### SYLLABUS

DIVISION: Business and Engineeri	ng lechnology		REVISED: Spring 2014	
CURRICULAR IN WHICH COURSE IS TAUGHT: Business Management and Marketing				
OURSE NUMBER AND TITLE: Bus 122, Business Mathematics II				
CREDIT HOURS: LEC: 3 hours pe	er week	LAB: 0	LEC/LAB COMB: 3	

I. CATALOG DESCRIPTION: Applies mathematical operations to business problems. Reviews basic statistics, distribution of profit and loss in partnerships, distribution of corporate dividends, mortgage amortization, insurance, simple interest, present value, bank discount notes, multiple payment plans, compound interest, annuities, sinking funds, and depreciation, and mortgage amortization.

#### II. RELATIONSHIP OF THE COURSE TO CURRICULAR OBJECTIVES: BUS 122 will address the following DCC Business Management outcomes: Graduates will demonstrate the ability to perform and interpret basic business math, accounting, and business statistical calculations.

## III. REQUIRED BACKGROUND/PREREQUISTIES: BUS 121

### IV. COURSE CONTENT:

- Promissory Notes: Simple Discount Notes, and the Discount Process
- Structure of a Promissory Note
- Discounting an Interest-Bearing Note before maturity
- Compound Interest and Present Value
- Ordinary Annuities and Annuity Due
- Present Value of an Ordinary Annuity
- Sinking Funds
- Cost of Installment Buying
- Paying off Installment Loans before Due Date
- Revolving Charge Credit Cards
- The Cost of Home Ownership
- Types of Mortgages and the Amortization Schedule
- How to Read, Analyze, and Interpret Financial Reports
- Balance Sheet
- Income Statement
- Trend and Ratio Analysis
- Concept of Depreciation: Straight-Line Method, Units-0f-Production Method, Declining-Balance Method
- Modified Accelerated Cost recovery System
- Inventory and Overhead
- Assigning costs to Ending Inventory: Specific Identification, Weighted Average, FIFO, and LIFO
- Retail Method: Gross Profit, Inventory Turnover, and Distribution of Overhead
- Sales and Excise Taxes
- Property Taxes
- Life, Fire, and Auto Insurance
- Stocks, Bonds, and Mutual Funds
- Business Statistics: Mean, Median, and Mode
- Frequency Distributions and Graphs

#### V. THE FOLLOWING GENERAL EDUCATION OBJECTIVES WILL BE ADDRESSED IN THIS COURSE (Place X by all that apply)

# Communication

- <u>X</u> X
- Critical Thinking Cultural and Social Understanding
- XX Information Literacy
- Personal Development
- Quantitative Reasoning
- Scientific Reasoning

#### VI. LEARNER OUTCOMES

#### VII. **EVALUATION**

Learner outcome	Evaluation method
<ul> <li>Differentiate between interest-bearing and noninterest-bearing notes</li> <li>Calculate bank discount and proceeds for simple discount notes</li> <li>Calculate and compare interest, maturity value, proceeds, and effective rate of a simple interest note</li> <li>Explain and calculate the effective rate for a treasury bill</li> <li>Calculate the maturity value, bank discount, and proceeds of discounting an interest-bearing note before maturity</li> <li>Identify and complete the four steps of the discounting process</li> </ul>	In-class problem assignments Written tests
Learner outcome	Evaluation method
<ul> <li>Compare simple interest with compound interest</li> <li>Calculate the compound amount and interest manually and by table lookup</li> <li>Explain and compute the effective rate</li> <li>Compare present value with compound interest</li> <li>Compute present value by table lookup</li> <li>Check present value by compounding</li> </ul>	Written tests
Learner outcome	Evaluation method
<ul> <li>Differentiate between contingent annuities and annuities certain</li> </ul>	In-class problem assignments Written tests
<ul> <li>Calculate future value of an ordinary annuity and annuity due manually and by table lookup</li> </ul>	
<ul> <li>Calculate the present value of an ordinary annuity by table lookup and manually check</li> </ul>	
<ul> <li>Compare the calculation of the present value of one lump sum verses an ordinary appuity</li> </ul>	
<ul> <li>Calculate the payment made at the end of each</li> </ul>	
<ul><li>period by the table lookup</li><li>Check table lookup by using ordinary annuity table</li></ul>	

