Advanced Mathematical Decision Making

Davidson Fine Arts 2024-2025

# Instructor Information

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| Instructor | Email | Office Location |
| Latanya Jackson | Jacksla1@boe.richmond.k12.ga.us | Room 223 |
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| Remind Information |  |  |
| Text @amdm242 to 81010 |  |  |

# General Information

## Description

## This is a course designed to follow the completion of Algebra II, Advanced Algebra, Accelerated Geometry B/Algebra II or Accelerated Analytic Geometry B/Advanced Algebra. The course will give students further experience 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.

## Course Materials

## Required Materials

* Pencils and Colored Pens
* Loose Leaf Paper
* Graph Paper
* Spiral Notebook (200 pages college-ruled)
* 3 Ring Binder (1-in)
* Scientific Calculator

## Technology Requirement

Students will have access to TI-84+ graphing calculators for in-classroom use; however, it is highly recommended that each student own a graphing calculator if the student intends to take higher-level mathematics courses. You should have your own scientific calculator.

## Textbook Requirement

Miller, Charles D., et al. (2020). *Mathematical Ideas* (15th ed.). Pearson Education, Inc. ISBN 13: 9780138051433

Course Outline

| Unit | Topic | Big Ideas |
| --- | --- | --- |
| Unit 1 | Using the Power of Mathematical Reasoning to Make Decisions | Proportions, Ratios, Rates, & Percentages, Averages, Voting Methods, |
| Unit 2 | Using Probability to Make Decisions | Probabilities, Expected Value, Zero-Sum Games |
| Unit 3 | Using Statistical Studies to Make Decisions | Statistical Methods, Sampling, Random Selection, Distributions |
| Unit 4 | Using Mathematical Models to Make Decisions | Interests, Discrete/Continuous, Models using Functions, Trig Principles |
| Unit 5 | Using Vectors & Matrices to Make Decisions | Vectors, Geometric Transformations |
| Unit 6 | Using Network Models to Make Decisions | Vertex-Edge Graphs, Flow Charts, Program Evaluation Review Techniques, Coloring Graphs |
| Unit 7 | Culminating Capstone | Capstone Project |

# Grading Policy

| Category | Percentage |
| --- | --- |
| Minor Grades (quizzes, labs, graded work) | 60 |
| Major Grades (tests, project-based assignments, culminating tasks) | 40 |
| Homework (practice) | 0 |

Total 100

\*\*\*Extra credit is not allowed as students are given opportunities to relearn and reassess per the Richmond County School System policy.

* **Work Problems** will be given daily and will be checked for completion. The work problems are designed to allow a student to practice and/or reinforce a concept. These are essential for students to build the skills necessary to discuss the mathematics in the problems. If a student does not complete homework to the satisfaction of the instructor, the student will be asked to re-attempt it in a before-school session (Thursdays 7:45am).
* There will be a great deal of group collaboration in this course. Group activities, group projects, and partner/group quizzes may be given periodically. However, each student will receive individual scores based on their individual product.

# Make-Up/Late Work Policy

* When a student is absent, it is the responsibility of the student to get the missed work.
* Make-up work should be complete within 5 school days.
* Quizzes missed must be made up before completion of the corresponding test.
* Tests missed must be made up as soon as possible and before the next formal assessment.
* All quizzes and tests are to be made up in my classroom Thursday or Friday mornings at 7:30 am.
* **All work should be submitted on the DUE DATE as notified in class or online. Each submission day after the due date will incur a 5% grade penalty, up to a maximum 25% penalty. Any grade penalty incurred will be indicated in Canvas and Infinite Campus. Work that is not submitted after the 5-day window will be marked as “Missing” in Canvas and Infinite Campus and will earn zero points.**

**Reassessment Information:**

**Relearn and Reassessment (R&R) opportunities are offered to remediate unsatisfactory scores on MAJOR grades. These opportunities are offered once per assignment, but each R&R plan (including the reassessment itself) must be completed within seven school days of receipt of the original grade. The R&R form indicates the requirements that must be met to be eligible for the opportunity.**

Students may choose to **relearn/reassess** each major assignment, **one time**.

