Name of the Assistant Professor: Dr. Asha

Subject: Mathematics
Paper: Functions and Algebra (Course Code: 24MATM401DS01)

ass: B.A.  abject: Mathematics  aper: Functions and Algeb	wa (Cc	ourse Code: 24MATM.
Functions and Algeb	ra (Co	Description Pelations
aper: Function	140	Descriptions of Relations
		- vericulum, Concept
Week	Introd	tions along with domain and range, Composition of functions
10 07 2025)		and range, Composition of
(15.07.2025 to 19.07.2025)	Func	tions along with domain and
and	Func	extibility and inverse of functions, One-to-one correspondence
(21.07.2025 to 26.07.2025)		" " " and inverse of functions, on
(21.07.2025 to 20.0	Inve	the cardinality of a set, Revision the cardinality of a set, Revision ations between the roots and coefficients of general ations between in one variable. Solutions of polynomial
3 <sup>rd</sup> 22 08 2025)	and	the cardinary
(28.07.2025 to 02.08.2025)	Rel	the cardinality of a cos, the cardinality of
(04.08.2025 to 09.08.2025)	por	nations having conditions enots. Transformation of
(04.08.2023	TICC	ammon roots and an equation
5 <sup>th</sup>	E	Diguidant Diguidant
(11.08.2025 to 16.08.2025	) and know in the last	gns, Revision gns, Revision (Cardon's method), Biquadrum
The last test of the second of	S1	olutions of cubic equations (Cardon's medical colutions of cubic equations, Assessment Test equations and their solutions, Assessment Test
<b>c</b> th	12	outions and their solutions, Assess
(18.08.2025 to 23.08.202	5)   e	quations symmetric, Skew-symmetric
(18.08.2023 to 2	1	olutions of cubic equations, Assessment Test equations and their solutions, Assessment Test equations and their solutions are solutions.
7 <sup>th</sup>	15)	Matrix and its types and its types and its types and its types. Skew Hermitian matrices Idempotent, Involuntary,
(25.08.2025 to 30.08.202		
oth		Unitary and Orthogonal Matrices Nilpotent Matrices Rank of a matrices, Row rank and column rank of a matrix, Rank of a matrices, Inverse of a matrix  ortary Operations on matrices, Inverse of a matrix  dependence and independence
(01.09.2025 to 06.09.20	25)	Rank of a matrices, Row rank and column rank of a matrices, Row rank and column rank of a matrices, Row rank and column rank of a matrix Rank of a matrices, Inverse of a matrix Elementary Operations on matrices, Inverse of a matrix Elementary Operations on matrices, Inverse of a matrix
		Rank of a matrices, Row Falk and Elementary Operations on matrices, Inverse of a matrix Elementary Operations on matrices, Inverse of a matrix Elementary Operations on matrices, Inverse of a matrix Elementary Operations on matrices, Revision Normal Form, PAQ Form, Linear dependence and independence and columns of matrices, Revision
(08.09.2025 to 13.09.20	)25)	Elementary PAQ Form, Linear depondence Payision
(08.09.2025 to re-		Normal Form, PAQ Form, Linear deployment of rows and columns of matrices, Revision of rows and columns of matrices to a system of linear (both homogeneous
(15.09.2025 to 20.09.2	025)	Normal Form, PAQ Form, Linear depleted of rows and columns of matrices, Revision of rows and columns of matrices to a system of linear (both homogeneous Applications of matrices to a system of linear equations,
(15.09.2025 to 2011)		Applications of matrices to and non-homogeneous) equations and non-homogeneous) equations and non-homogeneous of a system of linear equations,  Theorems on consistency of a system of linear equations,
(22.09.2025 to 27.09.2	2025)_	and non-nomes on consistency of a system of me
(22.09.2025 to 27.03		Theorems on consistency  Assessment Test  Assessment Test  Cayley Hamilton theorem. Eigenvalues, eigenvectors and the  Cayley Hamilton theorem and
12 04 10.	2025)_	Assessment Test Lemilton theorem. Eigenvalues, eigenvalues,
(29.09.2025 to 04.10.		Cayley Hamilton theorem. Eigenvalues  Cayley Hamilton theorem. Eigenvalues  characteristic equation of a matrix.  Characteristic equation of a matrix. Cayley Hamilton theorem and  Minimal polynomial of a matrix.
(06.10.2025 to 11.10	.2025)	characteristic of characteristic of a matrix. Cayley Trans
(06.10.2023 to 12th		Minimal polynomial of a matrix.  use in finding the inverse of a matrix.  use in finding of matrix.
(13.10.2025 to 25.10	).2025)	Use in finding the interpretation of matrix.  Diagonalization of matrix.
(13.10.2025 to 25.12)		Diagonalization
13	1.2025	)
(27.10.2025 to 01.1 16 <sup>th</sup>		Revision
10	1.2025	
(03.11.2025 to 08.1	1.202	Revision
1711		
(10.11.2025 to 15.	11.2025	5)
(2-3-1)		
		P#II

