



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:

Lecture
Assignments

Pre-learning: None

Course Outline:

Sr.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:

Written exam
 Online exam/Quiz
 Presentation
 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: