

**Monthly Teaching Plan**  
**Mehr Chand Mahajan DAV College for Women, Sector - 36A, Chandigarh**  
**Monthly Teaching Plans-Odd Semester (Semester-I)**  
**Session – 2025-26**

**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
	<b>From</b>	<b>To</b>		
August	01.08.2025	31.08.2025	<p><b>Theory: 1. Functions:</b> Domain and range of standard functions like constant, identity, polynomial, rational, modulus, signum, exponential, logarithmic, greatest integer functions. Their sum, difference, product, eponents and quotients etc.</p> <p><b>2. Straight lines:</b> 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.</p> <p><b>Practicals: (MATLAB)</b> 1. Plotting of graphs of functions: <math>\sqrt{ax + b}</math>, <math> ax + b </math>, <math>e^{(ax+b)}</math>, <math>\sin(ax + b)</math>, <math> \sin(ax + b) </math>, <math>\cos(ax + b)</math>, <math> \cos(ax + b) </math> and observing the variation in graphs by changing values of the constant <math>a</math> and <math>b</math>.</p> <p>2. To plot the general equation of a straight line and explore the effects of variation in coefficients and the constant on its geometry.</p>	Syllabus, Doubt session.
<b>Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 27.08.2025</b>				
September	01.09.2025	30.09.2025	<p><b>Theory: 3. Circles:</b> 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.</p>	

			<b>Practicals:</b> 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.	
<b>Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 24.09.2025</b>				
October	01.10.2025	31.10.2025	<b>Theory:</b> 4. Matrices: Order of a matrix, operations on matrices, transpose of a matrix, Determinants, Minors, cofactors, adjoint and Inverse of a matrix.  <b>Practicals:</b> 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
<b>Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 29.10.2025</b>				
November	01.11.2025	13.11.2025	<b>Theory:</b> Matrices (cont.): Row operations, row rank and row Echelon form of a matrix. Brief about linear systems of equation.  <b>Practicals:</b> 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
<b>Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 12.11.2025</b>				
<b>End semester Examination 14.11.2025 to 26.12.2025</b>				