

Financial Algebra

Course of Study (COS)

Review and Approval Process

Curriculum and Instruction

Educational Services

Mt. Diablo Unified School District



If a Course of Study and Course Code exists, but requires changes and/or updates

THEN

Course of Study REVISION

List of existing MDUSD Courses
of Study Available at:
<https://www.mdusd.org/cos>

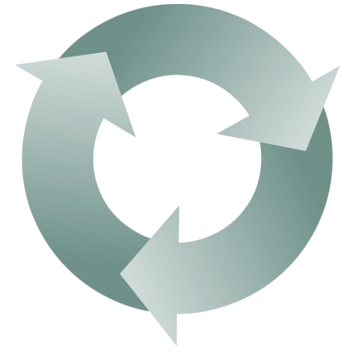
If a Course of Study and Course Code DOES NOT EXIST, but a group of educators from across sites would like to offer the course in the term(s) ahead

THEN

Course of Study PILOT Proposal



MDUSD
COURSE OF STUDY REVISION PROCESS
&
PILOT COURSE PACKET



Rationale

- Sharpen the equity lens applied to courses of study, materials, and instruction
- Align with UC A-G Portal
- Continuous cycle of review, revisions, and improvements to courses of study and materials

FINANCIAL ALGEBRA: Advanced algebra with financial applications is a mathematical modeling course that is algebra-based, applications oriented, and technology-dependent.

How this course aligns with Math Year 3 Standard & UC A-G Requirement

- Alternative to Algebra II to meet the third year math requirement and satisfy the California University A-G requirement.
- Alternative to Personal Finance, addressing real-world applications of mathematics, while at the same time satisfying A-G requirements.
- This serves as a “C” Area course.

Financial Algebra Pilot Course

Major Units/Concepts/Skills:

The course addresses college preparatory mathematics topics from advanced algebra, statistics, probability, precalculus, and calculus under seven financial umbrellas:

- banking
- investing
- credit
- employment and income taxes
- automobile ownership
- independent living
- retirement planning and Household budgeting.

Financial Algebra Pilot Course

Major Units/Concepts/Skills:

The course allows students to experience the ***interrelatedness of mathematical topics***, find patterns, make conjectures, and extrapolate from known situations to unknown situations.

Students are encouraged to use a ***variety of problem solving skills and strategies in real-world contexts***, and to question outcomes using mathematical analysis and data to support their findings.

The course offers students ***multiple opportunities to use, construct, question, model, and interpret financial situations*** through symbolic algebraic representations, graphical representations, geometric representations, and verbal representations.

Financial Algebra Pilot Course

Major Units/Concepts/Skills:

It provides students a ***motivating, young- adult centered financial context for understanding and applying the mathematics they are guaranteed to use in the future***, and is thusly aligned with the recommendations of the Common Core State Standards, as stated in this excerpt: “...all students should be strongly encouraged to take math in all years of high school.”

Pilot Process—Teacher Feedback

Pilot Began with an Idea to Change Math for ALL

Financial Algebra is a practical solution to the third year of math for many students in MDUSD. The concepts covered in the curriculum are applicable to real world skills, such as travel expenses, banking services, taxes, and participating in the stock market. The topics that cover student loans, credit card payments, starting a business, patenting an invention, obtaining life insurance are all subjects that allow students to equitably apply advanced algebra skills to real life situations.

Pilot Process—Teacher Feedback

Year 1 of Pilot

- The Cengage Financial Algebra textbook and workbook received as a publisher's gift to pilot the program at Ygnacio Valley High School
- As the first semester came to an end, students remarked that they enjoyed the subject matter, and were awakened to what interest meant, how to buy a home, how to invest in the stock market, and how to buy a car. They were intrigued by the financial world and how math played a role in their lives—it was applicable.
- During the second semester, students continued to be amazed at the complexities of a budget and all that is involved with opening a business.

Pilot Process—Teacher Feedback

Year 2 of Pilot

- During the second year of the pilot, students were tasked with focusing more on ***project-based learning and assessments*** as opposed to working through the textbook and Algebra II skills in a practical manner.
- Students had to pick three potential occupations, and define qualifications for the job, beginning salaries, and advancement opportunities. Students explored careers from lawyer to mortician, restaurant owner to professional athlete. The best part of the project-based learning was that students truly understand how mathematical concepts affect interest they pay, payments they make, saving for retirement, and managing household expenses.

Pilot Process—Teacher Feedback

Year 2 of Pilot

Though the practical and project-based learning was beneficial for all students, the pacing at the end to fully engage students could be worked on further.

In summation:

Students benefited from taking this course because they will receive a third year UC math credit for taking an equivalent course to Algebra II, they learned about the importance of credit and financial math, especially their FICO scores, and the math was not unreachable for all students because it was project-based on topics of everyday life that were extremely interesting to students. Financial Algebra teaches algebraic concepts that are contextually part of the larger financial global world.

Overall, the popularity of the course doubled from Year 1 to Year 2, with 74 students enrolled this year. This course will replace Personal Finance at YVHS and other schools in our district.

Pilot Process—Student Feedback

Student Survey Responses: [Link Here](#)
Also linked above are administrative responses.

A Sample of Student Responses—What new skills or knowledge did you gain from this course?

“I learned how to properly budget when it comes to saving and how to deal with credit cards/debit cards.”

“I now am more cautious when it comes to opening a bank account.”

“I learned the steps of buying a house or taking out a student loan.”

“I learned about taxes, FiCO scores, How to buy a house. Very important info I haven't learned anywhere.”

“I learned more about financing, loans and also taxes. I also learned how easy it is to get into debt if you don't know what you're doing.”

“I learned how to make big money on the stock market which I could use in other areas so that I'm not completely broke.”



Questions?