

Lesson Plan
Session: 2025-26

Name of the Assistant Professor: Ankit Kumar

Class: B.A./B.Sc. - 1st Sem

Subject: Mathematics

Paper : Calculus

Paper Code:- B.A/BSC/MD/MAT/1/DSC/101

Dates	Week	Topic
24/07/2025 to 26/07/2025	1	Introduction to syllabus ϵ - δ def ⁿ of limit and continuity
28/07/2025 to 02/08/2025	2	Basic Properties of Limits, Types of Discontinuities Differentiability of functions
04/08/2025 to 09/08/2025	3	Application of L' Hopital Rule, Successive differentiation, Leibnitz theorem
11/08/2025 to 16/08/2025	4	Taylor's and Maclaurin's series expansion with different forms of remainder
18/08/2025 to 23/08/2025	5	Asymptotes : Horizontal, vertical and oblique asymptotes for algebraic curves.
25/08/2025 to 30/08/2025	6	Asymptotes for polar curve Intersection of curve and its asymptotes.
01/09/2025 to 06/09/2025	7	Curvature, Radius of curvature of Cartesian, polar, parametric curves.
08/09/2025 to 13/09/2025	8	Newton's method, Centre of curvature, circle of curvature -

Dates	Week	Topic
15/09/2025 to 20/09/2025	9	multiple points, Node, cusp, Conjugate point, Point of inflexion
22/09/2025 to 27/09/2025	10	Test for concavity and convexity. Reduction formulae
29/09/2025 to 04/10/2025	11	Tracing of Curves for Cartesian curves
06/10/2025 to 11/10/2025	12	Tracing of curves for polar curves and parametric curves.
13/10/2025 to 18/10/2025	13	Mid term Examination Rectification and intrinsic equation of curve
27/10/2025 to 01/11/2025	14	Quadrature, Area bounded by closed curves.
03/11/2025 to 08/11/2025	15	Solids of Revolution: Surface area and volume.
10/11/2025 to 15/11/2025	16	Pappus Theorem volumes of solids of Revolution
17/11/2025 to 24/11/2025	17	Revision

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Lesson Plan
Session: 2025-26

Name of the Assistant Professor: Ankit Kumar

Class: B.A./B.Sc 3rd sem

Subject: Mathematics

Paper : Differential Equations

Paper Code:- BA/BSC/MD/MAT/3/DSC/201

Dates	Week	Topic
24/07/2025 to 26/07/2025	1	Introduction to syllabus Basic concepts of ordinary differential equations
28/07/2025 to 02/08/2025	2	Order, degree of differential equation. Solutions of diff. eqn. of first order & first degree
04/08/2025 to 09/08/2025	3	Exact differential equations, Integrating factor
11/08/2025 to 16/08/2025	4	first order higher degree equations solvable for x, y, p .
18/08/2025 to 23/08/2025	5	Lagrange's equations, Clairaut's form Orthogonal trajectories.
25/08/2025 to 30/08/2025	6	Solutions of linear ordinary differential equations with constant coefficients.
01/09/2025 to 06/09/2025	7	Linear non homogeneous differential eq ⁿ s Linear diff. eqn of second order with variable coeff.
08/09/2025 to 13/09/2025	8	method of reduction of order, method of variation of parameters

Dates	Week	Topic
15/09/2025 to 20/09/2025	9	Method of undetermined coefficients Cauchy's Euler Eqn.
22/09/2025 to 27/09/2025	10	Simultaneous differential equations Total differential equations
29/09/2025 to 04/10/2025	11	Partial differential equations, Concept of linear and non linear PDEs.
06/10/2025 to 11/10/2025	12	Complete solution, general solution and singular solution, linear PDE of first order
13/10/2025 to 18/10/2025	13	Lagrange's method for PDEs of form $Pp + Qq = R$
27/10/2025 to 01/11/2025	14	Integral Surfaces passing through a given curve
03/11/2025 to 08/11/2025	15	Compatible systems of first order equations, Charpit's method.
10/11/2025 to 15/11/2025	16	Special types of first order PDEs, Jacobi's method.
17/11/2025 to 24/11/2025	17	Second order partial differential equations with constant coefficients.

