Financial Mathematics, Semester A

Course Overview

Financial Mathematics, Semester A, is a single-semester course designed to introduce you to the basics of financial algebra. This course includes lessons that focus on planning for expenses and developing financial goals. You'll learn to use algebraic expressions that model growth that's due to interest. You'll also describe investments in terms of their cost, risks, and returns.

Course Goals

By the end of this course, you will be able to do the following:
- Describe the impact of careers on income, and explain the basics of bank accounts.
- Explain how money and other benefits are earned from employment.
- Explain the consequences of unexpected expenses, and describe how consumers can protect themselves.
- Use and manipulate algebraic expressions that model growth due to interest.
- Examine how inflation affects the value of savings, and describe the difference between nominal interest rates and real interest rates.
- Compare money with its future value.
- Interpret stock market information, data, and models used for investments.
- Describe how expenses affect buying, selling, and holding assets.
- Examine common mistakes in investing, and describe strategies for making good investments.

Math Skills

Before beginning this course, you should be able to do the following:
- Solve problems involving arithmetic operations with real numbers.
- Know the properties of expressions and equations, and use those properties to solve problems.
- Collect, analyze, and display data to solve problems.

General Skills

To participate in this course, you should be able to do the following:

- Understand the basics of spreadsheet software, such as Microsoft Excel or Google Spreadsheets, but having prior computing experience is not necessary.
- Communicate through email and participate in discussion boards.

For a complete list of general skills that are required for participation in online courses, refer to the Prerequisites section of the Student Orientation document, found at the beginning of this course.

Credit Value

Financial Mathematics, Semester A, is a 0.5-credit course.

Course Materials

- notebook
- computer with internet connection and speakers or headphones
- Microsoft Excel or equivalent

Course Pacing Guide

This course description and pacing guide is intended to help you keep on schedule with your work. Note that your course instructor may modify the schedule to meet the specific needs of your class.

Unit 1: Budgeting

Summary
In this unit, you'll learn how to create a basic budget. First, you'll examine different types of career benefits and how to convert a pay schedule into a weekly, biweekly, or monthly income value. Then you'll examine how to structure your finances to plan for different types of expenses. At the end of the unit, you'll set some financial goals and incorporate them in a personal budget.

Day	Activity/*Objective*	Type
1 day: 1	**Syllabus and Student Orientation** *Review the Student Orientation and Course Syllabus at the beginning of this course.*	Course Orientation

Day	Activity/*Objective*	Type
5 days: 2–6	**Income** *Explain how money and other benefits are earned from employment.*	Lesson
5 days: 7–11	**Planning for Expenses** *Explain the consequences of unexpected expenses and describe how consumers can protect themselves.*	Lesson
5 days: 12–16	**Financial Goals** *Create personal financial goals and develop a plan to meet them.*	Lesson
4 days: 17–20	**Creating a Budget** *Construct a one-year budget plan.*	Course Activity
5 days: 21–25	**Unit Activity and Discussion—Unit 1**	Unit Activity/ Discussion
1 day: 26	**Posttest—Unit 1**	Assessment

Unit 2: Saving

Summary

In this unit, you'll examine the importance of saving and how saving behavior affects financial well-being. You'll use algebraic expressions to model interest. Using your knowledge of interest, you'll examine how inflation affects the value of savings and explore the difference between nominal interest rates and real interest rates. You'll use what you know about interest and inflation to compare money with its future value. You'll also see how employer and government programs provide incentives and disincentives for saving.

Day	Activity/*Objective*	Type
5 days: 27–31	**Saving for the Future** *Discuss the importance of saving and how saving behavior affects the financial well-being of consumers.*	Lesson
6 days: 32–37	**Interest** *Use and manipulate algebraic expressions that model growth due to interest.*	Lesson

Day	Activity/*Objective*	Type
6 days: 38–43	**Inflation and Interest Rates** *Examine how inflation affects the value of savings and describe the difference between nominal interest rates and real interest rates.*	Lesson
6 days: 44–49	**The Time Value of Money** *Compare money with its future value.*	Lesson
5 days: 50–54	**Incentives for Saving** *Explain how employer and government programs provide incentives and disincentives for saving.*	Lesson
5 days: 55–59	**Unit Activity and Discussion—Unit 2**	Unit Activity/ Discussion
1 day: 60	**Posttest—Unit 2**	Assessment

Unit 3: Investing

Summary

In this unit, you'll interpret stock market information, data, and models used for investments. You'll describe how expenses affect investing income from buying, selling, and holding assets. Then you'll explain how an investment with a greater risk and rate of return will cost less than a safer investment. Finally, you'll examine common mistakes in investing and describe strategies for making good investments.

Day	Activity/*Objective*	Type
5 days: 61–65	**Introduction to Investments** *Interpret stock market information, data, and models used for investments.*	Lesson
6 days: 66–71	**Investment Costs and Returns** *Describe how expenses affect the buying, selling, and holding of assets.*	Lesson
6 days: 72–77	**Investment Risks and Returns** *Explain how an investment with a greater risk and rate of return will cost less than a safer investment.*	Lesson
5 days: 78–82	**Investing Decisions** *Examine common mistakes in investing and describe strategies for making good investments.*	Lesson

Day	Activity/*Objective*	Type
5 days: 83–87	**Unit Activity and Discussion—Unit 3**	Unit Activity/ Discussion
1 day: 88	**Posttest—Unit 3**	Assessment
1 day: 89	**Semester Review**	
1 day: 90	**End-of-Semester Exam**	Assessment