Learner outcome		Evaluation method
•	Calculate the amount financed, finance charge, and	In-class assignments
	deferred payment	Written tests
Calculate the estimated APR by table lookup		
Calculate the monthly payment by formula and by		
table lookup		
•	Calculate the rebate and payoff	
•	Calculate the finance charges on revolving charge	
credit card accounts		
Learner outcome		Evaluation method
•	List the types of mortgages available	In-class problems assignments
•	Utilize an amortization chart to compute monthly	Written tests
	mortgage payments	
•	Calculate the total cost of interest over the life of a	
	mortgage	
•	Calculate and identify the interest and principal	
	Propage an amortization schedule	
•		Evaluation mathed
Learn	Evolution the purpose and the key terms on a helence.	Evaluation method
•	shoot	Writton tost
	Sileei Explain and complete vertical and herizental	Whiteh lest
•	analysis	
•	Explain the purpose and key terms on an income	
	statement	
•	Explain and complete vertical and horizontal	
	analysis	
•	Explain and complete a trend analysis	
•	List, explain, and calculate key financial ratios	
Learn	er outcome	Evaluation method
•	Explain the concept and causes of depreciation	In-class problem assignments
•	Prepare a depreciation schedule and calculate	Written test
	partial-year depreciation	
•	Explain how use affects the units-of-production	
	method	
•	Prepare a depreciation schedule	
•	Explain the importance of residual value in the	
	depreciation schedule	
•	Prepare a depreciation schedule	
•	Explain the goals of ACRS and MACRS and their	
	Imitations	
Loarn	or outcome	Evaluation method
Lean	List the key assumptions of each inventory method	Lyanation method
	Calculate the cost of ending inventory and cost of	Written test
•	goods sold for each inventory method	Whiteh test
	Calculate the cost ratio and ending inventory at cost	
•	for the retail method	
Calculate the estimated inventory using the gross		
	profit method	
•	Explain and calculate inventory turnover	
•	Explain overhead; allocate overhead according to	
	floor space and sales	

Learner outcome	Evaluation method
Compute sales tax on goods sold involving trade	In-class problem assignments
and cash discounts and shipping charges	Written test
Explain and calculate excise tax	
Calculate the tax rate in decimal	
<ul> <li>Convert tax rate in decimal to percent, per \$100 of</li> </ul>	
assessed value, per \$1,0000 of assessed value	
and in mills	
Compute property tax due	
Learner outcome	Evaluation method
Explain the types of life insurance: calculate life	In-class problem assignments
insurance premiums	Written test
Explain and calculate cash value and other non-	
forfeiture options	
Explain and calculate premiums for fire insurance of	
buildings and their contents	
Calculate refunds when the insured and the	
insurance company cancel fire insurance	
Explain and calculate insurance loss when	
coinsurance is not met	
Evolution and calculate the cost of auto insurance	
Learner outcome	Evaluation method
Read and explain stock quotations	In-class problem assignments
Calculate dividends of preferred and common	Written test
stocks: calculate return on investment	Whiteh test
Read and explain bond quotations	
Compare bond vields to bond premiums and	
Compare bond yields to bond premiums and discounts	
Evolution and calculate not accest value and mutual	
Explain and calculate her asset value and mutual fund commissions	
Pood and explain mutual fund quotations	
Learner outcome	Evaluation method
Define and calculate the mean	In-class problem assignments
Explain and calculate a weighted mean	Written test
Define and calculate the median	
Define and identify the mode	
Prepare a frequency distribution	
Prepare bar line and circle graphs	
<ul> <li>Calculate price relatives and cost comparisons</li> </ul>	
Evolution and calculate the range	
<ul> <li>Define and calculate the standard deviation</li> </ul>	
Denne and calculate the Standard deviation	
Estimate percentage of data by using standard     deviations	