still responsible for the notes taken on that day!)

D. All assignments will be graded on a partial credit system of grading. Meaning you will get credit for notes and writing out explanations of answers.

E. Grades for this course are determined as follows:

50%	Tests
20%	Quarter Final
15%	Homework

10% Notebooks/Writing Assessments
5% Labs/Quizzes

It is very important to do your homework and prepare yourself for the tests, not just one or the other.

F. Quarter Final Schedule; See Student Planner

G. Semester Grades will be determined as follows:
50% 1st (3rd) Quarter
50% 2nd (4th) Quarter

Classroom Expectations:

1. Students will respect their fellow classmates, the teacher, and themselves at all times.
2. Students will use their ears and brains at all times while in this class
3. No food or drink in this classroom(bottled water is excepted)
4. Ask questions when you don't understand
5. Always be prepared for class: paper, writing utensil, calculator, textbook, homework, reading book, and planner (random planner checks will be given and points assigned for these checks will contribute to your homework grade).
6. Students must attend class and be on-time, ready to work when the bell rings. This is essential in the real-world as well as in my class. If a student must be absent talk to me ahead of time to know what assignments/ projects, etc you will miss. In cases of emergencies please use the school notes web page to find out what you are missing. This webpage is updated at least weekly and has assignments, etc that we will be doing in class for that week. The website is http://new.schoolnotes.com/bdubsrebels/
7. The most important expectation of all is to always try!
8. Always use a pencil in this class.
9. Respect! Respect! Respect!

Supplies and Materials Needed:

A. Paper and pencils. NO PENS!
B. Calculator (will have TI 83's available to use in the classroom)
C. Notebook or binder for notes (remember, you can use notes on tests).
D. Planners (Have them all of the time and have them filled in)

Homework Policy and Grading Scale: Please refer to the Student Handbook for the Homework Policy. The grading scale is as follows:

A…..100-95 A-…..94-90 B+…..89-87 B…..86-83 B-…..82-80 C+…..79-77
C…..76-73 C-…..72-70 D+…..69-67 D…..66-63 D-…..62-60 F…..59-0

Extra Help: I am more than willing to help any and all students be successful in this class, but it is the student's responsibility to ask for help. If a student needs help before school, they can make plans with me to be here early. Students may also take advantage of our extra help program P.A.S.S., which takes place after school. My P.A.S.S. days are Tuesday and Thursday from 2:42- 3:30. **Please know that a student does not have to be assigned to pass in order to take advantage of the program.**

ADDITIONAL HELP: The books we have come with a variety of programs that can help students outside of the classroom. Throughout the book you will find links to the Prentice Hall Web site. Use the web codes provided with each link to gain access to online material.

- **Go to PHSchool.com**
- **Enter the web code of the lesson you desire**
- **Click Go!**

For every lesson there is an online quiz, which you can access with the webcode ata-0101(for ch.1 lesson 1) through ata-1208 (for chapter 12 lesson 8). Also every lesson has additional online help for students to complete homework, including a video tutor for the material.

Time and Place to be Reached by Parent: My school email address is bwallen@centralr3.org. This is probably the best way to reach me. Please feel free to email with any questions and/or concerns and I will do my best to reply. I can also be reached at the high school by calling 431-2616, ext. 4160, I will return your call as quickly as possible. My planning period is from 1:50- 2:40 and this will probably be the best time for me to return your calls.