Course Outline

2026-2027 Catalog

BCIS 46 - Business Math Calculations

Catalog Description

Transfer Status: CSU

Unit(s): 2.00

Lecture: 25.50 Contact hours/51.00 Out of class hours/76.50 Total hours/1.50 Unit(s)

Lab: 25.50 Contact hours/0.00 Out of class hours/25.50 Total hours/0.50 Unit(s)

Total: 51.00 Contact hours/51.00 Out of class hours/102.00 Total hours/2.00 Unit(s)

Course Description: In this course, students use the features of a business ten-key calculator to solve business math problems including banking, payroll, invoicing, markups/markdowns, interest, present and future value, credit cards, student loans, types of insurance, installment buying, and mortgages. Students will develop ten-key speed and accuracy using the touch method.

Objectives

Upon successful completion of this course, the student should be able to:

1. Demonstrate entering mathematical data with accuracy and speed using the touch method on a variety of numeric keypads.
2. Accurately round numbers and estimate answers for multiplication and division problems without using a business calculator.
3. Solve basic business mathematical problems that include whole numbers, fractions, decimals, and percents.
4. Perform banking, payroll, and tax calculations.
5. Compare and contrast different types of consumer and business credit, as well as types of insurance.
6. Explain mortgage types, simple and compound interest, amortization.
7. Calculate discounts, markups, and percentages for business applications.

Course Content

Topic Titles / Suggested Time Topic

Lecture

Topics	Lec Hrs
Ten-Key Touch Method	1.50
Whole numbers, fractions, percents, and decimals	2.00
Using equations to solve business problems	2.00
Checking accounts and banking	2.50
Payroll and federal tax calculations	2.50
Invoices, trade, and cash discounts	2.50
Markups and markdowns	2.50
Simple interest, compound interest, promissory notes	2.50
Present value, and annuities	2.50
Credit cards; student loans; and term, whole life, property and casualty insurance.	2.50
Installment buying and mortgages and home ownership	2.50
Total Hours:	**25.50**

Lab

Topics	Lab Hrs
Ten-Key Touch Method	1.50
Whole numbers, fractions, percents, and decimals	2.00
Using equations to solve business problems	2.00
Checking accounts and banking	2.00
Payroll and federal tax calculations	2.00
Invoices, trade, and cash discounts	2.00
Markups and markdowns	2.00
Simple interest, compound interest, promissory notes	3.00
Present value, and annuities	3.00
Credit cards; student loans; and term, whole life, property and casualty insurance.	3.00
Installment buying and mortgages and home ownership	3.00
Total Hours:	**25.50**

Methods of Instruction

A. Class Activities
B. Homework: Students are required to complete two hours of outside-of-class homework for each hour of lecture
C. Instructor Demonstrations
D. Lecture
E. Practical Applications

Methods of Evaluation

A. Exams/Tests
B. Demonstration
C. Homework
D. Practical Evaluations
E. Time writing
F. Weekly Assignments where students demonstrate problem-solving skills and assess their progress towards math skills and competencies

Examples of Assignments

Reading Assignments

1. Read the section in the textbook on completing and verifying inventory cards. In a Word document in one to two paragraphs, explain what positive balance means in a problem that includes both plus and minus amounts and then make up a problem that has a negative balance. Please submit to the instructor at the beginning of the next class session for review.
2. Read the lesson in the textbook on crossfooting; and in a Word document in one to two paragraphs, define crossfooting and explain why it is important to use crossfooting to check your answers. Please submit to instructor at the beginning of the next class session for review.

Writing Assignments

1. In a Word document in 1-2 paragraphs, respond to the following: 1) What is a factor? 2) Why it is important to estimate your answers? and 3) What is a floating decimal on an electronic calculator? Please submit to the instructor at the beginning of the next class session for review.
2. Write 1-2 paragraphs in a Word document that explains both the shortcut method for changing a decimal to a percent, and a short cut method for changing a percent to a decimal. Submit to the instructor at the beginning of the next class session for review.

Out-of-Class Assignments

1. On a ten-key calculator, set the Decimal Point Selector at two, the Round switch in the five/four position, and the Constant Operation mode to “on.” In the lesson on constant multiplication and division, use the calculator to solve problems 1-64. Run a tape for each problem. On the tape, write your name, the date, and the lesson number at the top and number each problem and circle the answer. Transfer answers to the provided answer tab. Staple the answer tab and tape together, and submit to the instructor at beginning of the next class session for review.
2. Using a ten-key calculator, solve problems 1-50 in the lesson on multiplying three factors or more. Determine the setting of the Decimal Point Selector by the method covered in the lesson and class. Run a tape for each problem. On the tape, write your name, the date, and the lesson number at the top and number each problem and circle the answer. Transfer answers to the provided answer tab. Staple the answer tab and tape together, and submit to the instructor at beginning of the next class session for review.

Recommended Materials of Instruction

Polinsky, M. (2003). Solving Business Problems Using a Calculator. *McGraw Hill, 6th.* 978-0-07-830020-2.
Slater, J. & Wittry, S. (2022). Practical Business Mathematics Procedures. *McGraw-Hill Publishing, 14th.* 978-1-26-409838-5.

Minimum Qualifications

Office Technologies

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