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A Sha	W.	
Name of the Assistant Professor: Dr. Asha		
Class: R A I (Sem-1)		
Subject: Mathematics Practical Work (Sans Code: 24MATM401DS01)		
Subject: Mathematics Practical Work (Using MATEMATE)  Subject: Mathematics Practical Work (Using MATEMATE)  Paper: Functions and Algebra (Course Code: 24MATM401DS01)		

apert -	Course Code: 24MATM401DS01)  Description
Week	
Week 1st	Introduction to MATLAB Software
(15.07.2025 to 19.07.2025)	ntroduction to curriculum, Introduction to MATLAB Software  Practical based on Matrix operations (addition, multiplication, inverse,
2 <sup>nd</sup>	Practical based on Matthe P
(21.07.2025 to 26.07.2025)	transpose, determinant)  Practical based on Matrix operations (rank, eigenvectors, eigenvalues,  Characteristic equation and verification of Cayley Hamilton equation,
그리트 이 지난 경기를 하는 것이 되었다. 나는 사람들은 경기를 들어 있다면 하는데 없는데 없었다. 그 없는데 없다.	CI - materioric Pullation with
(28.07.2023 to 52	system of linear equations  Practical based on System of Homogenous Equation and application to
	solve balance chemical equation
(04.08.2025 to 09.08.2025)	Practical based on System of Non- Homogenous Equation and Practical based on System of Non- Homogenous Equation and Economic
5 <sup>th</sup>	Practical based on System of Non-Homogenous Equations to solve network flow problems, Nutrition and Economic applications to solve network flow problems, Nutrition and Economic
	applications to solve network
(11.08.2025 to 16.08.2025)	Input-Output Models.  Input-Output Models.  Tracess a type of Mathematical Modeling,
th	
6 <sup>th</sup>	Applications and Uses of Matrix in Coding theory  Applications and Uses of Matrix in Coding theory
(18.08.2025 to 23.08.2025)	dilation contraction of figure
7 <sup>th</sup>	Study of reflection, snear, dilation, computer graphics. transformation as application of computer graphics.  Electric Circuits,
(25.08.2025 to 30.08.2025)	transformation as application of estaphics to Solve Electric Circuits,  Application of System of Equations to Solve Electric Circuits,  Application of System of Equations to Solve a Diffusion Process and
8 <sup>th</sup>	Application of System of Equations to Solve Electric Applications of Eigen values to solve a Diffusion Process and Applications of Eigen values to solve a Diffusion Process and
(01.09.2025 to 06.09.2025)	Applications Of Eigen value
(01.09.2023 to obtain	Dynamical Systems. Synations (i) $V \stackrel{\text{iff}}{=} X^n$ , Rational function
9 <sup>th</sup>	Plotting of graphs of following functions 1
(08.09.2025 to 13.09.2025)	Plotting of graphs of following functions (i) $f(x) = \frac{1}{x^n}$ , Irrational function (iii) $f(x) = x^n$ where $n \in \mathbb{N}$ (discuss
(08.09.2023 to 12.00	(ii) $f(x) = \frac{1}{r^n}$ , Illianona function
	heath cases on n is even or odd . Function (Modulus
	both cases on n is even or odd  Plotting of graphs of following functions: Piecewise Function (Modulus  Plotting of graphs of following functions: Piecewise Function, Fractional part
10 <sup>th</sup>	
(15.09.2025 to 20.09.2025)	function, Least integer function).  function, Least integer function).
	function, Least integer function).  Plotting of graphs of transcendental and standard functions
11 <sup>th</sup>	Plotting of graphs of the
(22.09.2025 to 27.09.2025)	Plotting of graphs of Standard Geometrical functions (i) Straight Line  Plotting of graphs of Standard Geometrical functions (ii) Straight Line  Plotting of graphs of Standard Geometrical functions (ii) Straight Line
12"	Plotting of graphs of Standard Cov Hyperbola.  (ii) Circle (iii) Parabola (iv) Ellipse (v) Hyperbola.  (iii) Circle (iiii) Parabola (iv) Ellipse (v) Hyperbola.
(29.09.2025 to 04.10.2025)	(ii) Circle (iii) Parabola (iv) Ellipse (v) Hyperbola.  Plotting of graphs of six inverse trigonometric functions and hyperbolic plotting of graphs of Transcendental equation using graph (iii)
13 <sup>th</sup>	Plotting of graphs of six inverse trigonometric functions in Plotting of graphs of Six inverse trigonometric functions in graph (iii)  functions (ii) Solution of Transcendental equation using graph (iii)  in [1] (six x) six (six x)
(06.10.2025 to 11.10.2025)	functions (ii) Solution of Transcendents, $\sin(\sin x)$ , $\sin(\sin^{-1} x)$ Plotting of graphs of functions $\sin^{-1}(\sin x)$ , $\sin(\sin^{-1} x)$
	Plotting of graphs of functions
14 <sup>th</sup>	Study of various graphical transformations
(13.10.2025 to 25.10.2025	5) Lical transformations
(13.10.2023 to 23.13.13.13.13.13.13.13.13.13.13.13.13.13	Study of various graphical transformations
(27.10.2025 to 01.11.2025	5)
	Revision
16 <sup>th</sup>	
16 <sup>th</sup>	5)
16 <sup>th</sup> (03.11.2025 to 08.11.2025	5) Revision

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Name of the Assistant Professor: Dr. Asha
Class: B.A. II (Sem-3)
Subject: Mathematics
Paper: Ordinary Differential Equations (Course Code: 25MATM403DS01)

Week	Description
1 <sup>st</sup> (28.07.2025 to 02.08.2025)	Introduction to curriculum, Review of Differential Equation (12 <sup>th</sup> Class)
2 <sup>nd</sup> (04.08.2025 to 09.08.2025)	Geometrical meaning of a differential equation. Exact differential equations. Integrating factors.
3 <sup>rd</sup> (11.08.2025 to 16.08.2025)	First order higher degree equations solvable for x,y,p. Lagrange's equations,
4 <sup>th</sup> (18.08.2025 to 23.08.2025)	Clairaut's equations. Equation reducible to Clairaut's form. Singular solutions, Revision
5 <sup>th</sup> (25.08.2025 to 30.08.2025)	Orthogonal trajectories: Cartesian coordinates and polar of coordinates. Self-orthogonal family of curves.
6 <sup>th</sup> (01.09.2025 to 06.09.2025)	Linear ordinary differential equations with constant coefficients.
7 <sup>th</sup> (08.09.2025 to 13.09.2025)	Homogeneous linear ordinary differential equations. Equations reducible to homogeneous.
8 <sup>th</sup> (15.09.2025 to 20.09.2025)	Linear differential equations of second order: Reduction to normal form. Transformation of the equation by changing the dependent variable/the independent variable.
9 <sup>th</sup> (22.09.2025 to 27.09.2025)	Solution by operators of non-homogeneous linear differential equations. Reduction of order of a differential equation.
10 <sup>th</sup> (29.09.2025 to 04.10.2025)	Linear differential equations of second order: Method of variations of parameters.
11 <sup>th</sup> (06.10.2025 to 11.10.2025)	Linear differential equations of second order: Method of undetermined coefficients.
12 <sup>th</sup> (13.10.2025 to 25.10.2025)	Ordinary simultaneous differential equations.
13 <sup>th</sup> (27.10.2025 to 01.11.2025)	Total differential equations. Condition for $Pdx + Qdy + Rdz = 0$ to be exact. General method of solving $Pdx + Qdy + Rdz = 0$ by
14 <sup>th</sup> (03.11.2025 to 08.11.2025)	rtaking one variable constant. Method of auxiliary equations  Revision
15 <sup>th</sup> (10.11.2025 to 15.11.2025)	Revision

