COLLEGE: MBP GOVT. P.G. COLLEGE, ASHIANA, LUCKNOW

ACADEMIC CALENDAR : SESSION- (2021-2022)

NAME OF TEACHER: DR. POONAM BAJPAI
DEPARTMENT: DEPARTMENT OF **MATHEMATICS**
CLASS: **BSC (NEP)-I** YEAR (**I SEMESTER**) (APPLICABLE FROM SEPTEMBER 2021)

S.NO.	CLASS (YEAR, SEMESTER)	PAPER	UNIT	TOPIC NAME	MONTHLY / WEEKLY PLAN	TEACHING PEDAGOGY	LEARNING OUTCOMES	ANY OTHER DETAIL
01	02	03	04	05	06	07	08	09
1	BSC (NEP) – I YEAR, I SEMESTER CREDITS-4 T:04	P-1 (MAJOR & MINOR) DIFFERENTIAL CALCULUS	**Course Outcomes:** 1. Know the concepts of calculus, namely, limits, continuity, differentiability of functions of one and two variables and their applications in the form of mean value theorem and Taylor's theorem. 2. Sketch curves in a plane using its mathematical properties in the different coordinate systems of reference. 3. Apply derivatives in Optimization, Social sciences, Physics and Life sciences etc. 4. Get knowledge of curvature, asymptotes, envelopes and evolutes.					
			UNIT-I	Limit, continuity and differentiability of function of single variable, Cauchy's definition, Heine's definition, Uniform continuity, Borel's theorem, boundedness theorem, Bolzano's theorem, Intermediate value theorem, extreme value theorem, Darboux's intermediate value theorem for derivatives, Chain rule, indeterminate forms.	MIN. 14 LECTURES	ONLINE &OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-II	Rolle's theorem, Lagrange and Cauchy Mean value theorems, mean value theorems of higher order, Taylor's theorem with	MIN 14 LECTURES	ONLINE &OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS

				various forms of remainders, Successive differentiation, Leibnitz theorem, Maclaurin's and Taylor's series, Limit and Continuity of functions of two variables, Differentiation of function of two variables, Necessary and sufficient condition for differentiability of functions two variables.		VIDEO,CLASS ROOM TEACHING METHOD)		
			UNIT-III	Partial differentiation, Euler's theorem on homogeneous function, Schwarz's and Young theorem, Taylor's theorem for functions of two variables with examples, Maxima and minima for functions of two variables, Lagrange multiplier method, Jacobians, Inverse function theorem and implicit function theorem.	MIN 12 LECTURES	ONLINE &OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-IV	Tangents and normals, Asymptotes, Curvature, Envelops and evolutes, Tests for concavity and convexity, Points of inflexion, Multiple points, Parametric representation of curves and tracing of parametric curves, Tracing of curves in Cartesian and Polar forms.	MIN 12 LECTURES	ONLINE &OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			References: **Text Books:** 1. T.M. Apostol, Calculus Vol. I, John Wiley & Sons Inc. 2. S. Balachandra Rao, C. K. Shantha, Differential Calculus, New Age Publication. **Suggested Reading:** 3. H. Anton, I. Birens and S. Davis, Calculus, John Wiley and Sons, Inc.,2002. 4. G.B. Thomas and R.L. Finney, Calculus, Pearson Education, 2007.					**FINAL EVALUATION THROUGH INTERNAL ASSESMENT UPLODED ON LU EXAM PORTAL**

			Web References: 1.Digital platforms web links: NPTEL/SWAYAM/ MOOCS/Openstax.org https://openlearninglibrary.mit/edu/courses http://heecontent.upsdc.gov.in/SearchContent.aspx https://www.lkouniv.ac.in/en/article/e-content-faculty-of-science					
2	**BSC (NEP) – I YEAR, I SEMESTER CREDITS-4 T:04**	**P-2 (MAJOR) (MATRICES & ALGEBRA)**	**Course Outcomes:** 1. Find the rank and eigen values of matrices. 2. Study the system of linear homogeneous and non-homogeneous equations. 3. Recognize the mathematical objects that are groups, and classify them as abelian, cyclic and permutation groups, etc. 4. Link the fundamental concepts of Groups and symmetrical figures. 5. Analyze the subgroups of cyclic groups. 6. Explain the significance of the notion of cosets, normal subgroups, and factor group. 7. Understand the concepts of rings, subrings and fields.					
			UNIT-1	Elementary operations on matrices, Rank of a matrix, Echelon and normal form of a matrix, Inverse of a matrix by elementary operations, System of linear homogeneous and non-homogeneous equations, Theorems on consistency of a system of linear equations. Eigen values, Eigen vectors and characteristic equation of a matrix, Cayley-Hamilton theorem and its use in finding inverse of a matrix.	MIN 13 LECTURES	ONLINE &OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-II	Equivalence relations and partitions, Congruence modulo n, Definition of a group with examples and simple properties, Subgroups, Generators of a group, Cyclic groups, Coset decomposition, Lagrange's theorem and its consequences,	MIN 13 LECTURES	ONLINE &OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS

