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

Department: Mathematics

Class: MSc-I Mathematics Subject: MATH-601S: Real Analysis-I

Name of the Teacher: Dr Nisha Sharma

Metric Spaces, Open and Closed Sets, Interior Point Session. Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson of 27.08.2025 September 01.09.2025 30.09.2025 Limit Point, Closed Set, Equivalent Metrices, Subspaces, Compactness, Connectedness, Convergent Sequences Connectedness, Convergent Sequences Olans on 24.09.2025 Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson olans on 24.09.2025 Detail 01.10.2025 31.10.2025 Subsequences, Complete Metric Spaces, Limit Inferior and Superior, Series, Limit and Continuity, Reimann Stieltjes integral definition and existence results Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson olans on 29.10.2025	Month	Date		Topics to be covered	Academic Activity to be Undertaken
Metric Spaces, Open and Closed Sets, Interior Point Session. Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson of a few topics. Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson. Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson of a few topics. Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson of a few topics. Departmental Meeting to Coordinate and Review the Monthly complete Metric Spaces, Limit Inferior and Superior, Series, Limit and Continuity, Reimann Stieltjes integral definition and existence results Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson of vector-valued function, Sequence and Series of functions Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson of a few topics. Doubt session, Assignments, Power Point Presentations, Question papers discussed. Revision of a few topics Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson of a few topics		From	To		
September 01.09.2025 30.09.2025 Limit Point, Closed Set, Equivalent Metrices, Subspaces, Compactness, Connectedness, Convergent Sequences revision of a few topics. Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 24.09.2025 31.10.2025 Subsequences, Complete Metric Spaces, Limit Inferior and Superior, Series, Limit and Continuity, Reimann Stieltjes integral definition and existence results Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 29.10.2025 13.11.2025 Properties of R-S integral, Relation between R-S and R integral, Integration of vector-valued function, Sequence and Series of functions Doubt session, Assignments, Power Point Presentations, Question papers discussed. Revision of a few topics Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson Doubt session of a few topics Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson Doubt session of a few topics Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson Doubt session of a few topics Doubt session of a	August	01.08.2025	31.08.2025	Metric Spaces, Open and Closed Sets,	Examination pattern discussed, Doubt
Metrices, Subspaces, Compactness, revision of a few topics. Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson of 24.09.2025 Detail October O1.10.2025 O			oordinate and	Review the Monthly completion of Syllal	ous as per lesson
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson October	September	01.09.2025	30.09.2025	Metrices, Subspaces, Compactness,	Assignments, revision of a few
Limit Inferior and Superior, Series, Limit and Continuity, Reimann Stieltjes integral definition and existence results Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson of 29.10.2025 November O1.11.2025 13.11.2025 Properties of R-S integral, Relation between R-S and R integral, Integration of vector-valued function, Sequence and Series of functions Operartmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson of a few topics Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson of a few topics			oordinate and	Review the Monthly completion of Syllal	
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 Properties of R-S integral, Relation between R-S and R integral, Integration of vector-valued function, Sequence and Series of functions Question papers discussed. Revision of a few topics Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 12.11.2025	October	01.10.2025	31.10.2025	Limit Inferior and Superior, Series, Limit and Continuity, Reimann Stieltjes	Assignments, Power
November 01.11.2025 13.11.2025 Properties of R-S integral, Relation between R-S and R integral, Integration of vector-valued function, Sequence and Series of functions Question papers discussed. Revision of a few topics Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 12.11.2025	Department	al Meeting to Co	oordinate and		ous as per lesson
between R-S and R integral, Integration of vector-valued function, Sequence and Series of functions Assignments, Power Point Presentations, Question papers discussed. Revision of a few topics Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 12.11.2025				v I	•
plans on 12.11.2025	November			between R-S and R integral, Integration of vector-valued function, Sequence and Series of functions	Assignments, Power Point Presentations, Question papers discussed. Revision of a few topics
			oordinate and	Review the Monthly completion of Syllab	ous as per lesson
			14 11 2025 to 1	26 12 2025	_

MCM DAV College for Women, Sector – 36A, Chandigarh Monthly Teaching Plans-Odd Semester (Semester-I)

