

CVA AMDM Syllabus



COBB VIRTUAL ACADEMY
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Class Description

Advanced Mathematical Decision Making (AMDM) is designed to follow the completion of Advanced Algebra (or the equivalent). The course will give students further experiences with statistical information and summaries, methods of designing and conducting statistical studies, an opportunity to analyze various voting processes, modeling of data, basic financial decisions, and use network models for making informed decisions.

This course has three sections: AMDM A is the first half of the class and includes Units 1-3. AMDM B is the second half of the class and includes Units 4-6. AMDM Y is the entire class and includes Units 1-6.

Click [HERE](#) for the AMDM Class Schedule which outlines the Units, Lessons, and Assessments for this course.

Click [HERE](#) for the AMDM State standards.

Class Outline

Unit 1: Using the Power of Mathematical Reasoning to Make Decisions

Students will examine the use of mathematical reasoning to solve estimable problems involving large quantities. Students will learn how rates and ratios are used in the analysis of voting methods and consumer purchases. Students will also explore how numbers are used in industry for identification and in business for the validation of transactions.

Unit 2: Using Probability to Make Decisions

Students will focus on the creation of various models to organize data and determine the probability of events for conditional, compound, and weighted problems. Students will also calculate and analyze the fairness, risks, and expected payoffs as they pertain to games of chance or consumer decisions.

Unit 3: Using Statistical Studies to Make Decisions

Students will examine the process of conducting a research study by emphasizing the various methods of collecting data, creating appropriate graphical displays, and interpreting the results. Students will explore various sampling techniques, while identifying the parameters and possible sources of bias that may affect the findings used to make research and business decisions.

Unit 4: Using Mathematical Models to Make Decisions

Students will connect distributions and interpretations of data as it relates to personal and business finance with real world analysis of various functions in financial situations. Students will determine the best model for discrete and continuous relationships using a variety of functions. Students will apply these relationships to two-dimensional representations, three-dimensional representations, and using basic trigonometric principles.

Unit 5: Using Vectors and Matrices to Make Decisions

Students will use algebraic reasoning with vectors and matrices and their representations to make real world decisions.

Unit 6: Using Network Models to Make Decisions

Students will solve, construct, analyze, interpret, and investigate a variety of network models that include vertex-edge graphs, flow charts to develop algorithms, Program Evaluation Review Technique (PERT), and problems that can be resolved by coloring graphs using real world application to make informed decisions.

CVA Work Policy

- All classwork must be completed and submitted using the links in CTLS by the DUE DATE listed on the Class Schedule.
- Work should be completed in the order it is assigned on the Class Schedule.
- All work submitted on time will be graded within 48 hours.
- Assignments not submitted by the due date will be marked missing. Missing assignments are calculated as zeros in the coursework average. When students submit missing work, the assignment will be graded and calculated into the coursework average.



The CVA term ends prior to the end of the traditional school semester. The final date work will be accepted each term is posted on the [CVA website](http://cobbvirtualacademy.org) (cobbvirtualacademy.org) and the Class Schedule.

Grading

Grades for this course are calculated based on category percentages as follows:

Category	Weight
Assignments	30%
Quizzes	20%
Tests	40%
Final Exam	10%

CVA Exemption Incentive

To qualify for CVA's exemption incentive and exempt the Final Exam/lowest unit test or major assessment grade, CVA students must:

- Submit ALL assignments on OR before the due date
- Have an 85% coursework average or higher before the final exam
- Have no more than one academic integrity violation

Academic Integrity

Academic integrity is the cornerstone of learning at CVA and we take the integrity and authenticity of student work very seriously. When academic integrity is maintained, students will make decisions based on values that will prepare them to be productive, meaningful, and ethical citizens.

Students are required to abide by the CVA Academic Integrity Policy. Academic dishonesty in any form will not be tolerated. The CVA Academic Integrity Policy outlines the consequences if students fail to maintain academic integrity in their course. For additional information, the CVA Academic Integrity Policy is posted on the [CVA website](http://cobbvirtualacademy.org).



Consequence	Occurrence			
	1st	2nd	3rd	4th
Parent contact by teacher	✓	✓	✓	✓
Resubmit work for full credit	✓			
Resubmit work for half credit		✓		
Automatic Zero			✓	✓
Parent contact by CVA Administration			✓	✓
Mandated proctored exam or course work				✓
Local school is notified of Academic Integrity violation		✓	✓	✓
Other as designated by CVA or local school administration	✓	✓	✓	✓

General Information

- The Cobb Teaching and Learning System (CTLIS) is the platform used to deliver Cobb Virtual Academy classes.
- Students must earn 100% on the Student Orientation Quiz located inside each CVA Digital Classroom before they begin their Student Coursework.
- All coursework must be submitted through CTLIS.
- All CCSD students have access to Microsoft 365 applications and must submit assignments in the requested format.
- Students in all sections of this course will take an online final exam during the window of time published on the CVA website and the Class Schedule.

Course Specific Information

- **Practice Assignments:** After reviewing each lesson, students will complete a practice assignment ONLINE. Each assignment has approximately 10 questions.
- **Quizzes and Tests:** Students should carefully review the feedback on graded items and be sure to understand the material prior to beginning the quiz or test.



Technology Requirements

CTLS is geo-restricted to the United States.

- A modern PC or Mac Computer
 - Lightweight or mobile devices such as Chromebooks, iPads, Android tablets, or smartphones **may not** be compatible with many of our courses.
 - Windows or Mac based computer
- Access to Microsoft 365
- Internet access

CVA Expectations

Student

- Maintain consistent access to a computer and internet
- Login to the course daily and review the announcements
- Adhere to the deadlines listed on the Class Schedule
- Read and promptly respond to teacher communication
- Contact the teacher with questions
- Manage your time wisely

Teacher

- Welcome Phone Call in the first two weeks
- 24 – 48-hour turnaround on all communication
- 24 – 48-hour turnaround on grading for items submitted by the due date
- Provide relevant feedback on assignments
- Be accessible via email and phone or text during published hours
- Provide two or more live sessions per term

Remind

CVA students and parents are automatically enrolled in their CVA teacher's Remind class based on the phone numbers provided during registration. If a parent and student provide the same cell phone number, they will not sync to Remind and will have to join the class manually using the join code posted on the Teacher Information page of their course.

Student Support



A student's first source for support is their CVA teacher. However, additional support is available. The **CVA Learning Center** is staffed with facilitators and is available both **in person** and **virtually**.

Facilitators can assist students with getting started, class navigation, assignment instructions, submitting work, technical issues, and strategies for online success.

The in-person Learning Center is on the Cobb Horizon High School campus at 1765 The Exchange Atlanta, GA.

All CVA students are enrolled in the Student Support digital classroom which provides access to the Virtual Learning Center (VLC). Students use the CTLS chat feature to send a message to the Student Support Team during the hours it is open.

Live Sessions

Your teacher will post live session information to the Class Board.

