



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

Shri Vaishnav Institute of Science

Choice Based Credit System (CBCS) in the light of NEP-2020

M.Sc. Mathematics

SEMESTER-I (2026-28)

COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME						L	T	P	CREDITS
			Marks	THEORY			PRACTICAL					
				END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
MSMAC101	C	Abstract Algebra I	Max	60	20	20	0	0	5	0	0	5
			Min	24	16		0	0				

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit; *Teacher Assessment shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

COURSE OBJECTIVES: To introduce the students to the Sylow theory, field extension and Galois theory.

COURSE ALIGNMENT WITH UNSDG:

The Course aims to fulfil the United Nations Sustainable Development Goals, **SDG 4 (Quality Education)** and **SDG 9 (Industry, Innovation and Infrastructure)**.

COURSE OUTCOMES:

After completion of the course, the student will be able to:

- CO1 Understand and apply the basics of Sylow's theory.
- CO2 Understand fundamental principles of field extensions.
- CO3 Analyse and demonstrate examples of Galois theory and splitting fields.
- CO4 Use the concepts of automorphisms and isomorphism over fields.
- CO5 Apply algebra to solve problems in other areas of mathematics and other disciplines.
- CO6 Produce rigorous proofs in the context of abstract algebra.

TEACHING PEDAGOGY:

- T1 Classroom teaching (white board), Power Point Presentations, Interactive lectures, Inquiry-based teaching
- T2 ABL activities, Assignments, Flip Class/ Seminars, Quizzes, Oral Viva-voce examination

ASSESSMENT TOOLS:

- ATL1 Quiz
- ATL2 Activity Based Learning
- ATL3 Midterm Exams
- ATL4 Seminar Presentation
- ATL5 Poster
- ATL6 Assignments
- ATL7 Oral Viva-voce examination

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				END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam					Teachers Assessment*
MSMAC101	C	Abstract Algebra I	Max	60	20	20	0	0	5	0	0	5
			Min	24	16		0	0				

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P - Practical; C - Credit; *Teacher Assessment shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

PREREQUISITES:

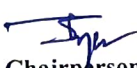
Knowledge of Basic Calculus.

SYLLABUS:

Module	Descriptors/Topics	Hours	Assessment Tools
I	UNIT – I Sylow Theorem: p -group, Cauchy Theorem, Sylow Theorem, Sylow p -subgroups, Applications of Sylow Theory: Application to p -groups and Class equation (Text 1. Section 36, 37.1-37.6).	12	ATL1 ATL3 ATL6
II	UNIT – II Extension Fields: Introduction to Extension Fields, Kronecker's Theorem, Algebraic and Transcendental Elements, Irreducible Polynomials, Simple Extensions. (Text 1: Section 29, 30.23) Algebraic Extension: Finite Extensions, Algebraic Closed Fields and Closure. (Text 1: Section 31)	12	ATL1 ATL3 ATL6
III	UNIT – III Automorphisms of Fields: Automorphisms and Fixed Fields. The Frobenius Automorphism. (Text 1: Section 48) The Isomorphism Extension Theorem: The Extension Theorem, Isomorphism Extension Theorem, The Index of Field Extension. (Text 1: Section 49)	12	ATL1 ATL3 ATL6
IV	UNIT – IV Splitting Fields: Definition, Properties and Examples (Text 1: Section 50).	12	ATL1 ATL3 ATL6


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			Marks	THEORY			PRACTICAL					
				END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
MSMAC101	C	Abstract Algebra I	Max	60	20	20	0	0	5	0	0	5
			Min	24	16		0	0				

Activity A: Self-Study; Activity B: Practical; C: Credit; *Teacher Assessment

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit; *Teacher Assessment shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

	Separable Extension: Multiplicities of Zeros of a Polynomial, Separable Extension, Perfect Fields, The Primitive Element Theorem Totally Inseparable Extension. (Text 1: Section 51, 52)		
V	UNIT – V Galois Theory: Normal Extension, The Main Theorem of Galois Theory, Galois Group over Finite Fields. (Text 1: Section 53)	12	ATL1 ATL3 ATL6
	Total Hours	60	

ADDITIONAL RESOURCES

A. Value addition to course content/ Skill enhancement content:

<https://www.youtube.com/@satishshukla2553330>

B. Remedial classes for slow learners:

As per the AUMP SOP for slow and fast learners.

SUGGESTED READINGS:

Textbooks

- John B. Fraleigh, A First Course in Abstract Algebra, Narosa Publication.
- Herstein, I.N., Topics in Abstract Algebra, Wiley Eastern Limited. Hungerford, T.W., Algebra, Springer.

