

# Rainshadow CCHS – Fall 2010 MIV: Advanced Algebra

This course explores Math as a means of interdisciplinary inquiry with an emphasis on the role of math in understanding its role in the real world.

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**Course Description:** This course explores Advanced Algebra as a tool for interdisciplinary inquiry. Key concepts include patterns, functions, algebraic problem solving, advanced matrices, system of equations and math reasoning. It invites students to find connections between algebraic concepts and real world issues and problems-- in essence, writing “story problems” from current events. This course delivers Rainshadow/Common Core standards in mathematics and prepares students for the proficiency examination.

**Course Aims and Objectives for this course:**

Upon completion of this course:

- ~Students will become proficient in the real world relationships of algebraic matrices and their operations as well as patterns, sequences and functions.
- ~Students will expand their understanding of the application of systems of equations and their relationship to everyday mathematical situations.
- ~Students will explore algebraic concepts and formula as they apply to functions and problem solving.
- ~Students will apply mathematics to interdisciplinary issues and problems by examining statistics and data.
- ~Students will relate advanced mathematical concepts to their everyday lives and to social and political issues in their neighborhood, city, region, or nation.
- ~Students will explore math as a means of communication through graphs, spreadsheets, charts, and statistics.

**Requirements:**

- participation in classroom activities every day.
- complete warm ups each class period
- completed notebook and worksheet assignment
- completed notes and examples.
- completed Weebly and class essays

<u>Week / Dates</u>	<u>Monday</u>	<u>Wednesday</u>
1) 8/30, 9/1	Course intro and class expectations.	Weebly Setup
2) 9/6, 9/8	Labor Day: No School	Intro to Matrices
3) 9/13, 9/15	Adding Matrices	Adding Matrices.
4) 9/20, 9/22	Subtracting Matrices	Subtracting Matrices
5) 9/27, 9/29	Multiplying Matrices	Multiplying Matrices
6) 10/4, 10/6	Combing Matrices	Combing Matrices
7) 10/11, 10/13	Matrices Completed	Matrices Completed
8) 10/18, 10/20	Intro to System of Equations	Intro to System of Equations
9) 10/25, 10/27	Prof. Development: No School	Weebly Posting
10) 11/1, 11/3	Substitution Method	Substitution Method
11) 11/8, 11/10	Elimination Method	Elimination Method
12) 11/15, 11/17	Systems of Equations Practice	Systems of Equations Practice
13) 11/22, 11/24	Systems of Equations Practice	Systems of Equations Practice
14) 11/29, 12/1	Intro to Functions	Intro to Functions
15) 12/6, 12/8	Function Operations	Function Operations
16) 12/13, 12/15	Quadratic Functions	Quadratic Functions
17) 1/3, 1/5	Trig Functions	Trig Functions
18) 1/10, 1/12	Functions Completed	Functions Completed
19) 1/17, 1/19	MLK: No School	Weebly Portfolio Essay

**Grading Policy and Assessment:** This class will be based on a point system spread out over the semester (19 weeks).

Point Breakdown:

**Attendance and Participation – approximately 500 points**

**Complete Folder of Work – approximately 30 to 100 pts each; 1000 pts**

- includes classwork, Notes, worksheets

**Warm-ups: 20 pts each; total of approximately 700+ pts for the semester**

**Folder, Notebook and Weebly Contents:** You will maintain a folder & notebook to be kept in-class with all of the assignments for this class. There is a specified manner in which notes and warm-ups are to be taken and kept please see warm-up 1 for a reference. You will also be required to create and keep a Weebly portfolio for this class (and all classes).