

COURSE OUTLINE **Business Math/10-Key**

Course Description

BE 121. Business Machines/10-Key. 3 hours credit. Prerequisite: A score at a pre-determined level in the numerical skills portion of the ASSET exam or MA 050 or above with a C or better. This course will enable the student to combine business math and the 10-key using the computer. The student will concentrate on areas such as, fractions, percentages, pricing merchandise, payroll, interest, banking, and credit. This course will enable the student to develop a higher speed and a greater degree of accuracy using the 10-key touch method.

Course Relevance

The applications learned in this course will allow the student to effectively utilize consumer information to make wise choices in banking, discounts, interest, and payroll items. The applications and principles learned in this course are relevant to any career field.

Required Materials

Henry, B. & Prescott, S., (1999). *Calculating for business*. Cincinnati, OH: South-Western Educational Publishing.

Learning Outcomes

The intention is for the student to be able to

1. Apply skills required for mathematical concepts encountered in business situations
2. Use the touch system to demonstrate a minimum 10-key speed of 110 net kpm on a three-minute timing

Primary Learning PACT Skills that will be DEVELOPED and/or documented in this course

Through the student's involvement in this course, he/she will develop his/her ability in the following primary PACT skill areas

1. Problem Solving
 - By applying skills learned in lessons, the student will use techniques to solve specific problems.

Secondary skills (developed but not documented):

- Time Management
- Reading
- Computer Literacy
- Listening
- Nonverbal Communication
- Critical Thinking

Major Summative Assessment Task(s)

These learning outcomes and the primary Learning PACT skills will be demonstrated by

1. Completing a comprehensive simulation of specific, real-life business problems
2. Demonstrating improvement of keyboarding techniques with a minimum of 110 net kpm on a three-minute timing

Course Content

- I. Themes - Key recurring concepts that run throughout this course:
 - A. Calculations by touch
 - B. Consumer applications
 - C. Personal development skills
 - D. Listening skills
- II. Issues - Key areas of conflict that must be understood in order to achieve the intended outcome:
 - A. Reading comprehension
 - B. Following instructions
 - C. Completing tasks to the degree of approval
 - D. Touch system of keying numbers
 - E. Improving speed and accuracy
- III. Concepts – Key concepts that must be understood to address the issues:
 - A. Task completion
 - B. Time management
 - C. Calculator skills
- IV. Skills/Competencies - Actions that are essential to achieve the course outcomes.
 - A. Perform addition, subtraction, multiplication, and division problems
 1. Perform touch addition of whole numbers
 2. Perform addition and subtraction of whole numbers with positive and negative balances
 3. Find subtotals and totals in addition and subtraction
 4. Add numbers in columns and rows
 5. Multiply whole numbers and decimals and estimate
 6. Divide whole numbers and decimals and estimate
 7. Multiply and divide with a constant factor
 8. Become proficient in using the memory functions
 - B. Solve problems with mixed operations
 - C. Calculate fractions, decimals, percents, and discounts
 1. Change fractions to decimals
 2. Change percents to decimal equivalents
 3. Change decimals, fractions, and percents to equivalents
 4. Find percentage, rate, and base
 5. Find amounts and percents of increase or decrease
 6. Find discount amounts
 7. Use the discount's complement to find amounts due
 8. Find net prices and series discount amounts using discounts complements
 9. Extend invoices and find net amount due

- D. Complete banking records
 - 1. Complete deposit slips
 - 2. Make a bank reconciliation
 - 3. Maintain a bank account balance
 - 4. Work with a petty cash fund
 - 5. Figure cash short and over
- E. Figure payroll earnings and taxes
 - 1. Calculate gross earnings, net pay, and deductions
 - 2. Find salary increase plus merit pay
 - 3. Figure salary plus commission
 - 4. Find hourly earnings
 - 5. Use a federal income tax withholding table
 - 6. Determine Social Security and Medicare deductions
 - 7. Calculate employer contributions and tax reporting
- F. Figure invoices
 - 1. Complete sales invoices by using extensions
 - 2. Prepare purchase invoices
- G. Figure discounts
 - 1. Figure freight costs and cash discounts
 - 2. Do single trade discounts
 - 3. Figure complements
 - 4. Calculate series trade discounts using complements
 - 5. Use a single discount equivalent table to figure net amounts due
 - 6. Figure cash discounts and due dates
- H. Figure interest
 - 1. Figure simple interest
 - 2. Calculate the length of a loan in days
 - 3. Work with unknown elements to figure interest
 - 4. Discount a loan by using the simple interest formula
 - 5. Figure compound interest
- I. Calculate pricing
 - 1. Calculate markup based on cost
 - 2. Calculate markup based on selling price
 - 3. Figure markdown
 - 4. Work with missing elements in figuring pricing
- J. Figure inventory
 - 1. Do inventory based on the first-in, first-out method
 - 2. Do inventory based on the last-in, first-out method
 - 3. Work with weighted average method
- K. Figure depreciation
 - 1. Figure depreciation using the straight-line method
 - 2. Figure depreciation using the declining-balance method
- L. Perform an office simulation for areas learned from above
- M. Key a minimum of 110 net kpm for three minutes

Learning Units

- I. Addition, subtraction, multiplication, division
- II. Mixed operations
- III. Fractions, decimals, percents, discounts
- IV. Banking records
- V. Payroll earnings and taxes
- VI. Invoices
- VII. Discounts
- VIII. Interest
- IX. Pricing
- X. Inventory
- XI. Depreciation
- XII. Simulation

Learning Activities

Learning activities will be geared toward techniques used in manipulating data. These activities will be both independent and collaborative. Demonstrations will allow the student to observe each task before proceeding.

Grade Determination

The student will be graded on assessment tasks, learning activities, timed writings, and exams.