Reference Books

- P.B. Bhattacharya, S.K. Jain and S.R. Nagpaul, Basic Abstract Algebra, Cambridge University Press.
- Jacobson, N., Basic Algebra, I & II, Hindustan Publishing Corporation, India.
- V. Sahi and V. Bisht, Algebra, Narosa Publication.

Suggested e- resources (Websites/e- books)


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SEMESTER-I (2026-28)

SEMESTER-I (2020-21)												
COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME						L	T	P	CREDITS
			Marks	THEORY			PRACTICAL					
				END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
MSMAC101	C	Abstract Algebra I	Max	60	20	20	0	0	5	0	0	5
			Min	24	16		0	0				

Guided Student Activity; P – Practical; C - Credit; *Teacher Assessment

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P - Practical; C - Credit; *Teacher Assessment shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

- <https://www.youtube.com/@satishshukla2553330>
- <https://sites.google.com/view/satishmathematics1978/home?authuser=0>

COURSE ARTICULATION MATRIX (MAPPING OF COs WITH POs)

Course Outcomes	Correlation with POs					Correlation with PSOs		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
CO1	3	2	2	-	-	3	2	1
CO2	3	2	2	-	-	3	3	1
CO3	3	2	3	-	-	3	3	2
CO4	3	2	3	-	-	3	3	2
CO5	2	3	3	-	1	3	3	2
CO6	3	1	3	-	2	3	2	3


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SEMESTER-I (2026-28)

COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME						L	T	P	CREDITS
			Marks	THEORY			PRACTICAL					
				END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
MSMAC102	DC	Real Analysis	Max	60	20	20	0	0	5	0	0	5
			Min	24	16		0	0				

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P - Practical; C - Credit; *Teacher Assessment shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

COURSE OBJECTIVES: To introduce the students to the Fundamentals of the Real Analysis.

COURSE ALIGNMENT WITH UNSDG:

The Course aims to fulfil the United Nations Sustainable Development Goals, **SDG 4 (Quality Education)** and **SDG 9 (Industry, Innovation and Infrastructure)**.

COURSE OUTCOMES:

After completion of the course, the student will be able to:

- CO1 understand and apply the basics of the Riemann-Stieltjes Integral.
- CO2 understand and apply the concepts of convergence and uniform convergence.
- CO3 apply Power Series and Linear Transformations.
- CO4 Illustrate and demonstrate the functions of several variables in the context of their differentiability and Integrals.

TEACHING PEDAGOGY:

- T1 Classroom teaching (white board), Power Point Presentations, Interactive lectures, Inquiry-based teaching
- T2 ABL activities, Assignments, Flip Class/ Seminars, Quizzes, Oral Viva-voce examination

ASSESSMENT TOOLS:

- ATL1 Quiz
- ATL2 Activity Based Learning
- ATL3 Midterm Exams
- ATL4 Seminar Presentation
- ATL5 Poster
- ATL6 Assignments
- ATL7 Oral Viva-voce examination

PREREQUISITES:

Knowledge of Basic Calculus.


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MSMAC102	DC	Real Analysis	Max	60	20	20	0	0	5	0	0	5
			Min	24	16		0	0				

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SYLLABUS:

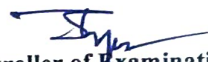
Module	Descriptors/Topics	Hours	Assessment Tools
I	Unit I: Definition and existence of Riemann-Stieltjes Integral and its properties, Integration and Differentiation, Fundamental Theorem of Calculus, Integration by Parts (Text 1: Chapter 6, Sec. 6.1-6.22).	12	ATL1 ATL3 ATL6
II	Unit II: Integration of Vector-valued Functions, Rectifiable Curves, Sequence and Series of Functions: Weierstrass M Test, Abel's and Dirichlet's Test for Uniform Convergence, Uniform Convergence and Continuity. (Text 1: Chapter 6, Sec. 6.23-6.27, Chapter 7, Sec 7.1-7.15).	12	ATL1 ATL3 ATL6
III	Unit III: Uniform Convergence and Riemann-Stieltjes Integration, Uniform Convergence and Differentiation, Equicontinuous Families of Functions, Stone-Weierstrass Theorem (Text 1: Chapter 7, Sec. 7.16-7.33).	12	ATL1 ATL3 ATL6
IV	Unit IV: Some Special Functions: Power Series, The Exponential and Logarithmic Functions, The Trigonometric Functions, The Algebraic Completeness of the Complex Field, Functions of Several Variables: Linear Transformation. (Text 1: Chapter 8, Sec. 8.1-8.8, Chapter 9, Sec. 9.1-9.9).	12	ATL1 ATL3 ATL6
V	Unit V: Functions of Several Variables: Differentiation, Chain Rule, Partial Derivatives, The Contraction Principle, The Inverse Function	12	ATL1 ATL3 ATL6


