

Branch Name:	B.Sc. Mathematics
Program Code:	SC104
Course Name:	Business Mathematics-V
Course Code:	2SC1040521
Pre-requisite Course:	

Course Objectives:

1. To understand the basic concept of Sets and Subsets.
2. To understand the concept of Bounded and Unbounded sets.
3. To know about Identity function.
4. To understand the concept of Inverse of function.

Teaching and Examination Scheme:

Teaching Scheme (Hours per week)				Evaluation Scheme (Marks)				
Lecture (L)	Tutorial (T)	Practical (P)	Credit	Theory (Marks)		Practical (Marks)		Total (Marks)
				University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	
2	--	--	2	35	15	--	--	50

Subject Contents:

Sr. No	Topic	Total Hours	Weightage (%)
1	Set Theory: Sets and subsets, Basic set operations, Sets of numbers, Product sets, Indexed sets, Union and intersection of indexed collections, Principle of duality, Bounded and unbounded sets.	15	50
2	Functions: Definitions, Operators, transformations, Range, one-one Functions, onto functions, Identity function, constant functions, composition of functions (product of functions), Inverse of function, Set functions, Real valued functions, Algebra of real valued functions, characteristic function.	15	50

Reference Books:

1. Set Theory & Related Topics. By Seymour Lipschutz, McGraw-Hill book Company, Singapur.
2. Business Mathematics By.D.C.Sancheti & V.K.Kapoor, Sultan Chand & Sons Publications, New Delhi.

List of Open Source Software/learning website:

1. <https://www.youtube.com/watch?v=W3CkXaayqbk>
2. <https://www.youtube.com/watch?v=fek4DCfxQ7M>
3. <https://www.youtube.com/watch?v=4ZMDovqPe6E>

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

CLO	Description	Bloom's Taxonomy Level
CLO1	Describe Basic set operations.	1 Remembering
CLO2	Discuss the knowledge on Union and intersection of indexed collections.	2 Understanding
CLO3	Use definition of a Bounded sets and using it solve the example of its.	3 Applying
CLO4	Explain Range of function.	4 Analysing
CLO5	Know the one-one Functions to Justify the application of its.	5 Evaluating
CLO6	Create an example of onto Functions.	6 creating

Mapping of CLOs with POs & PSOs:

Course Learning Outcomes	Program Outcomes (POs)												Program Specific Outcomes (PSOs)			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
CLO1	L		L						L				M			L
CLO2		H	L									L		M		L
CLO3	M	L								M		L	L			
CLO4		M								M		L	L		M	
CLO5	L	M											M	L		
CLO6	L	L	H								L		L	L		

H: High, M: Medium, L: Low