Branch Name:	MANAGEMENT
Program Code:	MS301
Course Name:	Essentials of Business Mathematics
Course Code:	2MS3010302T
Pre-requisite Course:	Commerce & Trade, Business. Forms of Business, Economics, Industry

Course Objectives:

1) Identify the basic mathematical tools which are used in business
2) Develop insights in mathematical concepts towards understanding business problems.
3) Analyze managerial situations using mathematical concept.

Teaching and Examination Scheme:

Teaching Scheme (Hours per week)				Evaluation Scheme (Marks)				
				Theory (Marks)		Practical (Marks)		
Lecture (L)	Tutorial (T)	Practical (P)	Credit	University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Total (Marks)
4	-	-	4	60	40	-	-	100

Subject Contents:

Sr. No.	Topic	Total Hours	Weightage (%)
1	**Profit And Loss:** • Trade discount & Cash discount • Problems involving cost price, Selling Price and Profit & Loss • Problems on Commission and brokerage	8	20
2	**Ratio**: Ratio- Definition, • Continued Ratio • Inverse Ratio **Proportion:** • Continued Proportion, • Direct Proportion, • Inverse Proportion **Percentage** - Meaning and Computations of Percentages.	10	20

3	• **Functions:**
	• Definition of a function,
	• Domain, co- domain,
	• Range of a function.
	• Types of functions-
	  ○ One-one function
	  ○ Many-one function
		9	20

4	**Index Number:** • Simple Index number • Unweighted Aggregate Price index Numbers • Weighted Aggregate Price index Numbers • Laspeyres Price Index • Paasche Price Index	9	20
5	**Simple Regression Analysis:** • Determining the equation if the Regression Line • Residual Analysis • Standard Error • Coefficient of determination	9	20

	Practical • Students may have to work on any topic of their choice and try to identify the implications of above mentioned mathematical concepts in the industry of their choice		Internal evaluation marks (40 of CEC)

Text Books:

Sr. No.	Books
1	Business Mathematics by D.C. Sancheti and V.K. Kapoor, Sultan Chand & Sons
2	Business Statistics for Contemporary decision making by Ken Black, John Wiley

Reference Books:

Sr. No.	Books
1	Business Mathematics BY J. K. Singh, Himalaya Publishing House - Third edition 2015
2	Mathematics & Statistics BY Ajay Goel and Alka Goel, Taxmann Allied Services - Fourth Edition 2007
3	Business Mathematics By Dr. Amarnaths Dikshit, Dr. Jinendra Kumar Jain, Himalaya Publishing House 2011

List of Open Source Software/learning website:

1. http://www.managementstudyguide.com/planning_function.htm
2. https://swayam.gov.in/

LAB/Practical

1. Expert talk from Managers can be arranged for students to discuss essential of business mathematics.
2. Students should work collaboratively to discuss and solve business mathematics problems.

Course Learning Outcomes (CLO): On completion of this course, the students will be able to:

CLO	**Description**	**Bloom's Taxonomy Level**
CLO1	Understand the concepts and use equations, formula.	2 Understanding 3 Applying
CLO2	Remembering and understanding about business mathematics. Evaluating Ratios, Profit and loss, Interest, etc.	1 Remember 2 understand
CLO3	Apply the knowledge of mathematics in solving business problems.	3 Applying
CLO4	Analyze and demonstrate mathematical skills required in mathematically intensive areas in Economics and business.	4 Analyze
CLO5	Integrate concept in international business concepts with functioning of global trade using regression.	6 Create
CLO6	Evaluate mathematical expressions and relationships in a variety of contexts.	5 Evaluate

Mapping of CLOs with Pos & PSOs

Course Learning Outcomes	**Program Outcomes(POs)**								**Program Specific Outcomes(PSOs)**	
	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PSO1**	**PSO2**
CLO1	M	M						M	M	
CLO2	M	M	H			L	M		M	M
CLO3		L	H	M		M		M	H	M
CLO4	H	M	M			H	M		H	M
CLO5	M	M	M	M				M	H	
CLO6	M	H				M	M	H	M	H

H: High, M: Medium, L: Low