



Woodland Community College
Your College. Your Future. To College. To Future.

ARTICULATION AGREEMENT

Date Approved: 11/14/2013

Woodland Community College	Dept: Business Computer Applications Course No: BCA 20 Title: Computer Calculation	High School or ROP Course: Hours:	ROP Office Skills – Machine Calculations 36 hrs
College:	Woodland Community College	School/ROP:	Middletown High School/LCOE ROP

A. COLLEGE UNITS: 1.5 Units

B. GENERAL COURSE DESCRIPTION:

Skill development in the operation of electronic calculator and computer 10-key as it applies to business operations. Functions include: addition, subtraction, multiplication, division, memory, percentages, and interest calculations to solve typical business problems. Speed and accuracy by touch method emphasized.

C. COURSE CONTENT:

1. Basic Operations of the electronic calculator and computer ten-key pad.
 - a. Ten-key operation & Skill Development
 - i. Developing Touch Operation
 1. Addition
 2. Subtraction
 3. Multiplication
 4. Division
 - ii. Skill Building--Speed and Accuracy
 - b. Skill Development using Constants
 - i. Addition and Subtraction of a Constant
 - ii. Multiplication and Division of Constants
 - c. Multiple, Sequential, and Business Calculations
 - i. Chain Division
 - ii. Inventory Valuation
 - iii. Unit Cost
 - iv. Production Cost Analysis
 - v. Average Unit Cost
 - vi. Daily Sales Averages
 - vii. Production Cost Analysis
2. Business Calculation & Applications
 - a. Fractions & Percentages
 - i. Commission Calculations
 - ii. Net Price Calculations
 - iii. Discount Calculations
 - iv. Chain Discounts
 - v. Partial Invoice Payments and Discounts
 - b. Interest, Discounts, Annuities, and Bank Statement Reconciliation
 - i. Interest Bearing Notes
 - ii. Computation of Compound Interest
 - iii. Markup and Markdown
 - iv. Invoicing

- v. Calculating Interest and Maturity Value
 - vi. Bank Statement Reconciliation
 - vii. Calculating Present Value of an Annuity
 - viii. Installment Buying
3. Advanced Business Problems
- a. Payroll Records and Proration
 - i. Weekly Payroll Records
 - ii. Payroll Register--Regular and Overtime Hours
 - iii. Computing Social Security--Medicare Taxes
 - iv. Proration--Expense Distribution
 - b. Real Estate, Depreciation, and Insurance
 - i. Assessed Valuation--Property Taxes
 - ii. Depreciation--Double-Declining Balance
 - iii. Depreciation--Sum-of-the-Years Digits Method
 - iv. Depreciation--Modified Accelerated Cost Recovery System (MACRS)
 - v. Depreciation--Straight-Line Method
 - vi. Insurance--Premium Earned and Returned
 - vii. Term Life Insurance Premiums--Using Premium Tables

D. COMPETENCIES AND SKILL REQUIREMENT (PERFORMANCE OBJECTIVES):

At the conclusion of this course, the student should be able to:

1. Develop workplace competence using the electronic calculator and computer 10-key numeric touch method.
2. Solve common business and personal math problems using the electronic calculator and computer 10-key. ****Requires Critical Thinking****
3. Complete a variety of data entry applications with speed and accuracy on the computer 10-key and the electronic calculator.
4. Demonstrate ability to use critical thinking skills to determine the most efficient approach to quantitative computational problems. ****Requires Critical Thinking****

E. CREDIT BY EXAMINATION CRITERIA:

Students must obtain a grade of 'B' or better in the course and grade of 'C' or better on the final examination.

F. PROCEDURES AND/OR CRITERIA FOR COURSE ARTICULATION:

1. The high school/ROP instructor will enter an articulation agreement with Woodland Community College.
2. Students will enroll into the CTE Transitions Program during the academic year at their high school/ROP.
3. When the student has completed the approved credit by examination criteria for the course the high school/ROP instructor will provide the CTE Transitions Program Office the course grade and the final exam grade.
4. CTE Transitions Program processes students that met credit by examination criteria.
5. Students are awarded credit for the articulated course in which they completed.

G. TEXTBOOKS OR OTHER SUPPORTING MATERIALS (INCLUDING SOFTWARE):

Calculators Printing & Display 4th edition

Other Materials: Beginning Packet-Worksheets and timings

Agreement was based on Statewide Career Pathways Project template: Yes

No

Name of Template used: N/A

This agreement will be reviewed annually

Signatures are provided per the Tech Prep Articulation Credit by Examination Agreement Form:

HIGH SCHOOL/ROP/DISTRICT SIGNATURES:

Requested by:

James V. Ryz 11/13/17
High School Instructor (Print & Sign) Date
Jennifer Pzyer
William Rodrick 11/13/17
High School Principal (Print & Sign) Date
William Rodrick

James V. Ryz 11/13/17
High School Dept Chair/Coordinator (Print & Sign) Date
Jennifer Pzyer
N/A
ROP Director (If Applicable) (Print & Sign) Date

COLLEGE SIGNATURES

Approve by:

Maria S. [Signature] 11/21/17
College Instructor (Print & Sign) Date
AL KONUWA 11/18/17
V.P. Academic & Student Services (Print & Sign) Date

Anneth A. Lu 11/7/17
Campus Dean/Department Dean (Print & Sign) Date

District Articulation Officer (Print & Sign) Date

4th
EDITION

Calculators

PRINTING
& DISPLAY

William R. Pasewark

Professor Emeritus
Office Management Consultant
Texas Tech University
Lubbock, Texas

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ELECTRONIC PRINTING CALCULATOR

THIRD EDITION, PASEWARK

South-Western Publishing Co.

