

Financial Algebra

UC/CSU approval pending/Not NCAA approved

Grade Level: 10-12

Estimated Work Outside of Class: 1-2 hrs per week

Course Description:

This course is designed to equip students with essential financial literacy skills while integrating foundational mathematical concepts. In the first semester, students will explore practical financial topics such as budgeting, managing expenses, banking, and saving. They will learn to balance a checkbook, understand different savings options, and gain insight into credit, credit cards, and the critical factors that affect their FICO score. Key topics will include strategies for building and maintaining good credit, auto and home purchasing/loans, and the financial implications of monthly payments and interest calculations. Employment basics such as resume writing, paycheck breakdowns, and the role of benefits like Social Security and Medicare will also be covered. The course will culminate with an introduction to retirement vehicles and an overview of stock market fundamentals.

In the second semester, students will build on their financial knowledge by applying mathematical concepts to real-world financial scenarios. They will begin by exploring automobile insurance through probability, including conditional and independent events, and use Venn diagrams to model risk assessment. Students will study the basics of income taxes, from completing simple 1040EZ forms to more complex 1040A forms, and learn about deductions and tax worksheets. As the course progresses, they will delve into the stock market, focusing on investing principles, moving averages, stock splits, and dividend income. The class will conclude with an exploration of business models, including fixed and variable expenses, and the application of quadratic functions to graph revenue and expense trends. Students will analyze breakeven points, optimize profit equations, and examine decision-making processes for business success.

By the end of the course, students will have developed a well-rounded understanding of personal finance, business operations, and the mathematical tools necessary to make informed financial decisions.

Prerequisite:

Completion of Geometry, Geometry B, Geometry Honors, Integrated Math 2 or higher level math course with a C or higher

Can be taken concurrently with Algebra 2 or Algebra 2 Honors

Recommended Prerequisite Skills:

Interest in business, finances and related topics. Strong basic math skills.

Strong interest and desire to study Business. Strong computational skills as we will be using ratios analysis, formulas, and evaluating depreciation and inventory valuation methods.

Algebra basics, including quadratics, exponential decay, linear regression, and basic geometry trigonometry.

Course Grade Categories:

Personal Finance:

- 30% Independent Practice/Engagement
- 25% Quizzes
- 45% Tests/Final

Major Assessments/Units/Topics:

Personal Finance I Units:

- I. Stock Market:
 - A. The basic idea of what the stock market is and why it exists. Students will explore basic data, ideas on investing, transactions, stock splits, and dividend income. (Quiz & Test)
- II. Discretionary Spending

Students will be looking into all the things we spend your money on and whether it is essential or just for fun spending. (1 quiz)

Blend into Budgeting: Different methods of budgeting will be discussed along with the essential items for which you need to budget
- III. Banking & Credit

Students will learn about different bank accounts, how to write a check, balance a checkbook, the different types of interest, and the time value of money. We will also explore topics in credit, including student loans, credit cards, FICO scores, how to read a credit card statement and the dangers students face when they step onto a college campus. (1 quiz & 1 test)
- IV. Car ownership

Students will learn about the important parts of automobile ownership including insurance, depreciation, auto loans, and driving safety. (1 quiz & 1 test)
- V. Retirement

Retirement planning will be a major emphasis including matching 401K's, starting to save early, Social Security, pensions, and life insurance. (1 quiz & 1 test)

Second Semester: There will be a quiz and test for each unit covered.

- VI. Employment & Independent Living
 - A. We will cover basics in finding employment, how you get paid, benefits and taxes. Options for where and how you can be sheltered (own vs. rent) will be explored as well as mortgages and expenses involved with ownership. (1 quiz & 1 test)

VII. Income Taxes:

- A. Students will discover the way taxes are paid. The different forms 1040EZ, 1040A, 1040 w/ Schedule A & B, will be broken down as well as tax tables, worksheets, and schedules will be utilized in different scenarios.

Unit III: Modeling a Business: Students will examine the topics of market research, fixed and variable expenses, and graph expense and revenue functions. Students will also consider breakeven analysis, the profit equation, as well as optimal outcomes.

Unit IV: Advanced Topics: Students will continue to explore future and present value of investments, loan length formula, driving safety data (projectile motion quadratics), exponential depreciation for vehicles, probability, and diversification of investments. These basic topics (banking, credit, auto ownership, retirement) are all covered in Business Accounting and Personal Finance 1 but students will delve deeper into these subjects.

Personal Finance Assessments:

1. Homework
2. Quizzes
3. Tests
4. Final

UC/CSU "c" approved/Not NCAA approved
Grade Level: 10-12
Estimated Work Outside of Class: 2 hrs per week

Course Description:

Business Accounting II: Students will move on from a sole proprietorship to a more complex business structure, accounting for a merchandising business organized as a corporation. Students will complete an entire accounting cycle for a merchandising corporation culminating in the preparation of financial statements. In addition, they will account for inventory valuation, depreciation of plant and equipment, and for intangible assets. They will explore various methods for accounting for depreciation and inventory and advantages and disadvantages of each method. In addition, emphasis will be placed on analyzing financial statements using ratio analysis. Students will use both vertical and horizontal ratio analysis to determine the strengths and weaknesses of a corporation. Finally, students will continue to be challenged to develop their business ethic statements and to apply them to various case studies. Lastly, students will complete a semester project of a simulation of a merchandising corporation completing the entire accounting cycle, including financial statement analysis.

Personal Finance II: Students will begin with automobile insurance probability: conditional and independent events along with Venn diagrams and then to projectile motion quadratics. Students will explore employment basics including paycheck details, geometric sequences, benefits and S.S. and Medicare deductions. The basics of filing income taxes from 1040EZ to 1040A forms, including worksheets, schedules, and tables. Next, students will learn the basics of the stock market including investing, moving averages, splits, and dividend income. The class will culminate with a study of a business model. Beginning with fixed and variable expenses, students will graph both expense and revenue functions (using completing the square). Lastly, the class will conclude with breakeven analysis, the profit equation, and optimal outcomes will be discussed and investigated.

Recommended Prerequisite Skills:

Strong interest and desire to study Business. Strong computational skills as we will be using ratios analysis, formulas, and evaluating depreciation and inventory valuation methods. Algebra basics, including quadratics, exponential decay, linear regression, and basic geometry trigonometry.

Course Grade Categories:

Business Accounting II Semester:

- 30% Classwork
- 55% Assessments
- 15% Final Project

Personal Finance II Semester:

- 30% Independent Practice/Engagement
- 25% Quizzes
- 45% Tests/Final

Major Assessments/Units/Topics: