Monthly Teaching Plan
Mehr Chand Mahajan DAV College for Women, Sector – 36 A, Chandigarh
Monthly Teaching Plans-Odd Semester (Semester-I)
Session – 2026-27

Department: Mathematics
Class: BSc /B.A-I
Course: MAT-SEC-101: MATHS BASED PRACTICALS
Name of the Teacher: Dr Sonica

Month	**Date**		**Topics to be covered**	Academic Activity to be Undertaken
	From	**To**		
July	27.07.2026	31.07.2026	**Theory**: 1. **Functions:** Domain and range of standard functions like constant, identity, polynomial, rational, modulus, signum, exponential, logarithmic, greatest integer functions. Their sum, difference, product, exponents and quotients etc. **Practicals: (MATLAB)** 1. Plotting of graphs of functions: $\sqrt{ax+b}$, $\lvert ax+b\rvert$, $e^{(ax+b)}$, $sin(ax+b)$, $\lvert sin(ax+b)\rvert$, $cos(ax+b)$, $\lvert cos(ax+b)\rvert$ and observing the variation in graphs by changing values of the constant a and b.	Syllabus, Doubt session.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 31.07.2026				
August	01.08.2026	31.08.2026	**Theory**: 2. **Straight lines:** Slope of a line and angle between two lines. Various forms of equations of a line in 2 dimensions like parallel to axis, point-slope form, slope-intercept form, two-point form, intercept form, distance of a point from a line. **Practicals: (MATLAB)** 2. To plot the general equation of a straight line and explore the effects of variation in coefficients and the constant on its geometry.	Syllabus, Doubt session.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 26.08.2026				

September	01.09.2026	30.09.2026	**Theory**: **3. Circles:** Equation of a circle and its intersection with a line, condition for a line to be a tangent to a circle. Chord of contact, Polar. **Practicals:** 3. To show conics as sections of a cone. 4. To draw circle when the centre and radius are given. 5. To draw circle when the centre and any point on the circle are given.	
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 30.09.2026				
October	01.10.2026	31.10.2026	**Theory**: 4. Matrices: Order of a matrix, operations on matrices, transpose of a matrix, Determinants, Minors, cofactors, adjoint and Inverse of a matrix. **Practicals:** 6. Plot tangent, chord of contact and polar of a given circle from a given point. 7. To find inverse and rank of a square matrix.	Doubt session, Assignments, conducted MST
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 28.10.2026				
November	01.11.2026	17.11.2026	**Theory**: Matrices (cont.): Row operations, row rank and row Echelon form of a matrix. Brief about linear systems of equation. **Practicals:** 8. Transform the given matrix into row Echelon matrix. 9. To find solution of a linear system of equation.	Tutorial classes, Doubt session, Assignments, Question papers discussed. Revision of a few topics
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 11.11.2026				
End semester Examination 18.11.2026 to 31.12.2026				

Monthly Teaching Plan
Mehr Chand Mahajan DAV College for Women, Sector – 36 A, Chandigarh
Monthly Teaching Plans-Even Semester (Semester-II)
Session – 2026-27

Department: Mathematics
Class: BSc /B.A-I
Course: MAT-SEC-102: Maths Based Programming and Practicals
Name of the Teacher: Dr Sonica

Month	**Date**		**Topics to be covered**	Academic Activity to be Undertaken
	From	**To**		
January	15.01.2027	31.01.2027	**Theory**: Definition of tangent and normal to a curve, Points of maxima, minima and inflexion points. **Practicals: (Mathematica)** 1. To plot tangents and Normals.	Syllabus, Doubt session.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 27.01.2027				
February	01.02.2027	28.02.2027	**Theory**: Formation of ordinary differential equations, variable separable form, homogeneous form, linear differential equations of the type $\frac{dy}{dx} + P(x)y = Q(x)$. **Practicals: (Mathematica)** 2. To find solutions of first order ordinary differential equations. 3. To solve differential equations which are reducible to homogeneous form.	Syllabus, Doubt session.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 24.02.2027				
March	01.03.2027	31.03.2027	**Theory**: Curve tracing in polar and Cartesian co-ordinates of the types $y = f(x), f(x,y) = 0$ and $f(r,\theta) = 0$. **Practicals:** 4. To plot a curve when equation is given in Cartesian coordinates.	Doubt session, Assignment, conducted MST

			5. To trace curves when equation is given in parametric form. 6. To trace curves when equation is given in polar coordinates. 7. To plot a curve in three-dimensional plots and level surfaces.	
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 31.03.2027				
April	01.04.2027	26.04.2027	**Theory**: Area under curve in Cartesian coordinates, length of a curve (rectification). **Practicals:** 8. To solve problems related to finding area under the curve using integration. 9. To solve problems related to determination of length of a curve expressed in Cartesian coordinates. 10. To solve problems related to determination of length of a curve expressed in Polar coordinates	
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 21.04.2027				
End semester Examination 27.04.2027 to 05.06.2027				