

Advanced Topics in Mathematics - Syllabus

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Text: Algebra and Trigonometry - Blitzer

Description: Advanced Topics in Mathematics: 1 credit

A course designed for students who have completed three credits in high school mathematics including Algebra 2, and is interested in learning about some advanced mathematical topics and improving their math proficiency. The course includes algebra 2 topics, analytic trigonometry, matrices, analytic geometry, and probability.

At the end of this course the students will have a better understanding of algebra, as an approach to higher level courses as Pre-Calculus.

This course will have an EOC.

Outline:

- 1) Fundamental concepts of Algebra
- 2) Functions and Graphs
- 3) Polynomial and Rational Functions
- 4) Exponential and Logarithmic Functions
- 5) Trigonometric Functions
- 6) Analytic Trigonometry
- 7) Additional Topics in Trigonometry
- 8) Systems of Equations and Inequalities
- 9) Matrices and Determinants

Required materials: Pencil, pen, eraser, loose leaf paper, Graph Paper, and a scientific or graphing calculator.

Evaluation: Grades are calculated based on number of points earned divided by the total points . All assessments will be evaluated based on correctness. The total points vary for Quiz, homework and classwork. Every Test and projects will have a value of 100 points. Rubric will be provided with the projects.

- **Quiz** (~ biweekly)
- **Test** (~ biweekly)
- **Homework** to turn in (~ 1 per week)
- **Classwork** (to turn in)
- **Projects** (~ 1 per semester)
- **Daily points:** The students may earn 2 points daily based on the following criteria: 1 point - punctuality, class materials (pencil, notebooks, etc.), be working on bellwork by the time I start taking attendance, 1 point - classwork.

- **Late Work**
- -Late work will be accepted, but the academic consequence will be decided by the teacher (not less than ½ credit if completed).
- -All late work should be turned in prior to the Summative Assessment unless granted an extension by the teacher.
- -If given an opportunity to make up the work, a zero can be entered (document in Progress Book).

- **Make-up Work**
- -Students will be given one day plus one for every day absent to make up assignments and tests.
- -A student who is absent will be required to make-up work whether the absence is excused or unexcused.
- **-Students shall be responsible for contacting teachers and arranging for make-up work.**
- -The teacher's decision on make-up work beyond the one-day per absence rule will be final.
- -Long term projects assigned with two weeks (10 school days) advance notice shall be turned in on the assigned due date even if the student is absent. The teacher or an administrator may make exceptions to this rule for extreme or extenuating circumstances.
- -Students who do not complete make-up work within the specified time may be given a zero.
- -Students who are suspended out of school will be allowed to make up work missed. Students will be given one day plus one to make up work for each day suspended out of school.
- -Students absent the day of a test announced prior to their absence may be given the test on the first day back. The teacher also reserves the right to give a different test to students who miss the original test.
- -Grades for make-up work turned in late may be lowered by one letter grade per school day the assignment is late.
- -Students with planned absences should make every effort to keep up with class work during the absence. **It is the student's responsibility to notify the attendance office and their teachers of the planned absence, to take all necessary steps to complete missed course work during the absence and turn in completed work upon returning to school. There are prearranging forms located in the attendance office.**

Classroom Procedures:

- 1) Place the homework on the teacher's desk (if apply).
- 2) Get materials ready.
- 3) Copy the homework (if apply).
- 4) Copy the bellwork.
- 5) Start working on the bellwork. By this time the bell should ring and I will take attendance.
- 6) Pay close attention to instructions.
- 7) Participate in class.
- 8) Ask for help.
- 9) Clean up your area.
- 10) Leave the classroom.

Expectations: I expect every student to:

- be polite
- be respectful
- be on time
- be responsible

be prepare for class
ask for help
help others
participate in class instruction
have class materials
use the smart phone only as a math tool (no text or phone calls)

Student's Responsibilities: Is the student's responsibility:

- 1) to know the code of conduct.
- 2) to know the OCPS make up policy.
- 3) to know the OCPS grading policy.
- 4) to ask the teacher for help.
- 5) to be respectful to everyone.
- 6) to ask for makeup work in a timely frame (within 1 week).

The essence of mathematics is not to make simple things complicated, but to make complicated things simple. ~S. Gudder