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Name of the Assistant Professor: Dr. Asha

Class: B.A. II (Sem-3)
Subject: Mathematics

Paper: Ordinary Differential Equations (Course Code: 25MATM403DS01)

Week	Description .
1 <sup>st</sup> (28.07.2025 to 02.08.2025)	Introduction to curriculum, Review of Differential Equation (12 <sup>th</sup> Class)
2 <sup>nd</sup> (04.08.2025 to 09.08.2025)	Geometrical meaning of a differential equation. Exact differential equations. Integrating factors.
3 <sup>rd</sup> (11.08.2025 to 16.08.2025)	First order higher degree equations solvable for x,y,p. Lagrange's equations,
4 <sup>th</sup> (18.08.2025 to 23.08.2025)	Clairaut's equations. Equation reducible to Clairaut's form. Singular solutions, Revision
5 <sup>th</sup> (25.08.2025 to 30.08.2025)	Orthogonal trajectories: Cartesian coordinates and polar coordinates. Self-orthogonal family of curves.
6 <sup>th</sup> (01.09.2025 to 06.09.2025)	Linear ordinary differential equations with constant coefficients.
7 <sup>th</sup> (08.09.2025 to 13.09.2025)	Homogeneous linear ordinary differential equations. Equations reducible to homogeneous.
8 <sup>th</sup> (15.09.2025 to 20.09.2025)	Linear differential equations of second order: Reduction to normal form. Transformation of the equation by changing the dependent variable/the independent variable.
9 <sup>th</sup> (22.09.2025 to 27.09.2025)	Solution by operators of non-homogeneous linear differential equations. Reduction of order of a differential equation.
10 <sup>th</sup> (29.09.2025 to 04.10.2025)	Linear differential equations of second order: Method of variations of parameters.
11 <sup>th</sup> (06.10.2025 to 11.10.2025)	Linear differential equations of second order: Method of undetermined coefficients.
12 <sup>th</sup> (13.10.2025 to 25.10.2025)	Ordinary simultaneous differential equations.
13 <sup>th</sup> (27.10.2025 to 01.11.2025)	Total differential equations. Condition for Pdx + Qdy +Rdz = 0 to be exact. General method of solving Pdx + Qdy + Rdz = 0 by taking one variable constant. Method of auxiliary equations
14 <sup>th</sup> (03.11.2025 to 08.11.2025)	Revision
15 <sup>th</sup> (10.11.2025 to 15.11.2025)	Revision

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Chips

Name of the Assistant Professor: Dr. Asha

Class: B.A. II (Sem-3)

Subject: Mathematics Practical Work (Using MATLAB Programming)
Paper: O.D.E. (Course Code: 25MATM403DS01

Week	Description
1 <sup>st</sup>	40
(28.07.2025 to 02.08.2025)	Introduction to curriculum, Introduction to MATLAB Software
2 <sup>nd</sup>	Plotting of solutions of first order differential equation.
(04.08.2025 to 09.08.2025)	45
3 <sup>rd</sup>	Plotting of solutions of family of second order differential equation.
(11.08.2025 to 16.08.2025)	a second order differential equation.
4 <sup>th</sup>	Plotting of solutions of family of third order differential equation.
(18.08.2025 to 23.08.2025)	and order differential equation.
5 <sup>th</sup>	Solution of differential equation by variation of parameter method
(25.08.2025 to 30.08.2025)	46 6
6 <sup>th</sup>	Colution of austom of audio and differential and
(01.09.2025 to 06.09.2025)	Solution of system of ordinary differential equations.
7 <sup>th</sup>	Solving exact and non-exact ODEs.
(08.09.2025 to 13.09.2025)	State and Hori exact obes.
8 <sup>th</sup>	Solution of linear equations.
(15.09.2025 to 20.09.2025)	49
9 <sup>th</sup>	Problems on equations reducible to linear equations.
(22.09.2025 to 27.09.2025)	a series of equations reducible to initial equations.
10 <sup>th</sup>	Plotting of orthogonal trajectories.
(29.09.2025 to 04.10.2025)	
11 <sup>th</sup>	Population growth and finding the current at a given time.
(06.10.2025 to 11.10.2025)	A A
12 <sup>th</sup>	Applications of ODEs.
(13.10.2025 to 25.10.2025)	
13 <sup>th</sup>	Revision
(27.10.2025 to 01.11.2025)	
14 <sup>th</sup>	Revision
(03.11.2025 to 08.11.2025)	
15 <sup>th</sup>	Revision
(10.11.2025 to 15.11.2025)	