Final Achievement Test

Name _____
 Course _____
 Date _____
 Finish Time _____
 Start Time _____
 Errors _____

Grade _____

Accuracy _____ × _____ = _____
 Time _____ + _____ = _____
 + 3 = _____

Instructions:

This is a test of the skills you have learned throughout the course. To complete the test:

1. Record your Start Time in hours, minutes, and seconds at the top of this page.
2. Work each problem as accurately and as rapidly as possible.
 - a. Record your answer in the blank space near the problem.
 - b. Prove each answer and record it in the Answers column.
3. After working the problems:
 - a. Record your Finish Time as soon as you complete the test.
 - b. Calculate the Time and record it in the proper space on this page.
4. When the test is returned from your instructor, record the results in the Record Section, page 121, Record for Review Drills and Achievement Tests.

Credit Balance

1. .352
 16.573
 -68.406
 -74.231
 .917
 75.618
 23.914
 -9.785
 .214
 25.309
 -3.642

Grand Total Key

2. $74.51 \times 23 =$ _____
 3. $49.38 \times 48 =$ _____
 4. $57.34 \times 6 =$ _____
 5. Grand Total _____

Estimating Answers

	Rounded Factors	Estimated Product	Machine Product
6. $18 \times 62 =$ _____	_____	_____	_____

Unrounded Product

7. $4.27 \times 29.8 =$ _____

Rounded Product

8. $16.9 \times .307 =$ _____

Unrounded Quotient

9. $874 \div 7 =$ _____

Rounded Quotient

10. $2,836 \div 52 =$ _____

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____

Markup Expressed as Percent of Selling Price

Item	Cost	Selling Price	Amount of Markup	Percent of Markup
S94	61.98	87.91	_____	(11) _____
H17	37.42	53.27	_____	(12) _____
S19	82.14	119.45	_____	(13) _____

Expense Comparison

Item	Previous Month	Present Month	Amount of Inc. or Dec.	Percent of Inc. or Dec.
Rent	575	625	_____	(14) _____
Salaries	1,942	1,754	_____	(15) _____
Supplies	231	267	_____	(16) _____

Final Achievement Test (continued)

Average
17.

- 437.96
- 178.13
- 812.40
- 72.03
- 659.74
- 59.85
- 494.28
- 32.90

Total a. _____
Average b. _____

Division and Multiplication

18. 9 in. at \$5.94 per ft. = _____

Multiple Operations

19. $(6.14 \times 3.27) - (54.8 \times 202.7) =$ _____

Discounts and Net Amounts

	Gross	Discount		
	Amount	Rate	Discount	
20.	\$817.46	less 20%	=	_____


Metrics

800 dm = _____ m = _____ dam
(21) (22)

Answers

- 17. a. _____
- b. _____
- 18. _____
- 19. _____
- 20. _____
- 21. _____
- 22. _____
- 23. _____
- 24. _____
- 25. _____
- 26. _____
- 27. _____
- 28. _____
- 29. _____
- 30. _____
- 31. _____
- 32. _____
- 33. _____

Purchase Order

	GENUINE GEMS 6001 Foxworth Avenue Syracuse, NY 13224-5465	PURCHASE ORDER DATE: 3/26/-- ORDER NO.: 6750 TERMS: 1/10, n/30 SHIP VIA: UPS	
To: Gemstones, Inc. 4310 Oakley Road Boston, MA 02161-4310			
Quan.	Description	Unit Price	Amount
21	Emerald and diamond ring, A-4	98.50	(23) _____
19	Gold nugget bracelet, B-9	105.00	(24) _____
15	Clover leaf charm, C-17	32.50	(25) _____
Total			(26) _____
Purchasing Agent <u>C.E. Hill</u>			

J.R. SOFTWARE

Representative's Percent of Sales July to December, Current Year

Sales Representative	Sales	Sales Percent	
K. Austin	401,870	(27)	_____
J. Copeland	398,250	(28)	_____
R. Phelps	413,760	(29)	_____
M. Tanner	520,800	(30)	_____
TOTAL SALES	1,734,680	TOTAL	100%

Inventory Extensions

Qty.	Description	Sales Price		Cost Price		Difference
		Each	Amount	Each	Amount	
204	Ladies wool sweater	29.50		20.45		(31) _____
183	Ladies acrylic sweater	24.87		19.32		(32) _____
112	Ladies cotton sweater	39.26		23.10		(33) _____