

Course Title:	Math for Business and personal Finance
Head of Department:	Ms. Budoor Konialy Boudour.kb@greenwood.sch.ae
Teacher(s) + e-mail:	Ms. Budoor
Cycle/Division:	High School
Grade Level:	Grade 12
Credit Unit:	1 Credit
Duration:	1 Year
Course Prerequisites:	Proficiency in basic Math Skills Logical and analytical thinking Attention to details Numeracy skills

<u>Department's Vision:</u>	<ul style="list-style-type: none"> To be modern and an innovative Department that brings transformational opportunities to our students through diverse teaching strategies, effective collaboration and excellence in communication knowledge and nurturing skills.
<u>Department's Mission:</u>	<ul style="list-style-type: none"> .Prepare students to be active and engaged citizens who are able to apply accounting, economics and business knowledge for the betterment of individuals and organizations.

<u>COURSE DESCRIPTION:</u>
<p>this course is designed to represent the standards of learning that are essential and necessary for all students. The implementation of the ideas, concepts, knowledge, and skills will create the ability to solve mathematical problems, analyze and interpret data, and apply sound decision-making skills. This will enable students to implement the decision-making skills they must apply and use these skills in a hands-on manner to become wise and knowledgeable consumers, savers, investors, users of credit, money managers, citizens, employees, employers, inventors, entrepreneurs, and members of a global workforce and society.</p>
<u>GENERAL COURSE LEARNING OBJECTIVES:</u>
<ul style="list-style-type: none"> The student will calculate different types of pay and the total (or gross) pay. The student will examine how to manage money and develop a budget.

- The student will investigate loans, loan payments, interest payments, costs of a loan, and various methods credit card companies use to compute finance charges.
- The student will research costs involved in buying/maintaining a vehicle and leasing or renting a vehicle.
- The student will investigate costs associated with owning a home, such as mortgage, insurance, and maintenance.

I.

STANDARDS/BENCHMARKS:

STRAND 1

Students will use a rational decision-making process to set and implement financial goals.

Standard 4: Apply a decision-making model to maximize consumer satisfaction when buying goods and services.

- Distinguish between goods and services.
- Distinguish between wants and needs.
- Understand the value of warranties, service contracts, risk protection for varieties of products/services

STRAND 3

Students will understand and calculate sources of income and the relationship between income and career preparation.

Standard 1: Identify various forms of income and analyze factors that affect income.

- Identify sources of income (e.g., wages, investments, and self-employment). Differentiate between earned and unearned income (inheritance, dividends/royalties, rent, gifts, etc)
- Calculate gross pay per pay period (e.g., salaries, wages, commissions, overtime, tips, and piece-rate).

Standard 2: Identify and understand required income withholdings.

- List the reasons for taxation and uses of tax revenues.
- Describe the purposes of and calculate Social Security and Medicare taxes.
- Calculate federal, state and local payroll deductions by referencing tax charts and tables.
- Calculate net pay from an employee payroll record.

Performance Objective: Understand the various forms of income through various careers and the different withholdings associated with those choices.

STRAND 4

Students will understand principles of money management.

Standard 1: Describe the role of planning and maintaining a balanced budget.

Develop, monitor, and evaluate a personal budget.

- Demonstrate knowledge of financial transactions, checking and savings accounts, and associated financial services.
- Comparison of purchase costs using cash, check, debit cards, smart cards, credit cards and store cards.
- Maintain a check register and reconcile a bank statement.
- Evaluate the impact and related expenses of major purchases on budgeting (e.g., sales tax, property tax, registration, accessories).
- Be able to graph the income and expense portions of budgets using pie charts, line graphs, bar graphs, etc.
- Understand the use of available technology associated with banking and financial industry (debit cards, electronic checks and deposits, bill pay, online access to accounts, etc.).

Standard 2: Understand credit uses and costs from a business and consumer perspective.

Discuss the history and role of credit.

- List basic types of debt/loans (e.g., credit cards, installment loans, service credit, revolving credit, mortgage loans, student loans, payday loans).
- Describe the risks and responsibilities associated with using credit (predatory lending, borrowing money from personal sources, etc).
- Identify methods of establishing and maintaining a good credit rating.
- Explain the purpose of co-signers and collateral when applying for a loan.
- Identify warning signs of credit abuse (e.g., late fees, missed payments, collection notices, bounced checks) and ways to correct credit problems.
- Calculate, analyze and compare costs associated with the use of credit (e.g., finance charges, interest, late fees, default rates, closing costs, average daily balance).

Standard 3: Describe the impact of credit on money management from a business and consumer perspective.

- Compare the advantages and disadvantages of different payment methods.
- Understand the merchant fees related to accepting debit and credit cards.
- Compare the services of various types of financial institution (e.g., banks, credit unions, investment brokers, loan agencies, title loans, payday loans).
- Identify advantages of comparison shopping before selecting financial services and purchases.
- Describe the relationship between a credit rating, credit risk, the cost of credit, and factors that affect credit worthiness.
- Explain the value of credit reports and scores to borrowers and lenders.
- Calculate how long it takes to repay debt (short- vs. long-term loans).
- Calculate the total costs when a borrower makes only minimum payments.

Standard 5: Describe the purposes of insurance and risk management.

- Identify and budget for common types of insurance (e.g., automobile, health, homeowner's, renter's, reverse mortgage, life, long-term disability).
- Understand insurance terminology (e.g., term, whole life, deductible, premium, grace period, and beneficiary).
- Describe how insurance and other risk-management strategies protect against financial loss.