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Name of the Assistant Professor: Dr. Asha
Class: B.A. I / B.Com. I (Sem-1)
Subject: Mathematics (Multidisciplinary Course)
Paper: Introductory Mathematics (Course Code: 23MATX01MD01)

		Description
	Week	Introduction to curriculum, Concept of Numbers
		Introduction to carrier,
•	(15.07.2025 to 19.07.2025)	* Examples and
	2 <sup>nd</sup>	H.C.F. and L.C.M. of Numbers: Concept, Examples and
		H.C.F. and L.C.M. of Numbers: Concept, Examples and Exercises, Decimal and Fractions: Concept, Examples and
	(21.07.2025 to 26.07.2025)	Exercises Exercises and Revision
		Exercises Simplification: Concept, Examples and Exercises and Revision
		Simpincon
	(28.07.2025 to 02.08.2025)	Framples and Exercises,
	4 <sup>th</sup>	Square roots: Concept, Examples and Exercises,
_	(04.08.2025 to 09.08.2025)	Cube roots: Concept, Examples and Enter
)		Surds and indices: Concept, Examples and Exercises, Problems
	5 <sup>th</sup>	on numbers.
	(11.08.2025 to 16.08.2025)	on numbers.
	6 <sup>th</sup>	Average: Concept, Examples and Exercises, Assessment Test
	(18.08.2025 to 23.08.2025)	Percentage: Concept, Examples and Exercises
•	7 <sup>th</sup>	Percentage: Concept, Examples and
	(25.08.2025 to 30.08.2025)	•
		Profit and Loss: Concept, Examples and Exercises
	8 <sup>th</sup>	
	(01.09.2025 to 06.09.2025)	Ratio and proportion: Concept, Examples and Exercises
	9 <sup>th</sup>	
	(08.09.2025 to 13.09.2025)	Problem on ages: Concept, Examples and Exercises,
	. 10 <sup>th</sup>	Problem on ages. Concept, Examples and Exercises.  Partnership: Concept, Examples and Exercises.
	(15.09.2025 to 20.09.2025)	Time and work: Concept, Examples and Exercises
	11 <sup>th</sup>	Time and work: Collecpt, Examples
	(22.09.2025 to 27.09.2025)	Time and distance: Concept, Examples and Exercises,
	12 <sup>th</sup>	Time and distance: Concept, Examples and Excluses,
	(29.09.2025 to 04.10.2025)	Assessment Test
	13 <sup>th</sup>	Problems on trains: Concept, Examples and Exercises,
7	(06.10.2025 to 11.10.2025)	Mixture problem: Concept, Examples and Exercises, Revision
	14 <sup>th</sup>	Mixture problem: Concept, Examples and
	(13.10.2025 to 25.10.2025)	and alook: Concept Examples a
	15 <sup>th</sup>	Problems based on Calendar and clock: Concept, Examples as
	(27.10.2025 to 01.11.2025)	
	16 <sup>th</sup>	Revision
or end was the line of the second	(03.11.2025 to 08.11.2025)	
FIRST AND REPORT OF STATE OF S	(U3.11.2025 to U3.11.2025)	Revision
	17 <sup>th</sup>	
	(10.11.2025 to 15.11.2025)	

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Name of the Assistant Professor: Dr. Asha

Class: B.A. II / B.Com. II (Sem-3)

Subject: Mathematics (Multidisciplinary Course)

Paper: Introductory Mathematics (Course Code: 25MATX03MD01)

Week	Description
1 <sup>st</sup>	Introduction to curriculum, Theory of Sets: Meaning, elements,
(28.07.2025 to 02.08.2025)	types, presentation and equality of Sets,
2 <sup>nd</sup>	Theory of Sets: Union, Intersection, Complement and
(04.08.2025 to 09.08.2025)	Difference of Sets, Venn Diagram
3 <sup>rd</sup>	Theory of Sets: Cartesian Product of two Sets,
(11.08.2025 to 16.08.2025)	
4 <sup>th</sup>	Applications of Set Theory, Revision, Test
(18.08.2025 to 23.08.2025)	
5 <sup>th</sup>	Matrices and Determinants: Definition of a Matrix; Types of
(25.08.2025 to 30.08.2025)	Matrices.
Summers with the matternant	Algebra of Matrices; Properties of determinants; Calculation of
(01.09.2025 to 06.09.2025)	values of Determinants upto third order;
7 <sup>th</sup>	Adjoint of a Matrix, elementary row and column operations;
(08.09.2025 to 13.09.2025)	Finding inverse matrix through adjoint;
8 <sup>th</sup>	Solution of a system of Linear equations having unique Solution
(15.09.2025 to 20.09.2025)	and involving not more than three variables.
9 <sup>th</sup>	Revision, Written Test, Book review / Essay / Seminar .
(22.09.2025 to 27.09.2025)	0
10 <sup>th</sup>	Compound Interest: Certain different types of interest rate;
(29.09.2025 to 04.10.2025)	
11 <sup>th</sup>	Compound Interest: Concept of present value and amount of a
(06.10.2025 to 11.10.2025)	sum.
12 <sup>th</sup>	Annuities: Concept and examples, Types of annuities.
(13.10.2025 to 25.10.2025)	
13 <sup>th</sup>	Annuities: Present value and amount of an annuity, including
(27.10.2025 to 01.11.2025)	the case of continuous compounding. Written Test
14 <sup>th</sup>	Revision, Quiz / Group discussion / Debate
(03.11.2025 to 08.11.2025)	*
15 <sup>th</sup>	Revision
(10.11.2025 to 15.11.2025)	6 O

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Name of the Assistant Professor: Dr. Asha
Class: B.A. III (Sem-5)
Subject: Mathematics
Paper: Real Analysis

Mook	Description entragral
Week 1 <sup>st</sup> (28.07.2025 to 02.08.2025)	Introduction to Curriculum, Introduction of Riemann integral and related theorems and examples, Darboux's theorem.
2 <sup>nd</sup> (04.08.2025 to 09.08.2025)	Integrability of continuous functions, Monotonic functions, Integrability of continuous and monotone functions and related theorems.
3 <sup>rd</sup> (11.08.2025 to 16.08.2025)	The Fundamental theorem of integral calculus and basic examples, Mean value theorems of integral calculus.  Assignment and test of Unit-II.
4 <sup>th</sup> (18.08.2025 to 23.08.2025)	Improper integral and their convergence, Comparison tests.
5 <sup>th</sup> (25.08.2025 to 30.08.2025)	Cauchy's Test, Abel's Test and Difference street and convergence, Frullani's Integral.
6 <sup>th</sup> (01.09.2025 to 06.09.2025)	Integral as a function of a parameter, revision and test of Unit-II.
7 <sup>th</sup> (08.09.2025 to 13.09.2025)	Definition and examples of metric spaces.  Neighbourhood of a point, Interior Point, Open Set and related
8 <sup>th</sup> (15.09.2025 to 20.09.2025) 9 <sup>th</sup>	theorems and examples.  Limit Point, Closure of a set, Closed set and related theorems,
(22.09.2025 to 27.09.2025)	Equivalent Metrices.  Couchy Sequences Complete Metric Space, Subsequence and
(29.09.2025 to 04.10.2025)	related theorems, Cantor's Intersection Theorem.  Baire's category theorem, contraction Principle, revision and test of Unit-III.
(06.10.2025 to 11.10.2025) 12 <sup>th</sup> (13.10.2025 to 25.10.2025)	Continuity and uniform continuity in metric space and related
13 <sup>th</sup> (27.10.2025 to 01.11.2025)	Confipactness in metric spaces, Sequential compactness, Bolzano-Weierstrass property, Finte Intersection Property.  Continuity in relation with compactness and related theorems.
14 <sup>th</sup> (03.11.2025 to 08.11.2025)	Compactness in metric space, revision and test of Unit-IV.  Revision
(10.11.2025 to 15.11.2025)	8 9

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