 $\underline{Session-2025\text{-}26}$

Department: Mathematics Class: MSc-I Mathematics Subject: MATH-602S: Algebra-I Name of the Teacher: Dr Navjot Kaur

Month	Date		Topics to be covered	Academic Activity to be Undertaken
	From	То		
August	1.08.2025	31.08.2025	Review of basic concepts of groups	Syllabus,
_			with emphasis on exercises.	Examination
			Permutation groups, Even and odd	pattern discussed,
			permutations	Doubt Session.
Departmen	tal Meeting to	Coordinate a	nd Review the Monthly completion o	f Syllabus as per
lesson plans	s on 27.08.2025			
September	01.09.2025	30.09.2025	Conjugacy classes of permutations,	Doubt session,
			Alternating groups, Simplicity of	Assignments,
			An, $n > 4$. Cayley's Theorem, Direct	revision of a few
			products, Fundamental Theorem for	topics.
			finite abelian groups, Sylow	
			theorems and their applications,	
			Finite Simple groups	
	tal Meeting to so on 24.09.2025		nd Review the Monthly completion o	f Syllabus as per
October	03.10.2025	31.10.2025	Survey of some finite groups,	Doubt session,
			Groups of order p2, pq (p and q	Assignments,
			primes). Solvable groups, Normal	Power Point
			and subnormal series, composition	Presentations.
			series, the theorems of Schreier and	
			Jordan Holder	
	4 1 3 7 4: 4	C l' 4		
_	tal Meeting to 6 s on 29.10.2025		nd Review the Monthly completion o	f Syllabus as per
November	01.11.2025	13.11.2025	Review of basic concepts of rings	Doubt session,
			with emphasis on exercises.	Assignments,
			Polynomial rings, formal power	Power Point
			series rings, matrix rings, the ring of	Presentations,
			Guassian Integers.	Question papers
				discussed. Revision
				of a few topics

End semester Examination 14.11.2025 to 26.12.2025

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

Department: Mathematics

Class: MSc-I Mathematics

Subject: MATH-603S: DIFFERENTIAL EQUATIONS

Name of the Teacher: Dr NAVJOT KAUR

Month	Date		Topics to be covered	Academic Activity to be Undertaken
	From	To		
August	01.08.2025	31.08.2025	Existence and uniqueness of solution of first order equations. Boundary value problems and Strum-Liouville theory (Homogeneous).	Syllabus, Examination pattern discussed, Doubt Session.
_	ital Meeting to s on 27.08.2025		and Review the Monthly completion o	f Syllabus as per
September	01.09.2025	30.09.2025	Non-Homogeneous Strum-Liouville Boundary value problems. ODE in more than 2-variables (Surfaces and curves in three dimension).	Doubt session, Assignments, revision of a few topics.
-	tal Meeting to s on 24.09.2025		and Review the Monthly completion o	f Syllabus as per
October	01.10.2025	31.10.2025	Classification and methods to solve specific kind of differential equations. Partial differential equations of first order (Linear and non-linear).	Doubt session, Assignments, Power Point Presentations.
_	_		and Review the Monthly completion o	f Syllabus as per
	s on 29.10.2025	,		D 1
November	01.11.2025	13.11.2025	Partial differential equations of second order and their classification.	Doubt session, Question papers discussed. Revision tests.
plans on 12.	11.2025		Review the Monthly completion of Syllal	bus as per lesson
End semeste	er Examination 1	14.11.2025 to 2	26.12.2025	

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

Department: Mathematics

Class: MSc-I Mathematics

Subject: MATH-604S: Complex Analysis-I

Name of the Teacher: Ms Promila

Month	Date		Topics to be covered	Academic Activity to be Undertaken
	From	То		
August	01.08.2025	31.08.2025	Complex plane, geometrical representation of complex number, joint equation of circle and line, stereographic projection and spherical of the extended complex plane. Topology on complex plane, connected and simply connected sets.	Syllabus, Examination pattern discussed, Doubt Session.
		oordinate and l	Review the Monthly completion of Syllab	ous as per lesson
plans on 27.0 September	01.09.2025	30.09.2025	Complex valued functions and their continuity. Curves, connectivity through polygonal lines. Analytic functions, Cauchy-Riemann equations, Harmonic functions and Harmonic conjugates. Power series, exponential and trigonometric functions, arg z, log z, a z and their continuous branches.	Doubt session, Assignments, revision of a few topics.
Departmenta plans on 24.0		oordinate and l	Review the Monthly completion of Syllab	ous as per lesson
October	03.10.2025	31.10.2025	Complex Integration, line integral, Cauchy's theorem for a rectangle, Cauchy's theorem in disc, index of a point with respect to a closed curve.	Doubt session, Assignments, Power Point Presentation.
Departmenta plans on 29.1		oordinate and l	Review the Monthly completion of Syllab	ous as per lesson
November	01.11.2025	13.11.2025	Cauchy's Integral farmula, Higher derivatives, Morrera's theorem, Liouville's theorem, fundamental theorem of algebra. The general form of Cauchy's theorem.	Doubt session, Assignments, Power Point Presentations, Question papers discussed. Revision of a few topics
Departmenta plans on 12.1		oordinate and	Review the Monthly completion of Syllab	
•		14.11.2025 to 2	6.12.2025	

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

Department: Mathematics

Class: MSc-I Mathematics Subject: MATH-605S: Number Theory-I

Name of the Teacher: Dr Chitra

Month	Date		Topics to be covered	Academic Activity to be Undertaken
	From	To		
August	01.08.2025	31.08.2025	Divisibility, Greatest common divisor, Euclidean Algorithm, The Fundamental Theorem of arithmetic,	Syllabus, Examination pattern discussed, Doubt Session.
Department plans on 27.		ordinate and	Review the Monthly completion of Syllab	ous as per lesson
September	01.09.2025	30.09.2025	Congruences, Special divisibility tests, Chinese remainder theorem, Fermat's little theorem, Wilson's theorem, Residue classes and reduced residue classes, An Application to cryptography, Euler's theorem, Arithmetic functions Review the Monthly completion of Syllat	Doubt session, Assignments, revision of a few topics.
plans on 24.		orumate and	Keview the Monthly Completion of Synak	ous as per lesson
October	01.10.2025	31.10.2025	Mobius inversion Formula, the greatest integer function, perfect numbers, Mersenne primes and Fermat numbers. Primitive roots and indices, Quadratic residues	Doubt session, Assignments, Power Point Presentations.
Department plans on 29.		ordinate and	Review the Monthly completion of Syllab	ous as per lesson
November	01.11.2025	13.11.2025	Quadratic reciprocity law, Jacobi symbol, Binary quadratic forms and their reduction, sums of two and four squares, positive definite binary quadratic forms, Diophantine equations	Doubt session, Assignments, Power Point Presentations, Question papers discussed. Revision of a few topics
plans on 12.	11.2025		Review the Monthly completion of Syllah	ous as per lesson
End semeste	er Examination 1	14.11.2025 to 2	26.12.2025	

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

Department: Mathematics

Class: MSc-I Mathematics

Subject: MATH-621S: Real Analysis-II

Name of the Teacher: Dr Nisha Sharma

Month	Date		Topics to be covered	Academic Activity to be Undertaken
	From	To		to be chartemen
January	10.01.2026	31.01.2026	Differentiation of vector-valued	Syllabus,
•			function, Space of linear	Examination pattern
			transformations as a metric - spaces,	discussed, Doubt
			Differentiation of vector-valued	Session.
			function of several variables, Inverse	
			function theorem, Implicit function	
			theorem, Outer measure	
Departmen	tal Meeting to Co	ordinate and	Review the Monthly completion of Syllal	bus as per lesson
plans on 28	3.01.2026			
February	01.02.2026	28.02.2026	Measurable sets and Lebesgue	Doubt session,
			measure, Non-measurable Set ,	Assignments,
			Measurable functions, Littlewood's	revision of a few
			three principles	topics.
Departmen	tal Meeting to Co	oordinate and	Review the Monthly completion of Syllal	bus as per lesson
plans on 25				
March	01.03.2026	31.03.2026	Lebesgue Integral of bounded function	Doubt session,
			over a set of finite mesure, Lebesgue	Assignments, Power
			Integral of non-negative function,	Point Presentations.
			General Lebesgue Integral Convergence	
			in measure	
		oordinate and	Review the Monthly completion of Syllal	bus as per lesson
plans on 25			,	1
April	01.04.2026	25.04.2026	Differentiation of monotone function,	Doubt session,
			Differentiation of an integral, Absolute	Assignments, Power
			continuity, Convex functions	Point Presentations,
				Question papers
				discussed. Revision
		<u> </u>		of a few topics.
		oordinate and	Review the Monthly completion of Syllal	bus as per lesson
plans on 22			N 0 4 9 9 4	
End semest	ter Examination 2	27.04.2026 to (05.06.2026	

$\begin{array}{c} MCM\ DAV\ College\ for\ Women,\ Sector-36A,\ Chandigarh \\ Monthly\ Teaching\ Plans-Even\ Semester\ (Semester-II) \\ \underline{Session-2025-26} \end{array}$

Department: Mathematics Class: MSc-I Mathematics

Subject: MATH-622S: Algebra-II Name of the Teacher: Dr Navjot Kaur

Month	Date		Topics to be covered	Academic Activity to be Undertaken
	From	То		
January	10.01.2026	31.01.2026	Factorization Theory in Integral	Syllabus,
•			Domains, Divisibility, Unique	Examination
			Factorization Domain (UFD),	pattern discussed,
			Principal Ideal Domain (PID),	Doubt Session.
			Euclidian Domain (ED) and their	
			relationships.	
			nd Review the Monthly completion o	f Syllabus as per
lesson plan	ns on 28.01.2026			,
February	01.02.2026	28.02.2026	Noetherian and Artinian Rings,	Doubt session,
			Examples and Counter Examples,	Assignments,
			Artinian Rings without zero divisors,	revision of a few
			Nil Ideals in Artinian Rings, Hilbert	topics.
			Basis Theorem.	
			and Review the Monthly completion of	f Syllabus as per
	ns on 25.02.2026			T
March	01.03.2026	31.03.2026	Modules, Difference between	Doubt session,
			Modules and Vector Spaces, Module	Assignments,
			Homomorphisms, Quotient Module,	Power Point
			Completely reducible or Semisimple	Presentations.
			Modules, Free Modules,	
			Representation and Rank of Linear	
			Mappings	
_	_		nd Review the Monthly completion o	f Syllabus as per
April	ns on 25.03.2026 01.04.2026	25.04.2026	Smith normal Form over a PID,	Doubt session,
whin	01.04.2020	23.04.2020	Finitely generated modules over a	Assignments,
			PID, Rational Canonical Form,	Power Point
				Presentations,
			Applications to finitely generated	ŕ
			abelian groups	Question papers discussed. Revision
				of a few topics.
Danartma	tal Macting to	L Coordinate a	nd Review the Monthly completion o	
_	ntai Meeting to ns on 22.04.2026		ma Keview the Monthly completion of	i byliabus as pei
	ter Examinatio			

