

MONTE VISTA CHRISTIAN SCHOOL
Math 2330, Algebra 2 Honors
Course Syllabus

Course Description:

A continuation of developing computational, procedural, reasoning and problem solving skills. This course seeks to continue the establishment of a strong foundation for learning by strengthening a broad base of mathematical concepts necessary for higher education. Students will deal with real-life applications and must communicate orally and symbolically about mathematics.

Curricular Mapping:

This course will continue to develop students' algebraic and problem solving abilities and thought processes. It will build on the topics learned in Algebra 1 and Geometry as well as prepare students for Pre-Calculus/Honors Pre-Calculus.

Course Objectives:

Upon the successful completion of this course the student will be able to:

1. Understand function notation and operations like composition and inverse functions
2. Graph, factor, and solve quadratic equations
3. Solve systems of equations with 2 or 3 variables, using graphs, substitution, elimination, or matrices
4. Perform polynomial operations including factoring and working with rational expressions
5. Perform operations involving complex numbers, finds conjugates, and graphs complex numbers
6. Graph and solve logarithmic and exponential equations, including using basic properties to simplify equations
7. Find the general term and sums of arithmetic and geometric series
8. Recognize and graphs the conic sections centered on the origin
9. Find the probability of an event by using permutations and combinations, the binomial theorem, and independent/dependent probabilities

Text:

HMH Fuse: Algebra 2 Common Core Edition for the iPad

Algebra 2 Text Instructions:

1. Purchase the App called HMH Fuse: Algebra 2, from the App Store, on the iPad. It is free. It comes with one free chapter. This textbook is aligned to Common Core Standards.
2. The other chapters are an in-App purchase, for a total of \$19.99.

3. Follow your teacher's instructions on which chapters to download, once you've made the in-App purchase. **Warning:** this text takes up lots of memory.

Course Outline:

- Unit One: Linear Functions
- Unit Two: Quadratic Functions
- Unit Three: Polynomial Functions
- Unit Four: Exponential and Logarithmic Functions
- Unit Five: Rational and Radical Functions
- Unit Six: Properties and Attributes of Functions
- Unit Seven: Conic Sections
- Unit Eight: Probability
- Unit Nine: Data Analysis and Statistics
- Unit Ten: Sequences and Series
- Unit Eleven: Trigonometric Functions

Grading:

<u>Grade Book Categories</u>		<u>Semester Weighted Grading Configuration</u>	
Homework	20%	Quarter	40%
Quizzes	30%	Quarter	40%
Tests	50%	Final Exam	20%

Homework should take on average about 45 minutes per assignment.

HS Grading Policy:

Please refer to the policy and procedures posted online in our *Student Handbook*.

Class Policies:

1. Attendance

Consistent attendance contributes to success in class. Students who are part of the learning process in class find the homework easier and understand the material better. Missing more than one class day usually requires some kind of tutoring for the student to catch up, so make every effort to come to class and actively participate while you are there.

2. Tardiness

A student who is not in his/her assigned seat before the bell rings will be marked tardy.

If a student is tardy, he/she must sign the tardy sign-in sheet at the back of the classroom. Otherwise, the tardy may be counted as an absence. Tardies are handled on a school-wide basis, so consult the *Parent/ Student Handbook* for more details. If a student is more than 15 minutes late, he/she is marked absent for that period.

3. Assignments

In order to receive full credit on an assignment, a student must

- Attempt all of the assigned problems.
- Show all work in pencil.
- Include first and last name, date, period, and the assignment in the heading.

4. Exams

- Being absent one day before a test/quiz does not excuse a student from taking that test/quiz along with the rest of the class. If a student is absent the day of a test/quiz, he/she will be expected to make up that test/quiz on the day he/she returns to class.
- If scientific calculators are allowed on a test or quiz day, then they may not be shared.
- Graphing calculators are not required and are not allowed on tests or quizzes.
- iPods and cell phones are not allowed in class at any time even if used as a calculator.
- Talking during a test, not keeping answers or work covered, or looking at someone else's paper may result in a zero grade for that test or quiz. Anyone cheating or allowing other students to cheat will receive a zero on that assignment.

School Policies:

Students are subject to all academic policies of the school as found in the Parent/ Student Handbook. Furthermore, it is each student's responsibility to read and follow all academic policies of Monte Vista Christian School. In addition to addressing each ESLR every year, we target a specific ESLR each academic year for particular focus.

Students who earn a C or better in both 1st and 2nd semesters of this class can advance to the next mathematics course at Monte Vista. Students who earn an F need to repeat the class (often accomplished in summer school). It is recommended that students who receive a D repeat the course to enable them to be successful in future mathematics courses. In addition, a D is not considered a passing grade by some universities (for example, the University of California), so the student will not receive college credit for the course in these cases unless it is repeated and passed with a C or better.

Miscellaneous:

Required Materials: Every student is required to bring the following items to class each day.

- iPad with the digital textbook downloaded
- Red pen for correcting homework
- Pencil
- Binder paper
- Graph paper
- Scientific calculator, or Graphing calculator TI-Nspire, or TI 84.