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	Theorem, The Implicit Function Theorem, Derivatives of Higher Order, Differentiation of Integrals. (Text 1: Chapter 9, Sec. 9.10-9.29, 9.39-9.43).		
	Total Hours	60	

ADDITIONAL RESOURCES

A. Value addition to course content/ Skill enhancement content:

<https://www.youtube.com/@satishshukla2553330>

B. Remedial classes for slow learners:

As per the AUMP SOP for slow and fast learners.

SUGGESTED READINGS:

Textbooks

1. W. Rudin, Principles of Mathematical Analysis, Third Edition, McGraw-Hill Book Co.

Reference Books

1. C.D. Aliprantis, O. Burkinshaw, Principles of Real Analysis, 3rd Edition, Harcourt Asia Pte Ltd., 1998.
2. H.L. Royden, Real Analysis, 3rd Edition, Macmillan, New York & London, 1988.
3. T.M. Apostol, Mathematical Analysis, Narosa.
4. Introduction to Real Analysis, 4th Edition by Robert G. Bartle and Donald R. Sherbert

Suggested e- resources (Websites/e- books)

1. <https://www.youtube.com/@satishshukla2553330>
2. <https://sites.google.com/view/satishmathematics1978/home?authuser=0>


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Course Outcomes	Correlation with POs					Correlation with PSOs		
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CO2	3	2	3	-	-	3	2	2
CO3	3	3	3	-	-	3	3	2
CO4	3	3	3	-	-	3	3	2

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				END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
MSMAC103	DC	Complex Analysis I	Max	60	20	20	0	0	5	0	0	5
			Min	24	16		0	0				

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P - Practical; C - Credit; *Teacher Assessment shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

COURSE OBJECTIVES: To introduce the students to the Fundamentals of the Complex Analysis.

COURSE ALIGNMENT WITH UNSDG:

The Course aims to fulfil the United Nations Sustainable Development Goals, **SDG 4 (Quality Education)** and **SDG 9 (Industry, Innovation and Infrastructure)**.

COURSE OUTCOMES:

After completion of the course, the student will be able to:

- CO1 understand and represent complex numbers algebraically and geometrically
- CO2 define and analyze limits and continuity for complex functions as well as consequences of continuity
- CO3 evaluate complex contour integrals directly and by the fundamental theorem, apply the Cauchy integral theorem in its various versions, and the Cauchy integral formula
- CO4 illustrate functions by Taylor, power and Laurent series, identify singularities and poles
- CO5 apply power series methods for solving multiple physical and engineering problems

TEACHING PEDAGOGY:

- T1 Classroom teaching (white board), Power Point Presentations, Interactive lectures, Inquiry-based teaching
- T2 ABL activities, Assignments, Flip Class/ Seminars, Quizzes, Oral Viva-voce examination

ASSESSMENT TOOLS:

- ATL1 Quiz
- ATL2 Activity Based Learning
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Knowledge of Basic Calculus.

SYLLABUS:

Module	Descriptors/Topics	Hours	Assessment Tools
I	Unit I: Complex Numbers: Complex Numbers, Geometrical representation, Complex Conjugate, Modulus and Argument, Properties of Modulus, Properties of Arguments, Inequalities of Modulus, Cauchy's Inequality, D'Moivre's Theorem, Limit and Continuity, Analytic Function, C-R equations, Conjugate and Harmonic Functions. (Text 1: Chapters 1 and 2)	12	ATL1 ATL3 ATL6
II	Unit II: Complex Integration, Cauchy's Fundamental Theorem, Cauchy-Goursat Theorem, Cauchy Integral Formula, Higher Order Derivatives, Extension of Cauchy Theorem to multiply connected regions. (Text 1: Chapter 3: Sections 3.1-3.4,3.6)	12	ATL1 ATL3 ATL6
III	Unit III: Morera's Theorem, Cauchy's Inequality, Liouville's Theorem, The Fundamental Theorem of Algebra, Taylor's Theorem, Problems based on Taylor's Theorem. (Text 1: Chapter 3: Sections 3.7-3.8, 3.10 Only Taylor's Theorem, Theorem 5-8 and Theorem 13)	12	ATL1 ATL3 ATL6
IV	Unit IV: The Maximum Modulus Principle, Schwartz Lemma, Laurent Series, Problems based on the Laurent Series, and the Uniqueness of Laurent Expansion.	12	ATL1 ATL3 ATL6


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Knowledge of Basic Calculus.

SYLLABUS:

Module	Descriptors/Topics	Hours	Assessment Tools
I	Unit I: Complex Numbers: Complex Numbers, Geometrical representation, Complex Conjugate, Modulus and Argument, Properties of Modulus, Properties of Arguments, Inequalities of Modulus, Cauchy's Inequality, D'Moivre's Theorem, Limit and Continuity, Analytic Function, C-R equations, Conjugate and Harmonic Functions. (Text 1: Chapters 1 and 2)	12	ATL1 ATL3 ATL6
II	Unit II: Complex Integration, Cauchy's Fundamental Theorem, Cauchy-Goursat Theorem, Cauchy Integral Formula, Higher Order Derivatives, Extension of Cauchy Theorem to multiply connected regions. (Text 1: Chapter 3: Sections 3.1-3.4,3.6)	12	ATL1 ATL3 ATL6
III	Unit III: Morera's Theorem, Cauchy's Inequality, Liouville's Theorem, The Fundamental Theorem of Algebra, Taylor's Theorem, Problems based on Taylor's Theorem. (Text 1: Chapter 3: Sections 3.7-3.8, 3.10 Only Taylor's Theorem, Theorem 5-8 and Theorem 13)	12	ATL1 ATL3 ATL6
IV	Unit IV: The Maximum Modulus Principle, Schwartz Lemma, Laurent Series, Problems based on the Laurent Series, and the Uniqueness of Laurent Expansion.	12	ATL1 ATL3 ATL6

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			Marks	THEORY			PRACTICAL					
				END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
MSMAC103	DC	Complex Analysis I	Max	60	20	20	0	0	5	0	0	5
Legends: L - Lecture; T - Tutorial/Teacher's Guided Learning; P - Project/Practical			Min	24	16		0	0				

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P - Practical; C - Credit; *Teacher Assessment shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

	(Text 1: Chapter 3: Sections 3.9-3.10 (Laurent Theorem), Theorem 9-11, 14-15)		
V	Unit V: Bilinear Transformation, Fixed Points, Critical Points, Cross-ratio, Normal Form of a Bilinear Transformation and Problems, Mapping by Elementary Transformations (Translation, Rotation., Magnification, Rotation and Magnification, Inversion), Conformal Mappings, Necessary and Sufficient Condition for Conformal Mapping. (Text 1: Chapter 6)	12	ATL1 ATL3 ATL6
Total Hours		60	

ADDITIONAL RESOURCES

A. Value addition to course content/ Skill enhancement content:

<https://www.youtube.com/@satishshukla2553330>

B. Remedial classes for slow learners:

As per the AUMP SOP for slow and fast learners.

SUGGESTED READINGS:

Textbooks

1. B. Singh, V. Karanjgaokar, R.S. Chandel, Complex Analysis, Golden Valley Publ., Agra

Reference Books

1. J.B. Conway, Functions of one complex variable, Second Edition, Narosa Publishing
2. L.V. Ahlfors, Complex Analysis, McGraw-Hill, 1979.
3. W. Rudin, Real and Complex Analysis, McGraw-Hill Book Co., 1966.
4. S. Ponnusamy, Foundations of Complex Analysis, Narosa Publishing House, 1997.

Suggested e- resources (Websites/e- books)

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Choice Based Credit System (CBCS) in the light of NEP-2020

M.Sc. Mathematics

SEMESTER-I (2026-28)

COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME						L	T	P	CREDITS
			Marks	THEORY			PRACTICAL					
				END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
MSMAC103	DC	Complex Analysis I	Max	60	20	20	0	0	5	0	0	5
			Min	24	16		0	0				

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P - Practical; C - Credit; *Teacher Assessment shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

1.	https://www.youtube.com/@satishshukla2553330
2.	https://youtube.com/@priya-mathematics1030?si=pZIZYTyr-l5pV7q

COURSE ARTICULATION MATRIX (MAPPING OF COs WITH POs)

Course Outcomes	Correlation with POs					Correlation with PSOs		
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
CO1	3	2	2	-	-	3	2	1
CO2	3	2	3	-	-	3	2	2
CO3	3	3	3	-	-	3	3	2
CO4	3	2	3	-	-	3	3	2
CO5	2	3	3	-	1	3	3	2


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SEMESTER-I (2026-28)

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			Marks	THEORY			PRACTICAL					
				END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
MSMAC104	DC	Topology I	Max	60	20	20	0	0	5	0	0	5
			Min	24	16		0	0				

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit; *Teacher Assessment shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

COURSE OBJECTIVES: To introduce the students to the Fundamentals of the Topology.

