

Advanced Mathematical Decision Making

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Welcome to AMDM Seniors! You are about to experience a math class in a way you have never learned math before. You will get to use math in real world applications from analyzing data to probability and statistics, and something all seniors need- Understanding financial data! You will be applying prior knowledge from your previous math classes to real application problems.

Unit I: Analyzing Numerical Data <ul style="list-style-type: none">• Using Ratios, Rates, and Percents• Using Averages, Weighted Averages, and Indices• Estimating Large Numbers• Using Check Digits to Validate Identification Numbers	Unit II: Probability <ul style="list-style-type: none">• Determining Probabilities• Everyday Decisions Based on Probabilities• Expected Value• Insurance• Lotteries• Carnival day ☺
Unit III: Analyzing Statistical Studies <ul style="list-style-type: none">• Interpreting truth in data• Research practices• Analyzing graphs and data• Representing and presenting data coherently and accurately• Creating survey questions, limiting bias	Unit IV/V: <ul style="list-style-type: none">• Linear Regression• Spread of a virus• Using math to predict outcomes (investments, population, etc.)• Exponential Growth and Decay
Unit VI: <ul style="list-style-type: none">• Loans (student, cars, mortgage)• Credit cards/ credit scores• Salary vs hourly wages• Income and tax calculations• Present and future values of investments• Creating a sustainable budget	

How this class is different: In this class, I will not be standing at the board giving instruction while you take notes. You have already learned all the mathematical knowledge you will need to be successful in this class. This class is all about *applying* what you have learned about math.

Grading. A note about all quizzes and tests- You will be allowed ONE (1) notecard (3 x 5 size) per assessment. You may NOT SHARE notecards with anyone. You may use anything you write on that notecard and you may write on both sides. You will turn it in when you turn in your test

The other major part of your grade will be in projects and presentations. It is not enough to just write down a number, you need to be able to argue and justify your reasoning by presenting to a crowd.

Formative Assignments	20%
Summative Assessments	70%
Final	10%

In order to be successful in this class you MUST 'buy in' to how we are going to do things. Every year you complain about 'when are we ever going to USE this' and now you finally get to see how. What you get out of this class is directly related to what you put in. If you don't work through the activities, if you don't participate in groups or presentations you will get nothing out of this class and your grade will reflect that. In this class you will have the opportunity to learn math in a completely new way but only if you decide you finally want to learn how math is used outside of high school.

Attendance / Missed Assignments:

The material learned in this class is primarily based on in-class group activities and presentations. Which makes it VITAL that you are in class **everyday**.

If you are absent the day groups are assigned you will have to work on the activity on your own when you return. You get one extra day for each missed absence. After that it will be considered late.

If you are absent for a work day/presentation day in a group you will have to finish and present the assignment on your own.

BE IN CLASS.

Supplies

- 3 ring binder (date everything!) with paper!
- Pencils
- Calculator

ELECTRONIC DEVICES:

May only be used with teacher permission. The human race has survived for thousands of years without needing to snapchat, text, tweet, vine, instagram etc. every few minutes so **YOU CAN TOO**.

Teacher has right to alter/add information to the syllabus