The **relearn/reassess** cycle must be complete **no later than 7 school days** from the date the assignment grade is posted in Infinite Campus.

To be eligible for reassessing, students must have all previous assignments from that unit completed one day prior to the reassessment date.

Students earning a score below 70 on a major assignment are required to complete the relearn/reassess form for that assignment and to communicate their relearn/reassess plan to their families.  For all other students, it is optional.

Please note that the reassessment will not be the same as the original but will assess the same standards.

**Cheating Policy**

The RCSS Student Code of Conduct, Rule 1(A)(t), states that no student shall cheat, alter records, plagiarize, receive unauthorized assistance (including the use of AI when prohibited) or assist another in any type of academic dishonesty. The determination that a student has engaged in academic dishonesty will be based on the judgment of the classroom teacher and a supervising administrator, taking into consideration any written materials, observation, or information from witnesses.

Students found to have engaged in academic dishonesty will receive 3 hours of detention. Additionally, the task will be entered as an incomplete and the student is required to re-do the assignment or re-take the assessment.

## Cellphone Policy

The RCSS Student Code of Conduct, Rule 16, states that the use of cell phones, electronic communication devices, and/or accessories (including some tablets, smart watches, earbuds, and earphones) are prohibited for all students at all times during the instructional day, defined as the time the student arrives on campus until the end of the school day. Penalties are described in more detail in the Code of Conduct, but they range from confiscation of the device to suspension, which would result in disciplinary probation at DFA. Personal iPads & tablets are NOT allowed. Noncompliance: If students refuse to give up their phone/device to a staff member, they will receive two days of suspension.

## Expectations and Goals

**Expectations of the STUDENT**

Expect the best of yourself and others.

Praise others when they do well.

Evaluate your progress.

Communicate with kindness.

Take time to celebrate success.

1. Work only on current AMDM during the 50 minutes of class. Any extraneous material may be taken up and returned later.

2. Bring all materials needed daily.

3. Do work problems daily and give it your all! You are welcome to ask questions about work problems, but you may be asked your approach on solving the problem before your question is answered.

4. Work problems and Extra practice problems should be labeled with the date and assignment so that you can use it to help you study for unit tests and semester exams. Each problem should have three essential parts 1) Problem, 2) Work, and 3) Answer (that is called PWA). Homework should be neat and easy to follow.

5. Expect your teacher to work in a coaching capacity, which means she will expect you to use a little “elbow grease” to solve a problem instead of answering you immediately.

6. Respect others when thinking mathematically. This includes verbal discussions, board presentations, and individual time thinking through a problem.

7. Work collaboratively with other students and teacher. If you are asked to work on a problem, jump in there and do your best to solve it!

8. Ask for extra help, if needed. Schedule a time to meet with the instructor or with a classmate to receive any additional help.

**Expectations of the TEACHER**

1. Make every effort to make this course a very challenging, yet exciting course.

2. Vary the methods of instruction to include individual and group work.

3. Introduce each student to the concepts set forth in the Advanced Mathematical Decision-Making Georgia Standards of Excellence.

4. Introduce each student to free response questions and how these questions are graded.

5. Plan for adequate time to review all material so that students have an opportunity to put all concepts together.

6. Work diligently to create a positive, fun atmosphere.

**Expectations of the PARENT**

1. Encourage students to put forth their best effort in homework and preparation of tests.

2. Communicate to the teacher if there are any problems.

3. Encourage the student to get extra help when needed.

4. Provide an environment conducive to studying and doing homework.

5. Encourage your student to communicate with you the mathematics that he learned that day.

6. Monitor your student’s grades at least once weekly via the Infinite Campus Online Gradebook.

*By signing this form, I acknowledge that I have access to a copy of the course syllabus. I have read and fully understand the policies and procedures of the Advanced Mathematical Decision Making course, and I understand I will be held accountable for my role as a student in this course.*

Student Signature:

*sign and date here*

Parent Signature: Date: