Anacortes High School
Mathematics Department
Course Syllabus

Course Name: **Algebra 2**

Course Description: Topics include quadratic functions, structures of equations, solving quadratics and other equations, exponential functions and features, functions and their inverses, logarithmic functions, polynomial functions, rational expressions and functions, statistics, and modeling with functions.

Prerequisites: Successful completion of Algebra 1 and Geometry

Course Resources
- Mathematics Vision Project (MVP); An open source curriculum for the purpose of delivering a curriculum with instructional strategies aligned with the *Mathematical Practices* and The Common Core State Standards. http://www.mathematicsvisionproject.org/curriculum.html
- The MVP materials will be loaded to a One Note Algebra 2 notebook that all students will have access to both on and off line.

Required Materials:
- **Graph paper** notebook. Either a spiral or a composition style is appropriate. This notebook will be used daily in class for classwork, homework and notes. Composition graph paper notebooks are available for purchase at the ASB window for $1.50 and spirals are $2.00. Students can also purchase a graph paper notebooks at any office supply store or Amazon.com. (This is my favorite from Amazon **Ampad Computation Book, 4x4 Quad Ruled, 76 Sheets, Ivory, 11-3/4" x 9-1/4", 1 per Pack (22-157)**)
- Pencils and erasers.
- Colored pens/pencils (not black). They will only need a few.

Optional Materials:
- A graphing calculator (i.e. TI-84 or TI-*n*Spire). One of these calculators will last you through college, so it is a good investment now.
- During classroom instruction, there is a set of Texas Instrument TI-*n*Spire CAS that will be used. It is the students' responsibility to use the calculator responsibly and notify the teacher should any problems occur. ***Students are responsible for the care of the calculator.***

Course Outline/Instructional Units

Year Two, Mod 2: Structures of Expressions
Year Two, Mod 3: Quadratic Equations
Year Two, Mod 4: More Functions & Features
Year Three, Mod 1: Functions and Their Inverses
Year Three, Mod 2: Logarithmic Functions

Year Three, Mod 3: Polynomial Functions
Year Three, Mod 4: Rational Functions
Year Three, Mod 8: Statistics
Year Three, Mod 7: Modeling with Functions

Anacortes High School Grading Scale

Letter Grade	Percent
A	93% and above
A-	90% - 92%
B+	88% - 89%
B	83% - 87%
B-	80% - 82%
C+	78% - 79%
C	73% - 77%
C-	70% - 72%
D+	68% - 69%
D	60% - 67%
F	59% and below

Weighted Categories

Category	Percentage of Overall Grade
Assessment of Standards (Tests)	75%
Quizzes	15%
Homework /Participation	10%

Assignment Expectation

Assignments are expected to be completed by the due date. Late work will not be accepted for full credit unless otherwise stated by the teacher.

Rationale: When students have missing assignments, they often neglect current work and learning, falling further and further behind. Furthermore, current learning is based on the previous assignment so it is paramount for students to complete work as its assigned. All assignments, including any late work, must be completed no later than the day before the unit test. A highly collaborative learning culture will be encouraged throughout instruction. Activities may include a participation grade.

Assessment Expectation

Since Algebra 2 is a college level prep course, students are expected to demonstrate full effort throughout the complete unit of study and be fully prepared for the unit exam. Therefore, retakes are not a standard practice.

Test corrections are encouraged. A tremendous amount of learning happens through mistakes. Because learning from mistakes is valuable, students may earn back 25% of the points missed on unit tests by correcting all of their mistakes (showing full work), checking their answers with the key, and turning their corrections in before the next unit test. This work needs to be done in the student's classroom before or after school. We want students to realize that a test is just another learning opportunity and that the learning process continues past the end of the unit test.

Where to Get Math Help
- Google the math topic listed on the homework assignment.
- Khan Academy
- Math department website http://ahs-asd103.libguides.com/math

Extra Help

Help is available from your Algebra 2 teacher before and after school. Keep posted for other after school help opportunities that may be offered.

All school policies will be upheld in this class so please read your student handbook.

Anacortes High School Academic Dishonesty Policy: We believe students at AHS are responsible for their own work, created and intended for the particular class in which the student is enrolled and from which the assignment is given. Academic Dishonesty is defined as a student's use of unauthorized assistance with intent to deceive the teacher who will be evaluating the student's work. Examples of academic dishonesty include, but are not limited to, the following:

- **Cheating** involves the possession, communication, or use of information, materials, notes, study aids or other devices not authorized by the teacher.
- **Plagiarism** is the act of using another person's words or ideas without giving credit to that person.
- **Complicity** involves knowingly contributing to another's acts of academic dishonesty.
  Students who have committed academic dishonesty will be subject to academic sanctions cumulative over four years of high school.

Attendance/Tardies:

Per school policy a **tardy of more than 5 minutes** is considered an absence. Anyone coming late to class (for any reason) must have an admit slip after 5 minutes from the attendance office. If a student reaches three tardies in a semester, the student will be written up by the teacher. If a student reaches five absences a parent conference will be scheduled to discuss the issue.

Electronic Devices

Students must comply with the district's *Grade 7-12 Student Technology Equipment Use Agreement* policy. Students and families must also agree to follow the guidelines and expectations found in the *Secondary Student and Parent Mobile Device Handbook*. Failure to follow these expectations will result in consequences in accordance with building and district policies and procedures.

What does it look like to be a successful Algebra 2 student?

Algebra 2 is a rigorous class. You may find that you have units where you struggle in this course. Don't give up! Employ a growth mindset…believe that hard work and perseverance will make a big difference.

The attributes of a successful Algebra 2 student include:

- Daily attendance
- Active and appropriate participation in class.
- Strive to understand errors.
- Assignments are attempted to the best of one's ability .
- Ask questions daily.
- Formation of study groups
  - Benefits of Study Group Learning
    - *You can verify with each other any confusing or complex subject material.*
    - *Math is better understood and retained.*
    - *Fellow students can be a source of encouragement.*
    - *Math-anxious students will see themselves as tutor/teachers, not just recipients of someone else's knowledge.*
    - *An increase in confidence of mathematical ability.*
    - *You will have opportunity to learn new study habits from peers.*
  - How to form a study group
    - *Exchange contact information*
    - *Contact one another—make sure group members are caught up when absent*
    - *Meet twice per week (host at school, find a classroom, rotate meeting at someone's home)*
    - *Be inclusive—don't exclude someone who you think won't contribute. Remember that we all have areas of strength.*
    - *Teaching others solidifies your understanding. Rotate a teaching session.*

Contact Information:

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