ADVANCED MATHEMATICAL DECISION MAKING

COURSE SYLLABUS

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WELCOME!

Welcome back to the PCTA math department! We are looking forward to working with students and their families as we begin yet another unprecedented school year. Google Classroom will be where all of your work and class announcements will be posted. The Remind app is also essential for staying in contact with us. See your individual teacher for the Classroom and Remind codes for your specific class period. If you have any questions or concerns, please reach out and we will be happy to help. We look forward to a great year!

ACADEMIC EXPECTATIONS

Students are to submit their own assignments. Some of the submitted work is computerized and some is non computerized. All submitted work is subject to PPSD and PCTA policies. If a student needs additional time they must seek additional help and may also be scheduled for additional help in accordance with PCTA school policy. If absent, they are still responsible and accountable for the work. Attending school on time and participating in class every day is imperative to your success in this course.

TEXTBOOK & SUPPLIES

This year, we are using a curriculum called Advanced Mathematical Decision Making (AMDM). Students will have access to online resources which they can access through Google Classroom. Additionally, students will each be getting a student workbook. We are asking that all students bring with them to class a 1-inch binder for their portfolios, a notebook, their Chromebooks, and a pencil or pen.

GRADING

55% Student Portfolios - classwork, group activities, participation, etc.
45% Projects - each unit will conclude with a partner project

TOPICS

Unit 1: Analyzing Numerical Data
Unit 2: Probability
Unit 3: Statistical Studies
Unit 4: Using Recursion in Models & Decision Making
Unit 5: Using Functions in Models & Decision Making
Unit 6: Decision Making in Finance
Unit 8: Geometric & Logical Reasoning

TENTATIVE UNIT PROJECT SCHEDULE

Unit 1: 10/1	Unit 3: 12/17	Unit 5: 3/4	Unit 8: 5/6
Unit 2: 11/5	Unit 4: 1/21	Unit 6: 4/1	Last Call: 6/6

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COMMON CORE STANDARDS

QUARTER 1	QUARTER 2	QUARTER 3	QUARTER 4
UNIT 1	UNIT 3	UNIT 5	UNIT 8
HSN-Q.A.1 Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays. **HSN-Q.A.2** Define appropriate quantities for the purpose of descriptive modeling.	**HSS-IC.A.1** Understand statistics as a process for making inferences about population parameters based on a random sample from that population. **HSS-IC.B.4** Use data from a sample survey to estimate a population mean or proportion; develop a margin of error through the use of simulation models for random sampling.	**HSF.LE.A.1** Distinguish between situations that can be modeled with linear functions and with exponential functions. **HSF.LE.B.5** Interpret the parameters in a linear or exponential function in terms of a context.	**HSG.MG.A.3** Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios). **HSG.SRT.D.11** Understand and apply the Law of Sines and the Law of Cosines to find unknown measurements in right and non-right triangles (e.g., surveying problems, resultant forces).
UNIT 2	UNIT 4	UNIT 6	
HSS-CP.A.1 Describe events as subsets of a sample space (the set of outcomes) using characteristics (or categories) of the outcomes, or as unions, intersections, or complements of other events ("or," "and," "not"). **HSS-MD.B.5** Weigh the possible outcomes of a decision by assigning probabilities to payoff values and finding expected values. **HSS-MD.6** Use probabilities to make fair decisions (e.g., drawing by lots, using a random number generator).	**HSF-BF.A.1** Write a function that describes a relationship between two quantities. **HSF-BF.A.1.a** Determine an explicit expression, a recursive process, or steps for calculation from a context. **HSF-BF.A.1.b** Combine standard function types using arithmetic operations.	**HSF-IF.B.4** For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. **HSA-SSE.B.3** Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.	