Monthly Teaching Plan
MCM DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans-Odd Semester (Semester-III)
Session – 2025-26

Department: Mathematics

Class: B.Sc.-II (NM &Voc.)/B.A.-II
Subject:MAT DSC3(MAJ/MIN): Theory of Equations

Name of the Teachers: Dr Swati Sidana, Dr Komal Bansal

Month	Date		Topics to be covered	Academic Activity to be Undertaken
	From	To		
July	24.07.2025	31.07.2025	Polynomials (definition and examples), Euclid's algorithm, synthetic division, common divisors, G.C.D. of polynomials.	Syllabus, Examination pattern discussed, Doubt Session.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 30.07.2025				
August	01.08.2025	31.08.2025	Roots of a polynomial equation, repeated roots and their multiplicity, common roots. Fundamental theorem of Algebra, Factor theorem, Complex roots of real polynomials occur in conjugate pairs with same multiplicity. Irrational roots of polynomials over rationals occur in conjugate pairs with same multiplicity. Relation between roots and coefficients, Vieta's formulae, symmetric functions	Doubt session, Revision of a few topics and class test.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 27.08.2025				
September	01.09.2025	30.09.2025	diminishing roots of a polynomial equation by h and its application, Solution of a cubic when its roots are in A.P. / G.P., solution of a biquadratic when its roots are in A.P. (respect. in G.P.) and sum (resp. product) of two roots is given, Descartes' Rule of Signs, Newton's method of divisors for integral roots.	Doubt session, Assignments. Revision of a few topics.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 24.09.2025				
October	01.10.2025	31.10.2025	Transformation of equations: Transform the given polynomial equation into another such that signs of the roots changed, roots multiplied by a constant, roots are symmetric functions of the	Doubt session, class test/Assignments.

			roots of the original equation. Solutions of cubic and bi-quadratic equations when their roots are in H.P.	
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 29.10.2025				
November	01.11.2025	13.11.2025	Cardan's method and trigonometric methods for solving cubic equations. Discriminant and nature of roots, of a real cubic equation. Descartes' and Ferrari's method of solving a bi-quadratic equation.	Doubt session, Question papers discussed. Revision tests.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 12.11.2025				
End semester Examination 14.11.2025 to 26.12.2025				

Lesson Plan
MCM DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans-Even Semester (Semester-IV)
Session – 2025-26

Department: Mathematics

Class: B.Sc.-II (NM &Voc.)/B.A.-II
Subject:MAT DSC4(MAJ/MIN): Calculus-II

Name of the Teachers: Dr Swati Sidana, DrKomal Bansal

Month	Date		Topics to be covered	Academic Activity to be Undertaken
	From	To		
January	10.01.2026	31.01.2026	Concavity, convexity, points of inflexion, multiple points, double points and its types for curves ina plane. Tangents at origin, asymptote and its types, methods for finding asymptotes of rationalalgebraic curves. Special methods for finding oblique asymptotes of rational algebraic curves. Intersection of a curve and its asymptotes.	Syllabus, Examination pattern discussed, Doubt Session.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 28.01.2026				
February	01.02.2026	28.02.2026	Introduction to the polar coordinate system, tracing of curves represented by equations in Cartesiancoordinates, Polar coordinates, and in parametric forms. Curvature and radius of curvature, at a point, of curves in Cartesian and Polar Co-ordinates includingparametric forms as well as curves represented by equation $f(x, y) = 0$ implicitly.	Doubt session, Assignments, Class tests.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 25.02.2026				
March	01.03.2026	31.03.2026	Integral calculus: Integration of hyperbolic and inverse hyperbolic functions. Reduction Formulae for following integrals.	Doubt session, Assignments. Class tests.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 25.03.2026				
April	01.04.2026	25.04.2026	Numerical Integration: Trapezoidal, Prismoidal and Simpson Rules. Application of definite integral:Summation of Series, Quadrature, rectification, volumes and surfaces of solids of revolution (Cartesian co-ordinates only)	Doubt sessionand tests. Question papers discussed. Revision of the topics important from examination point of view.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 22.04.2026				
End semester Examination 27.04.2026 to 05.06.2026				

Lesson Plan

MCM DAV College for Women, Sector – 36A, Chandigarh

Monthly Teaching Plans-Even Semester (Semester-III/IV)

Session – 2025-26

Department: Mathematics

Class: B.Sc.-II (NM &Voc.)/B.A.-II

Subject: MAT DSC3(MAJ/MIN)-302: Differential Equations-I

Name of the Teachers: Dr Sonica

Month	**Date**		**Topics to be covered**	**Academic Activity to be Undertaken**
	From	**To**		
July	14.07.2025	31.07.2025	Exact differential equations: Necessary and sufficient condition for a differential equation of the type M(x, y) dx + N(x ,y) dy = 0 to be exact. Integrating factor of a D.E. and methods to find it.	Syllabus, Examination pattern discussed, Doubt Session.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 30.07.2025				
August	01.08.2025	31.08.2025	Homogeneous linear differential equations with constant coefficients and its solutions. Theorems for finding particular integrals $\frac{1}{D-a}f(x), \frac{1}{f(D)}e^{ax}, \frac{1}{f(D)}e^{ax}V(x), \frac{1}{f(D^2)}\sin x,$ $\frac{1}{f(D^2)}\cos x$, $\frac{1}{f(D)}x\,V(x)$, $\frac{1}{f(D)}\,x^n; n$ is the non-negative integer. Non-homogeneous linear differential equations with constant coefficients and its solutions.	Doubt session, Revision of a few topics and class test.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 27.08.2025				
September	01.09.2025	30.09.2025	First order and higher degree differential equations solvable for x, y, p $=\frac{dy}{dx}$. Clairaut's form and equations reducible to Clairaut's form. Singular solution as an envelope of general solutions. Geometrical meaning of a differential equation, orthogonal trajectories. Limit and continuity of functions of two and three variables.	Doubt session, Assignments. Revision of a few topics.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 24.09.2025				
October	01.10.2025	31.10.2025	Partial differentiation up to second order. Total differential, differentiation of composite and implicit functions. Euler's Theorem on homogeneous functions, differentiability of real-valued functions of two and three variables.	Doubt session, class test/Assignments.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per				

lesson plans on 29.10.2025				
November	01.11.2025	13.11.2025	Schwarz and Young's theorems (without proof).	Doubt session, Question papers discussed. Revision tests.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 12.11.2025				
End semester Examination 14.11.2025 to 26.12.2025				