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

Department: Mathematics

Class: MSc-I Mathematics

Subject: MATH-623S: VECTOR ANALYSIS AND MECHANICS

Name of the Teacher: Dr NAVJOT KAUR

Month	Date		Topics to be covered	Academic Activity to be Undertaken
	From	To		
January	10.01.2026	31.01.2026	Vectors: Vectors Scalar and vector point functions, Differentiation and integration of vectors, Gradient divergence and curl operators.	Syllabus, Examination pattern discussed, Doubt Session.
Departmen	ntal Meeting to	Coordinate a	and Review the Monthly completion of	f Syllabus as per
lesson plan	ns on 28.01.2020	5		
February	01.02.2026	28.02.2026	Green's and Stoke's theorems, Gauss' divergence theorem, Curvilinear coordinates.	Doubt session, Assignments, Class tests.
	ntal Meeting to ns on 25.02.2020		and Review the Monthly completion of	f Syllabus as per
March	01.03.2026	31.03.2026	Mechanics: Mechanics Generalized co-ordinates. Lagrange's equations. Hamilton's canonical equations. Hamilton's principle of least action. Reduction to the equivalent one body problem. The equations of motion and first integral.	Doubt session, Assignments, Power Point Presentations. Class tests.
_	ntal Meeting to ns on 25.03.2020		and Review the Monthly completion o	f Syllabus as per
April	01.04.2026	25.04.2026	The equivalent one-dimensional problem and classification of orbits. The Viral theorem. Rigid body motion about an axis. Moving axis.	Doubt session, Assignments, Question papers discussed. Revision of the topics important from examination point of view.
Departmen plans on 22		oordinate and	Review the Monthly completion of Syllab	ous as per lesson

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

Department: Mathematics

Class: MSc-I Mathematics

Subject: MATH-624S: Complex Analysis-II

Name of the Teacher: Ms Promila

Month	Date		Topics to be covered	Academic Activity to be Undertaken
	From	To		
January	10.01.2026	31.01.2026	Taylor's theorem, Laurent's theorem, Maximum Modulus principal and Schwarz's Lemma, zeros and singularities of a function, application of Schwarz's Lemma, Taylor series and Laurent series	Syllabus, Examination pattern discussed, Doubt Session.
Departmen	tal Meeting to Co	ordinate and	Review the Monthly completion of Syllab	ous as per lesson
plans on 28			, ,	•
February	01.02.2026	28.02.2026	Singularities, Cauchy's Residue theorem,,calculus of residue,bilinear transformation,Zeros and poles of meromorphic functions,Rouche's theorem, Argument Principal	Doubt session, Assignments, revision of a few topics.
Departmen plans on 25		ordinate and	Review the Monthly completion of Syllab	ous as per lesson
March	01.03.2026	31.03.2026	Definitions and examples of conformal mappings,infinite products,weierstrass theorem,,Mittagleffer's theorem, canonical product	Doubt session, Assignments, Power Point Presentations.
Departmen plans on 25		ordinate and	Review the Monthly completion of Syllab	ous as per lesson
April	01.04.2026	25.04.2026	Analytic continuation through power series, Natural boundary,The Gamma function and Riemann Zeta function	Doubt session, Assignments, Power Point Presentations, Question papers discussed. Revision of a few topics.
Departmen plans on 22		oordinate and	Review the Monthly completion of Syllab	ous as per lesson
End semest	ter Examination 2	27.0 <mark>4.2026 to (</mark>	05.06.2026	

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

Department: Mathematics

Class: MSc-I Mathematics Subject: MATH-625S: Number Theory-II

Name of the Teacher: Dr Chitra

Month	Date		Topics to be covered	Academic Activity to be Undertaken
	From	To		
January	10.01.2026	31.01.2026	Farey sequences, Continued fractions, Approximation of reals by rationals, Pell's equations,	Syllabus, Examination pattern discussed, Doubt Session.
Department plans on 28		oordinate and	Review the Monthly completion of Sylla	abus as per lesson
February	01.02.2026	28.02.2026	Minkowski's theorem and its applications,	Doubt session, Assignments, revision of a few topics.
Department plans on 25		oordinate and	Review the Monthly completion of Sylla	abus as per lesson
March	01.03.2026	31.03.2026	Partitions, Order of magnitude and average order of arithmetic functions,	Doubt session, Assignments, Power Point Presentations.
Department plans on 25	_	oordinate and	Review the Monthly completion of Sylla	abus as per lesson
April	01.04.2026	25.04.2026	Euler Summation Formula, Abel's Identity, Elementary results on distribution of primes.	Doubt session, Assignments, Power Point Presentations, Question papers discussed. Revision of a few topics.
Departmen		oordinate and	Review the Monthly completion of Sylla	
	ter Examination	27.04.2026 to (05.06.2026	