Course Overview: What is Algebra II all about?

Algebra II is building on your strong foundation of Algebra 1. Students will continue to strengthen their reasoning and problem solving abilities and extend their Algebra I skills through a series of inquiry-based units that cover quadratic expressions, equations, and functions; comparing their characteristics and behavior to those of linear and exponential relationships from Algebra 1. The need for extending the set of rational numbers arises and real and complex numbers are introduced so that all quadratic equations can be solved. Strong emphasis will be based upon deepening our understanding of math by seeking out connections, using productive math communication.

Units and Activities: What will we be learning about and doing in this course?

Units: Activities/Projects:
Modeling Data Projectile Project
Quadratic Functions Parabolas in our Lives Project
Structure of Expressions Walk Around Activities
Solving Quadratics and Other Equations Scavenger Hunts
More Functions, More Features

Standards: What knowledge and skills will I gain by the end of this course?

Anchor Standards: A student will have multiple opportunities to show their proficiency in each Anchor Standard below.

Sense Making and Problem Solving - Student will start by explaining to themselves the meaning of a problem and looking for entry points to its solution.
Modeling - Students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace.
Attending to Precision - Students will communicate precisely to others.
Making Use of Structure - Students will look closely to discern a pattern or structure.
Recognizing and Using Patterns - Students notice if calculations are repeated, and look both for general methods and for shortcuts.

Course Standards: This course builds student knowledge and skill using the Common Core State Standards for Mathematics. The course standards for Algebra II are:
Algebra, Functions, Number and Quantity, Modeling and Statistics

Assessment of Learning

Assessment Types:
Three types of assessments will be used to determine if you have gained the necessary knowledge and skills of this course: Formative assessments, Summative assessments, and Habits of Work for Learning. Each is briefly described below:
**Formative Assessments:** *Formative = Forming my knowledge and skills.* Formative Assessments receive a weight of .1 in the overall grade. Formative assessments are information for teachers, students, and parents on the progress students are making as they practice gaining knowledge and skills found in Anchor Standards. Teachers use the results of these assessments as data to understand individual student learning needs, adjust instructional pathways, and modify lessons to help students better meet course standards. Students use the results of these assessments to determine how they are progressing and to plan steps to ensure their success.

**Summative Assessments:** *Summative = Summation of my knowledge and skills.* Summative Assessments can receive three different weights: 1, 1.5, or 2 depending on the size of the assessment, and therefore have the greatest impact on the Overall Course Mastery Grade. Summative assessments are used as a measure of independent student achievement in Anchor Standards. Throughout this course, summative assessments provide benchmark student achievement data. A summative assessment will always have clear scoring criteria for students to understand how they are performing.

**Habits of Work for Learning:** Habits of Work for Learning (HOWLs) are skills and dispositions that are essential to the learning process but do not provide evidence of what a student knows or can do in relation to content. WUHSM teachers work to foster Habits of Work for Learning in three categories: preparation, participation, and perseverance.

**Assessment Scoring:**
Teachers will provide framing for summative assessment scores using proficiency level scoring criteria for grading similar to the example below:

**Anchor Standard:** Computational Modeling

| Course Standards: NGSS HS-L2-1 Use mathematical and/or computational representations to support explanations of factors that affect the carrying capacity of ecosystems at different scales. NGSS HS-LS2-4 Use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem. |
|---|---|---|---|---|---|---|---|
| 1.0* | 1.3* | 1.7* | 2.0 | 2.3 | 2.7 | 3.0 | 3.3 | 3.7 | 4.0 |
| NC* | NC* | NC* | C | C+ | B- | B | B+ | A- | A |
| **Beginning** | **Approaching** | **Proficient** | **Distinguished** |
| Representation | I can identify the components of a system. | I can represent the components of a system using numbers or variables. | I can show connections between components of a system using a computational model. | I can use mathematics and/or a computational representation to make predictions about how changing one variable or component will affect the system. |
| Computational Modeling & Analysis | I can use a given computational model to explore relationships between components of a system. | I can use a given computational model as evidence to support a claim or explanation of a system. | I can create and/or revise a computational model and use it as evidence to support a claim or explanation of a system. | I can expand the computational model to illustrate how a change in a system component can impact all other relevant components. |

*scores in the “Beginning range” are well below proficient and thus they are below passing.

**HOWL Scoring:**
HOWLs will be scored at least once per checkpoint, and will be based on the frequency with which students demonstrate each of the habits: preparation, participation, and perseverance.

**How is my Overall Course Grade Determined?**
Overall course grades will be reported as letter grades and will be comprised of:
- Formative & Summative Scores: 95%
Communication:

How Do I Know My Grades?

- On Summative Assessments, a teacher will provide both a 4-point grade and a letter grade.
- You can monitor your progress in the following ways:
  - By reading feedback and scoring returned to students on summative assessments
  - By monitoring the scores and Overall Course Mastery Grade in the Parent/Student portal on JumpRope
  - By monitoring the grades sent home quarterly through report cards

Where Can I Find This Syllabus during the School Year?

- This syllabus will be available on the school website in each subject’s department tab once the school year is up and running.

How Do I See What’s Due?

- Summative assessment due dates and handouts are posted to the blue “Upcoming Assessment” section of the JumpRope Parent/Student Portal on or before the day they are assigned to students.

How Do I See What’s Past Due?

- If a student is missing an assessment, it will be listed in the red “Missing Assessment” section of the JumpRope Parent/Student Portal along with any attachments.

Best Way to Contact Me:

Try first to email me at hvonada@wcsu.net. You can call me at 457-1317 x1003 but I don’t answer the phone while in class.

Materials:

Students should bring a writing utensil and math 3 ring notebook to class everyday.

Schoolwide Procedures:

Please see the Student Handbook for Procedures and Policies related to: Due dates and deadlines, extra credit, retaking assessments, and turnaround time for grade entry.

Personal Mobile Devices: This class will follow the procedures outlined in the student handbook.

Classroom Expectations are created by the students in this class. If you would like a copy of those please email me.
I have read this syllabus, and I have contacted the teacher with any questions I have.

Student name (printed): ________________________________

Student Signed: ________________________________ Date: ______________

Parent/Guardian name (printed): ________________________________

Parent Signed: ________________________________ Date: ______________

Any additional comments to tell me?!