COURSE ALIGNMENT WITH UNSDG:

The Course aims to fulfil the United Nations Sustainable Development Goals, **SDG 4 (Quality Education)** and **SDG 9 (Industry, Innovation and Infrastructure)**.

COURSE OUTCOMES:

After completion of the course, the student will be able to:

- CO1** use sets and functions, images and preimages, and you can distinguish between finite, countable, and uncountable sets
- CO2** understand and construct the topological spaces
- CO3** establish continuity in equivalent forms
- CO4** apply and analyse countability axioms to real-world problems

TEACHING PEDAGOGY:

- T1** Classroom teaching (white board), Power Point Presentations, Interactive lectures, Inquiry-based teaching
- T2** ABL activities, Assignments, Flip Class/ Seminars, Quizzes, Oral Viva-voce examination

ASSESSMENT TOOLS:

- ATL1** Quiz
- ATL2** Activity Based Learning
- ATL3** Midterm Exams
- ATL4** Seminar Presentation
- ATL5** Poster
- ATL6** Assignments
- ATL7** Oral Viva-voce examination

PREREQUISITES:

Knowledge of Basic Calculus.


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SYLLABUS:

Module	Descriptors/Topics	Hours	Assessment Tools
I	Unit I: Finite and Infinite Sets, Countable and Uncountable Sets, Schroeder-Bernstein Theorem, Axiom of Choice, and Well-ordered Set. Cardinal Numbers and its Arithmetic, Zorn's Lemma (Text 1. Sections 6,7,9,10,11).	12	ATL1 ATL3 ATL6
II	Unit II: Definition and Examples of Topological Space, Bases and Subbases, Order Topology, Product Topology, Subspace and Relative Topology. (Text 1. Section 12 to 16)	12	ATL1 ATL3 ATL6
III	Unit III: Closed Sets and Limit Points, Closure of a Set, Dense Subsets, Interior Exterior and Boundary of Sets, Neighborhoods and Neighborhood Systems. Continuous Functions and Homeomorphism, Examples. (Text 1. Section 17.1 to 17.7, 18)	12	ATL1 ATL3 ATL6
IV	Unit IV: Connected Spaces, Connected Subspaces of the Real Line, Path Connectedness, Components and Local Connectedness (Text 1. Section 23 to 25).	12	ATL1 ATL3 ATL6
V	Unit V: The Countability axiom, First and Second Countable Space, Lindelöf Theorem, Separable Space, Second Countability and Separability Hausdorff space. (Text 1. Section 17.8 to 17.10, 30)	12	ATL1 ATL3 ATL6
Total Hours		60	

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			Marks	THEORY			PRACTICAL					
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Practical: C - Credit: *Teacher Assessment

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P - Practical; C - Credit; *Teacher Assessment shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

ADDITIONAL RESOURCES

A. Value addition to course content/ Skill enhancement content:

<https://www.youtube.com/@satishshukla2553330>

B. Remedial classes for slow learners:

As per the AUMP SOP for slow and fast learners.

SUGGESTED READINGS:

Textbooks

- James R. Munkres, Topology, A First Course, Prentice Hall of India Pvt. Ltd. New Delhi.

Reference Books

- G.F. Simmons, Introduction to Topology and Modern Analysis, McGraw Hill.
- K.D. Joshi, Introduction to General Topology, Kelley, Eastern
- K.P. Gupta, Topology, Pragati Prakashan.

Suggested e- resources (Websites/e- books)

- <https://www.youtube.com/@satishshukla2553330>
- <https://youtube.com/@priya-mathematics1030?si=pZJZYtyr-l5pV7q>

COURSE ARTICULATION MATRIX (MAPPING OF COs WITH POs)

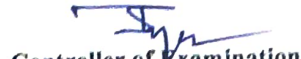
COURSE ARTICULATION MATRIX (MAPPING OF COs WITH POs)


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			Marks	THEORY			PRACTICAL					
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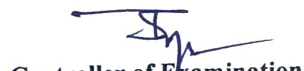
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