



Sub Committee for Curriculum Development

Course Name: Elements of Mathematics

(UG/PG): UG

Number of Credits: 2

Level: 1

Learning Objective(s):

This course will be able to create the foundation of mathematics. It also helps in developing the logical thinking to solve the problems.

Pedagogy:

1. Lecture
2. Assignments

Pre-learning: None

Course Outline

S.No.	Topic	Hours
1	Number System Algorithm to find additive and multiplicative inverse of number	1
2	Percentage and measurement Exponents (addition, multiplication, division of exponents) and radicals, Algorithm to find percentage, proportion of a number, square root of a perfect square	2
3	Logarithms and the slide rule, Fundamentals of algebra-concepts of set, union and intersection of sets, Algorithm to find union and intersection of two sets	1
4	Factoring polynomials Linear equations in one variable Linear equations in two variables	6
5	Ratio, proportion and variation, Dependence, functions and formulas , Algorithm to find ratio	4
6	Quadratic equations, Numericals, Algorithm to find roots of a quadratic equation $ax^2+bx+c=0$,	6
7	Sequence and Series, Algorithm to find nth term of Arithmetic progression, Geometric progression	5
8	Geometry Concepts- area of triangle, rectangle, square etc., Algorithms on finding area of triangle, rectangle, square etc., use of trigonometry to solve problems in geometry	5
	Total	30

Books Recommended

1. Basic Mathematics, Serge Lan, Springer New York, 1998, ISBN0387967877, 9780387967875
2. Foundations and Fundamental Concepts of Mathematics, Howard Whitley Eves, Courier Corporation, 1997

Suggested Evaluation Methods:

1. Written exam
2. Online exam/Quiz
3. Presentation
4. Assignments

Parallel/Similar courses the existing curriculum:

S.No.	Name of the course	Institute where it was offered

Name of Member	Mrs. Shilpa Mujumdar		
Designation	Asst. Professor		
Org. / Inst.	SICSR		
Signature			

Name of the Expert:

Signature:

Date: