BUSINESS MATHEMATICS

Course No	**:**	**BUS 102**
Course Title	**:**	**BUSINESS MATHEMATICS**
Prerequisites	**:**	**None**
Course Type	**:**	**Major**
Faculty Member	**:**	**Dr. ; Room # ; Telephone ; e-mail ;**
Office Hours	**:**	
Class Time	**:**	
Lecture Class	**:**	

Course Objectives:

The goal of this course is to develop the mathematical skills of students so that they will be able to make connections between some of the applications in their major field and the necessary mathematical concepts, and then use the necessary mathematical results to solve these application problems.

Course Description:

The student will be exposed to different mathematical tools from Algebra, Linear Programming and Calculus that are commonly used in business applications. It emphasizes building mathematical models for management decision problems, solving management problems using spreadsheet tools and interpreting the solutions. Besides working with systems of linear equations and inequalities, it also covers functions, graphing, derivatives, solving problems, problem solving using spreadsheets, and introductory probability concepts.

Course Outline:

1. Problem Solving with Whole Numbers and Decimals.
2. Problem Solving with Fractions and Percents.
3. Problem Solving with Formulas and Equations.
4. Statistics, Tables, and Graphs.
5. Bank Records.
6. Payroll.
7. Trade and Cash Discounts.
8. Markup and Markdown.
9. Simple Interest and Simple Discount.
10. Compound Interest, Future Value, and Present Value.
11. Annuities and Sinking Funds.
12. Consumer Credit.
13. Depreciation.
14. Inventory, Turnover, and Overhead.
15. Financial Statements.
16. Insurance.
17. Taxes.
18. Stocks and Bonds.

Learning Outcomes:

After completing the course the student should be able to:

1. explain and demonstrate the use of basic mathematics including formulae and ratios
2. identify and apply techniques for summarizing and analyzing data
3. explain and demonstrate the use of probability where risk and uncertainty exist
4. explain and apply financial mathematical techniques
5. explain and demonstrate techniques used for forecasting

Teaching Methods:

Electronic presentation, Use of Spreadsheet templates, and CD-ROM for action learning
Use of the Internet for up-to-date global info; Usage of CD-ROM data

Use of Modern Instructional Technology:

Use of LCD Projector, PC, CD ROM, modern Spreadsheet and Electronic presentation packages

Skills to be developed:

This course helps students in developing the following skills:

1.	**Communication (oral and written)**	**Through Assignments, Case Study discussions and Examinations**
2.	**Analytical**	**Through Case studies and examinations**
3.	**Team Work**	**Through Case studies**
4.	**Creative Thinking**	**Through Case studies, assignments, classroom discussions**
5.	**Adaptability to Change**	**Through Case studies, and examinations**
6.	**Ethics**	**Through lectures and assignments**
7.	**Use of Information technology**	**Through use of PCs, Internet, CD-ROM, Statistical data base in the library**
8.	**International issues**	**Through Case studies, assignments, classroom discussions, and examinations**

Evaluating Student Performance:

Class participation and attendance	**10%**
Individual assignments /or/ Tests (two)	**40%**
Final Exam	**50%**

Assignment	LO1	LO2	LO3	LO4	LO5
Classroom participation		X	X	X	X
Assignments/tests	X	X	X	X	X
Final exam	X	X	X	X	X

Grading:

Percentage Score	Letter Grade	GPA Points	Percentage Score	Letter Grade	GPA Points
90 – 100	A	4.0	70 - 74	C	2.0
85 - 89	B+	3.5	65 - 69	D+	1.5
80 - 84	B	3.0	60 - 64	D	1.0
75 - 79	C+	2,5	< 60	F	0.0

Educational Resources:

Educational Resource	Description	Comments
Textbooks Required	**Mathematical Applications : For the Management, Life and Social Sciences, 7th ed. , Harshbarger / Reynolds** **Business Mathematics by McConnell, Sarah (2003); Publsh: Butterworth-Heinemann; ISBN: 0750661488**	
References	**Quantitative methods for Business, Management and Finance by Swift, Louise (2001); Publshr: Palgrave; ISBN: 0333920767** **Brief Calculus and Its Applications by Goldstein, Lay, and Schneider, 7th ed., Prentice Hall.**	
Journals	**Mathematics Magazine**	
Computers	**Internet searches for obtaining info on Macroeconomics**	
CD - ROM :	**(CD-ROM) data base in the library + Action learning through CD** **Accompanying the textbook**	
Other Resources:	**Library resources, Internet search of periodicals**	

Course Schedule & Outline:

Sixteen Week Semester, 3 hrs/Wk

Date	Week	Outline Syllabus	Learning Outcomes	Homework Assignments, Due dates
February 12/2-16/2	1		LO1	
February 19/2-23/2	2		LO2	
May 28/5- 31/5		**General Review**		