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Lesson Plan
Session: 2025-26

Name of the Assistant Professor: Ankit Kumar

Class: B.A./ B.Sc. - 3rd Sem

Subject: Mathematics (SEC)

Paper : Quantitative Aptitude

Paper Code:- CDLU/SEC/MAT/3/202

Dates	Week	Topic
24/07/2025 to 26/07/2025	1	Introduction to syllabus
28/07/2025 to 02/08/2025	2	Linear equations and Quadratic equations
04/08/2025 to 09/08/2025	3	System of algebraic equations into two variables and their applications.
11/08/2025 to 16/08/2025	4	Problems on ages, Clocks.
18/08/2025 to 23/08/2025	5	Time and distance & Time and work. Problems on Trains.
25/08/2025 to 30/08/2025	6	Problems based on Boats and streams Problems based on pipes and Cistern
01/09/2025 to 06/09/2025	7	Work and Time : Problems on work and time, Work and Wages
08/09/2025 to 13/09/2025	8	Simple Interest and Compound Interest.

Dates	Week	Topic
15/09/2025 to 20/09/2025	9	Partnership : Types of partners, Types of partnership, related problems
22/09/2025 to 27/09/2025	10	Basic Idea of set theory to solve practical problems.
29/09/2025 to 04/10/2025	11	Trigonometry
06/10/2025 to 11/10/2025	12	Height and distances
13/10/2025 to 18/10/2025	13	Basic idea of Permutations and combinations
27/10/2025 to 01/11/2025	14	Probability : Events, Sample Space, probability of an event
03/11/2025 to 08/11/2025	15	Data Interpretation : Raw data, Grouped data, Bar Graph, Pie chart
10/11/2025 to 15/11/2025	16	Measures of Central tendency (mean, mode, median)
17/11/2025 to 24/11/2025	17	Revision

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Lesson Plan
Session: 2025-26

Name of the Assistant Professor: Ankit Kumar

Class: B.A./B.Sc. 5th Sem

Subject: Mathematics

Paper : Groups and Rings

Paper Code:- BM-352

Dates	Week	Topic
24/07/2025 to 26/07/2025	1	Introduction to syllabus Definition of Group.
28/07/2025 to 02/08/2025	2	Examples of Groups and simple properties of groups.
04/08/2025 to 09/08/2025	3	Subgroups and Subgroups criteria cyclic groups.
11/08/2025 to 16/08/2025	4	Theorems and Problems on cyclic groups
18/08/2025 to 23/08/2025	5	Cosets : left cosets and Right cosets, Index of a subgroup, Lagrange's Theorem
25/08/2025 to 30/08/2025	6	Normal subgroups, Quotient groups. Homomorphism : Theorems and Problems
01/09/2025 to 06/09/2025	7	Fundamental Theorem on homomorphism of groups, Second & Third Theorem of Isomorphism.
08/09/2025 to 13/09/2025	8	Automorphism, Inner automorphism Group of automorphisms

Dates	Week	Topic
15/09/2025 to 20/09/2025	9	Characteristic Subgroups and Commutator Subgroup
22/09/2025 to 27/09/2025	10	Permutation groups, Alternating groups Cayley's theorem
29/09/2025 to 04/10/2025	11	Introduction to Rings, Subrings, Integral domains, fields
06/10/2025 to 11/10/2025	12	Characteristic of a ring, Ring homomorphisms
13/10/2025 to 18/10/2025	13	Ideals : definition, Principal Ideal, prime Ideal, maximal ideal.
27/10/2025 to 01/11/2025	14	Quotient Rings, field of Quotients of an I.D.
03/11/2025 to 08/11/2025	15	Euclidean rings
10/11/2025 to 15/11/2025	16	Polynomial Rings, Eisenstein's Criterion of irreducibility, UFD.
17/11/2025 to 24/11/2025	17	Revision

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