



Articulation Agreement Course Provisions and Competencies

BUS 102 Business Mathematics

5 Credits

Applications of quantitative reasoning and logic in business through a study of banking, discounts, commissions, markup, promissory notes, interest, taxes, insurance, payroll, depreciation and financial statements

NOTE: This articulation is a 1 year trial for the following three schools.

- **Columbia Basin Secondary HS**
- **Ephrata HS**
- **Lake Roosevelt HS**

PROVISIONS

1. Student must be enrolled in the required high school class.
2. Student must receive an A or B grade (minimum 2.9 or better) and complete all competencies.
3. All required Tech Prep forms must be sent to BBCC **within 30 days** of high school course completion.
4. Teachers must assign student grades and credits **within 30 days** of high school course completion.
5. Tests must be given from the Deitz and Southam, Contemporary Business Math, 13th Edition test bank. BBCC will provide the test information to the high school.

COMPETENCIES

1. Use shortcuts and simplifications to perform the fundamental processes of addition, subtraction, multiplication, and division.
2. Estimate answers before performing mathematical operations.
3. Change improper fractions and mixed numbers.
4. Add, subtract, multiply, and divide fractions and mixed numbers.
5. Add, subtract, multiply, and divide decimals.
6. Apply formulas to solve rate, time, and distance problems.
7. Solve simple numerical equations.
8. Recognize numerical relationships in series.
9. Change percents to decimals.
10. Change decimals and fractions to percents.
11. Find Base, Rate, and Percentage using $R \times B = P$
12. Use percents to measure increase and decrease.
13. Use percents to allocate expenses such as overhead.
14. Compute sales commissions and gross pay.
15. Compute graduated sales commissions.
16. Compute sales and purchases for principals or commission agents.
17. Compute trade discounts and a series of trade discounts.

18. Compute the equivalent single discount rate for a series of trade discounts.
19. Compute the cash discounts and remittance amounts for fully paid invoices.
20. Compute cash discounts and remittance amounts for partially paid invoices.
21. Compute the variables in the basic markup formula of $\text{Cost} + \text{MUP} = \text{SP}$.
22. Compute the markup percent based on cost.
23. Compute the markup percent based on selling price.
24. Maintain a checking account.
25. Reconcile a bank statement with a checkbook balance.
26. Compute Social Security and Medicare tax amounts.
27. Compute federal income tax withholding amounts.
28. Compute an employee's gross pay, deductions, and net pay.
29. Compute sales taxes.
30. Compute assessed valuations and property taxes based upon assessed valuations.
31. Make basic computations to determine taxable income and the tax liability for taxpayers who use the standard federal income tax Form 1040.
32. Compute costs and insurance payments for auto, property, and life insurance.
33. Compute cash surrender and loan values for life insurance.
34. Compute simple interest with time in days (both 360 and 365 days), months, or years.
35. Compute the Principal, Rate, and Time variables using $I = P \times R \times T$.
36. Compute finance charges for credit account purchases.
37. Compute monthly payment on home mortgages using amortization payment tables.
38. Amortize loans.
39. Compute the number of interest days, the due date, and the maturity value of a promissory note.
40. Discount a promissory note.
41. Compute future values and compound interest using future value tables.
42. Compute present values using present value tables.
43. Perform horizontal analysis on basic financial statements (balance sheet, income statement).