

# ACCT-1011: BUSINESS MATH APPLICATIONS

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## Cuyahoga Community College

### Viewing: ACCT-1011 : Business Math Applications

**Board of Trustees:**

December 2021

**Academic Term:**

Fall 2022

**Subject Code**

ACCT - Accounting

**Course Number:**

1011

**Title:**

Business Math Applications

**Catalog Description:**

Application of applied quantitative procedures to typical accounting, financial, and business situations. Includes percents in business, simple and compound interest, financing, property and sales taxes, applied statistics, present and future values, and other accounting/business topics. Requires use of financial (business analyst) calculator and available internet resources in problem-solving.

**Credit Hour(s):**

3

**Lecture Hour(s):**

3

**Lab Hour(s):**

0

**Other Hour(s):**

0

## Requisites

**Prerequisite and Corequisite**

MATH-0910 Basic Arithmetic and Pre-Algebra or qualified Math placement.

## Outcomes

**Course Outcome(s):**

Apply quantitative analysis in accounting/financial/business decision making and written communications.

**Essential Learning Outcome Mapping:**

Critical/Creative Thinking: Analyze, evaluate, and synthesize information in order to consider problems/ideas and transform them in innovative or imaginative ways.

Written Communication: Demonstrate effective written communication for an intended audience that follows genre/disciplinary conventions that reflect clarity, organization, and editing skills.

Quantitative Reasoning: Analyze problems, including real-world scenarios, through the application of mathematical and numerical concepts and skills, including the interpretation of data, tables, charts, or graphs.

**Objective(s):**

1. Perform calculations related to debt and equity investments.
2. Apply quantitative financial analysis to a set of financial statements.
3. Apply statistical techniques in business decision-making.
4. Explain the basics of cash and credit banking transactions related to checking accounts and apply quantitative techniques to reconcile cash accounts.
5. Interpret and solve problems related to retail and wholesale functions.

6. Explain importance of and apply quantitative techniques relating to sales, cost, and profit relationships as used in accounting and business.
7. Identify various inventory valuation methods, apply calculations and determine relationship to cost and profit.
8. Explain concept of depreciation, apply quantitative techniques to varying depreciation methods and determine relationship to cost and profit.
9. Explain underlying principles of a payroll system, perform payroll computations and maintain mandatory payroll records.
10. Demonstrate the use of and calculate interest, annuities, and payment plans related to borrowing, lending, savings and investments.
11. Explain the use of promissory notes, simple discounts, and the discounting process as used in accounting/business and apply quantitative techniques.

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**Course Outcome(s):**

Use of financial calculator and available internet media and online tools to solve business related problems.

**Objective(s):**

1. Use a financial calculator to solve accounting/business-related problems.
2. Use of internet resources to research source information as basis for written project assignment on a selected course topic.

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**Methods of Evaluation:**

1. Minimum of three unit tests
2. Class participation
3. Homework assignments
4. Quizzes
5. Written cases
6. Case research
7. Other evaluation methods deemed appropriate by instructor to meet educational goals

**Course Content Outline:**

1. Use of financial (business analyst) calculator
  - a. Compound interest (future value)
  - b. Present value
  - c. Annuities
2. Banking
  - a. Bank transactions
  - b. Bank statement reconciliation
  - c. The latest trends in mobile banking
3. Solving for the unknown
  - a. Solving equations for the unknown
  - b. Solving word problem for the unknown
4. Percents and their application
  - a. Conversions
  - b. Portion formula
5. Discounts: trade and cash
  - a. Single and chain discounts
  - b. Cash discounts, credit terms, and partial payments
6. Markups and markdowns: perishables and breakeven analysis
  - a. Markups based on cost
  - b. Markups based on selling price
7. Payroll
  - a. Calculating gross pay
  - b. Computing payroll deductions
8. Simple interest
  - a. Calculation of simple interest and maturity value
  - b. Finding unknown in simple interest formula
9. Promissory notes, simple discount notes, and the discount process
  - a. Structure of promissory notes
  - b. Discounting an interest-bearing note before maturity

10. Compound interest and present value
  - a. Compare simple interest with compound interest
  - b. Compute the effective rate
  - c. Compare compound interest with present value
11. Annuities and sinking funds
  - a. Ordinary annuity and annuity due
  - b. Present value of an ordinary annuity
12. Installment buying
  - a. The cost of installment buying
  - b. Credit cards
13. The cost of home ownership
  - a. Types of mortgages and the mortgage monthly payment
  - b. Amortization schedule
14. How to read, analyze and interpret financial reports
  - a. Balance Sheet
  - b. Income statement
  - c. Trend and ratio analysis
15. Depreciation
  - a. Straight line method
  - b. Units of production method
  - c. Declining balance method
  - d. Modified accelerated cost recovery system (MACRS)
16. Inventory and overhead
  - a. Assigning costs to ending inventory
  - b. Retail method and gross profit method
17. Sales, excise and property taxes
  - a. Computing sales tax on goods sold
  - b. Compute excise tax
  - c. Compute property tax due
18. Stocks, bonds and mutual funds
  - a. Explain stock quotations
  - b. Explain bond quotations
  - c. Explain mutual fund net asset value, commissions, and quotations
19. Business Statistics
  - a. Mean, Median and mode
  - b. Frequency distributions and graphs.

## Resources

Slater, Jeffrey and Wittry, Sharon M. *Practical Business Math Procedures*. 13th ed. McGraw-Hill Education, 2020.

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Cleaves, Cheryl, et al. *Business Math*. 11th. Pearson, 2017.

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Clendenen, Gary, et al. *Business Mathematics*. 14th ed. Pearson, 2018.

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## Resources Other

1. none.

Top of page

Key: 2