

GUJARAT TECHNOLOGICAL UNIVERSITY

Pharm.D.

1st year

Subject Name: Remedial Mathematics

Subject Code: 818807

Scope: This is an introductory course in mathematics. This subjects deals with the introduction to matrices, determinants, trigonometry, analytical geometry, differential calculus, integral calculus, differential equations, laplace transform.

Objectives:

Upon completion of the course the student shall be able to : –

- a. Know Trigonometry, Analytical geometry, Matrices, Determinant, Integration, Differential equation, Laplace transform and their applications;
- b. solve the problems of different types by applying theory; and
- c. appreciate the important applications of mathematics in pharmacy.

TeachingScheme (Hours)				EvaluationScheme(Marks)				Totalmarks
Theory	Tutorial	Practical	Total	Theory		Practical		
				External	Internal	External	Internal	
3	1	0	4	70	30	0	0	100

Sr. No.	CourseContents	Hours	ModuleW eightage
1	Algebra : Determinants, Matrices	10	11%
2	Trigonometry : Sides and angles of a triangle, solution of triangles	12	13.5%
3	Analytical Geometry : Points, Straight line, circle, parabola	12	13.5%
4	Differential calculus: Limit of a function, Differential calculus, Differentiation of a sum, Product, Quotient Composite, Parametric, exponential, trigonometric and Logarithmic function. Successive differentiation, Leibnitz's theorem, Partial differentiation, Euler's theorem on homogeneous functions of two variables	18	20%
5	Integral Calculus: Definite integrals, integration by substitution and by parts, Properties of definite integrals	12	13.5%
6	Differential equations: Definition, order, degree, variable separable, homogeneous, Linear, heterogeneous, linear, differential equation with constant coefficient, simultaneous linear equation of second order.	16	17.5%
7	Laplace transform: Definition, Laplace transform of elementary functions, Properties of linearity and shifting	10	11%

Course materials: (Latest edition)

Text books

- a. Differential calculus By Shantinakaran
- b. Text book of Mathematics for second year pre-university by Prof.B.M.Sreenivas

Reference books

- a. Integral calculus By Shanthinakaran
- b. Engineering mathematics By B.S.Grewal c. Trigonometry Part-I By S.L.Loney