COURSE OUTLINE

Applied Business Mathematics
Course Title

BA 123
Dept. & Course No.

I. COURSE DESCRIPTION:

This course introduces students to various computational skills commonly used in business and finance such as payroll, inventory, ration and percent and time value of money. Students will utilize practical applications of these concepts such as markup, markdown, trade discount, simple and compound interest and annuities. Students will also learn to use a ten-key calculating machine that is generally used in business offices.

II. SEMESTER CREDITS: 3

III. CONTACT HOURS PER WEEK: 3 Lecture | 0 Lab | 3 Total

IV. PREREQUISITE: None

V. STUDENT LEARNING OUTCOMES:

Upon completion of this course, the student will be able, with 65% accuracy, to:

1. Perform basic business calculations

2. Explain the process of opening checking and Savings accounts, and reconciling bank statements.

3. Calculate trade and cash discounts.

4. Calculate markups and markdowns.

5. Define different pay systems and prepare payroll register.

VI. COURSE CONTENT:

A. 10 key calculator calculations
   1. Additions/Subtractions
   2. Multiplications/Divisions
   3. Rounding/Decimals

B. Banking:
   1. Checking & Saving Account
   2. Bank Statement/Reconciliation Process

C. Discounts: Trade/Cash
   1. Single/Chain Discounts
   2. Shipping Costs
   3. Sales Tax

D. Markups and Markdowns
   1. Markups based on Cost & Selling price
   2. Markdowns

E. Pay systems & Payroll Register
   1. Types of Pay Systems
   2. Regular/Overtime Pay
   3. Payroll Register
   4. Federal/State Unemployment taxes

6. Calculate simple & compound interest and maturity value.

7. Calculate bank discount and proceeds for simple discount notes.

8. Calculate present and future value of annuities.

9. Calculate monthly mortgage payments & prepare amortization schedule.

10. Calculate the cost of ending inventory and cost of goods sold for each inventory method.

11. Calculate Depreciation.

12. Calculate insurance premiums, cash value and other non-forfeiture options.

F. Simple & Compound Interest & Maturity Value
   1. Simple Interest and Maturity Value
   2. Interest formula/Annuity Table
   3. Compound Interest: Present/Future Value

G. Promissory Notes, Simple Discount Notes, and the Discount Process
   1. Structure of Promissory Note
   2. Simple Discount Notes
   3. Discounting Process

H. Annuities and Sinking Funds
   1. Annuity Table
   2. Present/Future Value Annuities
   3. Sinking Funds

I. Monthly Mortgage Payments & Amortization Chart and Schedule
   1. Types of Mortgages
   2. Monthly Mortgage Payments
   3. Amortization Chart/Schedule

J. Inventory Methods
   1. FIFO/LIFO Methods
   2. Weighted Average Method
   3. Retail Inventory Estimating Method

K. Methods of Depreciation
   1. Straight Line Method
   2. Declining Balance Method
   3. Units of Production Method

L. Types of Insurance, Insurance Premium Payments & Cash Value
   1. Life/Fire Insurance
   2. Premiums/Cash Value

VI. MATERIALS AND EQUIPMENT

A. Routine classroom materials
B. Electronic print/display calculator

VII. TEXT(S)

Tuttle, Michael D. *Practical Business Math: An Applications Approach* 8th Edition. Upper Saddle River, New Jersey: Prentice-Hall, Inc., 2001.

VIII. METHODS OF INSTRUCTION:

A. Lecture
B. Discussion
C. Board work: problem solving illustration
D. Individual/group activities

IX. METHODS OF EVALUATION

Participation	10%
Assignments/Quizzes/Class-work.....	25%
Tests	25%
Mid-Term Exam	20%
Final Exam	20%
Total:	100%

Transmutation of percent to letter-grade is as follows:

90 – 100%	..... A
80 – 89%	..... B
70 – 79%	 C
65 – 69%	..... D
0 – 64%	..... F

PALAU COMMUNITY COLLEGE

BA 123 Applied Business Mathematics

Course Learning Outcomes

During the course experience, the ***course learning outcomes*** (CLOs) will be assessed through the use of signature assignments. A rating scale will be used to determine the students' proficiency level of each CLO using specifically aligned assignments. The numerical ratings of 4, 3, 2 and 1 are not intended to represent the traditional school grading system of A, B, C, D and F. The descriptions associated with each of the numbers focus on the level of student performance for each of the course learning outcomes listed below.

Rating Scale: 4 - Exceed Expectation

3 - Meet Expectation

2 - Developing

1 - Below Expectation

CLO #1	**Students will be able to demonstrate skills and knowledge in basic mathematical operations and proficiency in using ten-key calculating machines.**
4	Complete all tasks with 80% - 100% of accuracy: a. Use number place values to read and write numeric and verbal numbers b. Add, subtract, multiply, divide, and round whole numbers c. Recognize types of fractions and conversion procedures d. Round and solve decimals and its conversions e. Solve percentage problems and its applications
3	Complete all tasks with 70% – 79 % of accuracy.
2	Complete all tasks with 65% - 69% of accuracy
1	Complete all tasks with 64% or below accuracy.

CLO #2	**Students will be able to prepare all documents relating to checking and savings accounts including credit/debit card transactions, successfully reconcile bank statements, and explain online banking.**
4	Complete all tasks with 80% - 100% of accuracy: a. Complete checking and savings account transactions b. Record merchant credit/debit card transactions c. Reconcile bank statement d. Explain trends in online banking
3	Complete all tasks with 70% – 79 % of accuracy.
2	Complete all tasks with 65% - 69% of accuracy
1	Complete all tasks with 64% or below accuracy.

CLO #3	**Students will be able to apply percentages to solve retail and wholesale sales problems including discounts, markup and markdown and identify the differences among these transactions.**
4	Complete all tasks with 80% – 100% of accuracy: a. Calculate trade and cash discounts. b. Identify and compute transportation cost: FOB Origin & FOB Destination. c. Apply credit terms and partial payments.
3	Complete all tasks with 70% – 79 % of accuracy.
2	Complete all tasks with 65% - 69% of accuracy
1	Complete all tasks with 64% or below accuracy.

CLO #4	**Students will be able to calculate all components of a payroll and identify and describe various types of earnings and deductions.**
4	Complete all tasks with 80% – 100% of accuracy. a. Determine gross earnings. b. Determine net pay. c. Calculate mandatory and voluntary deductions. d. Compute employer's payroll taxes.
3	Complete all tasks with 70% – 79 % of accuracy.
2	Complete all tasks with 65% - 69% of accuracy
1	Complete all tasks with 64% or below accuracy.

CLO #5	**Students will be able to apply the various formulas for interest to solve problems involving simple and compound interest, promissory notes, present/future value, annuities and sinking funds, and installment loans.**
4	Complete all tasks with 80% – 100% of accuracy. a. Calculate simple and compound interest b. Differentiate between interest-bearing and non-interest-bearing notes and its discount process c. Calculate present and future value of annuities and sinking funds payment d. Describe the various types of mortgage loans, use amortization schedules, and calculate the various components of a mortgage payment
3	Complete all tasks with 70% – 79 % of accuracy.
2	Complete all tasks with 65% - 69% of accuracy
1	Complete all tasks with 64% or below accuracy.