STRAND 5

Students will understand saving, investing, and retirement planning.

Standard 3: Compare savings and investments.

- Compare and calculate the risk, return, liquidity, and costs for savings and investments (e.g., P/E ratio, dividend yield).
- Explain the effects of inflation on savings and investments.

- Calculate and understand the concept of the time value of money (e.g., simple and compound interest, Rule of 72).

Standard 4: Analyze financial preparation for retirement.

- Discuss and calculate financial resources needed for specific retirement activities and lifestyles.

STRAND 6

Students will be able to solve various sales and marketing discounts and markup/markdown computations.

Standard 1: Calculate different types of discounts involved in purchasing.

- Use a single trade discount rate to determine the trade discount amount and net price.
- Use a chain trade discount to find the net price, equivalent rates, and discount amount.
- Use cash discounts to calculate the discount period(s), credit period, and payment amounts (ordinary, special).

STRAND 7

Students will understand and calculate the cost of home/business ownership.

Standard 1: Understand the elements related to the total cost of a monthly mortgage payment.

- Understand the components involved in a principal loan amount calculation (e.g., loan, closing costs, down payment).
- Define the purpose of an escrow account (e.g., property taxes and homeowner's insurance).
- Analyze how interest rate and length of loan affect payment

Standard 2: Calculate the costs associated with mortgages.

- Calculate how principal and interest are allocated in a monthly payment.
- Calculate the total interest and total cost paid over the life of a loan.
- Compute closing costs (e.g., title search, realtor, appraisal, HOA transfer).
- Calculate amount required for down payment given certain percentages.

Standard 3: Understand responsibilities and related costs associated with renting vs. home/business ownership.

- Discuss homeowner association fees and typical inclusions.
- Identify costs related to home improvement/repair.
- Recognize typical requirements for furnishing and landscaping.
- Understand obligations for utilities (gas, power, Internet, cable, water, sewer, garbage).



II.

RESOURCES:

- ✓ Glencoe Mathematics for Business and Personal Finance
- ✓ Chrome book
- ✓ Notebook
- ✓ Scientific Calculator
- ✓ Pencil, pen, ruler

III.

COURSE OUTLINE:

Semester 1:

Chapter 1: Gross Income

- 1.1 Straight-Time Pay
- 1.2 Overtime Pay
- 1.3 Weekly Time Card
- 1.4 Piecework
- 1.5 Salary
- 1.6 Commission
- 1.7 Graduated Commission

Chapter 2: Net Income

- 2.1 Federal Income Taxes
- 2.2 State Income Tax
- 2.3 Graduated State Income Tax
- 2.4 Social Security and Medicare Taxes
- 2.5 Group Health Insurance
- 2.6 Statement of Earnings

Chapter 3: Recordkeeping

- 3.1 Average Monthly Expenditures
- 3.2 Preparing a Budget Sheet
- 3.3 Using a Budget

Chapter 4: Checking Accounts

- 4.1 Deposits
- 4.2 The Check-Writing Process
- 4.3 Check Registers
- 4.4 Bank Statements
- 4.5 Bank Statement Reconciliation
- 4.6 Online Banking

Chapter 5: Savings Accounts

- 5.1 Deposits
- 5.2 Withdrawals
- 5.3 Account Statements
- 5.4 Simple Interest
- 5.5 Compound Interest
- 5.6 Compound Interest Tables
- 5.7 Daily Compounding
- 5.8 Annuities

Semester 2:

Chapter 6: Cash Purchases

- 6.1 Sales Tax
- 6.2 Total Purchase Price
- 6.3 Unit Pricing
- 6.4 Comparison Shopping
- 6.5 Coupons and Rebates
- 6.6 Markdown
- 6.7 Sale Price

Chapter 7: Charge Accounts And Credit Cards

- 7.1 Account Statements
- 7.2 Finance Charge: Unpaid-Balance Method
- 7.3 Finance Charge: Average-Daily-Balance Method

Chapter 8: Loans

- 8.1 Single-Payment Loans
- 8.2 Installment Loans-Amount Financed
- 8.3 Installment Loans - Monthly Payment & Finance Charge
- 8.4 Installment Loans - Monthly Payment Allocation
- 8.5 Paying Off Installment Loans
- 8.6 Determining the APR

Chapter 9: Vehicular Transportation

- 9.1 Purchasing a New Vehicle
- 9.2 Dealer's Cost
- 9.3 Purchasing a Used Vehicle
- 9.4 Vehicle Insurance

Chapter 10: Housing Costs

- 10.1 Mortgage Loans
- 10.2 Monthly Payment and Total Interest
- 10.3 Closing Costs
- 10.4 Allocation of the Monthly Payment
- 10.5 Real Estate Taxes
- 10.6 Homeowner's Insurance
- 10.7 Homeowner's Insurance Premium
- 10.8 Other Housing Costs
- 10.9 Renting or Owning a Home

IV.

GRADING:

Grading Policy/ Assessment Tools:

- Quizzes
- Graded Class works
- Unit Comprehensive Online Assessment
- Formative Assessments
- Practical Demonstration Formative Assessment
- Self-Assessment Quizzes
- In and out of classes projects
- Case studies

Grade Distribution:

<u>Semester 1</u>		<u>Semester 2</u>	
<u>Assessment</u>	<u>Points/Weight</u>	<u>Assessment</u>	<u>Points/Weight</u>
Quizzes	35%	Quizzes	35%
Graded Class work	25%	Graded Class work	25%
Projects	10%	Projects	10%
Final Exam	30%	Final Exam	30%