				Fermat and Euler theorems. Normal subgroups, Quotient groups.				
			UNIT-III	Homomorphism and isomorphism, Fundamental theorem of homomorphism, Theorems on isomorphism, Permutation groups, Even and odd permutations, The alternating group, Cayley's theorem, Direct products.	MIN 13 LECTURES	ONLINE &OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-IV	Rings, types of rings (commutative rings, rings with unity, division rings, Integral domains and fields) with examples, basic properties, sub-rings, Characteristic of a ring, Ideals and quotient rings, Ring homomorphism, Isomorphism theorems, Field of quotient of an integral domain, polynomial rings.	MIN 13 LECTURES	ONLINE &OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			References: **Text Books:** 1. Linear Algebra by K. Hoffman and R. Kunze. 2. V. Sahai and V. Bist, Algebra, Narosa **Suggested Readings:** 3. J.B. Fraleigh, A First Course in Abstract Algebra, Pearson 4. I.N. Herstein, Topics in Algebra, John Wiley & Sons **Web References:** Digital platforms web links: NPTEL/SWAYAM/ MOOCS/Openstax.org https://openlearninglibrary.mit/edu/courses http://heecontent.upsdc.gov.in/SearchContent.aspx https://www.lkouniv.ac.in/en/article/e-content-faculty-of-science				**FINAL EVALUATION THROUGH INTERNAL ASSESMENT UPLODED ON LU EXAM PORTAL**

COLLEGE: MBP GOVT. P.G. COLLEGE, ASHIANA, LUCKNOW

ACADEMIC CALENDAR : SESSION- (2021-2022)

NAME OF TEACHER: DR. POONAM BAJPAI

DEPARTMENT: DEPARTMENT OF **MATHEMATICS**

CLASS: **BSC (NEP)-I** YEAR (**II SEMESTER**) (APPLICABLE FROM JANUARY 2022)

S.NO.	CLASS (YEAR, SEMESTER)	PAPER	UNIT	TOPIC NAME	MONTHLY/WEEKLY PLAN	TEACHING PEDAGOGY	LEARNING OUTCOMES	ANY OTHER DETAIL
01	02	03	04	05	06	07	08	09
1	**BSC (NEP) – I YEAR, I I SEMESTER CREDITS-4 T:04**	**P-2 (MINOR) (MATRICES & ALGEBRA)**	**Course Outcomes:** 1. Find the rank and eigen values of matrices. 2. Study the system of linear homogeneous and non-homogeneous equations. 3. Recognize the mathematical objects that are groups, and classify them as abelian, cyclic and permutation groups, etc. 4. Link the fundamental concepts of Groups and symmetrical figures. 5. Analyze the subgroups of cyclic groups. 6. Explain the significance of the notion of cosets, normal subgroups, and factor group. 7. Understand the concepts of rings, subrings and fields.					
			UNIT-I	Elementary operations on matrices, Rank of a matrix, Echelon and normal form of a matrix, Inverse of a matrix by elementary operations, System of linear homogeneous and non-homogeneous equations, Theorems on consistency of a system of linear equations. Eigen values, Eigen vectors and characteristic equation of a matrix, Cayley-Hamilton theorem and its use in finding inverse of a matrix.	MIN. 13 LECTURES	ONLINE &OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-II	Equivalence relations and	MIN	ONLINE &OFFLINE	STUDENTS WILL	EVALUATION

				partitions, Congruence modulo n, Definition of a group with examples and simple properties, Subgroups, Generators of a group, Cyclic groups, Coset decomposition, Lagrange's theorem and its consequences, Fermat and Euler theorems. Normal subgroups, Quotient groups.	13 LECTURES	TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-III	Homomorphism and isomorphism, Fundamental theorem of homomorphism, Theorems on isomorphism, Permutation groups, Even and odd permutations, The alternating group, Cayley's theorem, Direct products.	MIN 13 LECTURES	ONLINE &OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-IV	Rings, types of rings (commutative rings, rings with unity, division rings, Integral domains and fields) with examples, basic properties, sub-rings, Characteristic of a ring, Ideals and quotient rings, Ring homomorphism, Isomorphism theorems, Field of quotient of an integral domain, polynomial rings.	MIN 13 LECTURES	ONLINE &OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			References: **Text Books:** 1. Linear Algebra by K. Hoffman and R. Kunze. 2. V. Sahai and V. Bist, Algebra, Narosa **Suggested Readings:** 3. J.B. Fraleigh, A First Course in Abstract Algebra, Pearson 4. I.N. Herstein, Topics in Algebra, John Wiley & Sons **Web References:** Digital platforms web links: NPTEL/SWAYAM/ MOOCS/Openstax.org					**FINAL EVALUATION THROUGH INTERNAL ASSESMENT UPLODED ON LU EXAM PORTAL**

			https://openlearninglibrary.mit/edu/courses http://heecontent.upsdc.gov.in/SearchContent.aspx https://www.lkouniv.ac.in/en/article/e-content-faculty-of-science				
2	**BSC (NEP) – I YEAR, I I SEMESTER CREDITS-4 T:04**	**P-3 (MAJOR) INTEGRAL CALCULUS**	**Course Outcomes:** 1. Some of the families and properties of Riemann integrable functions, and the applications of the fundamental theorems of integration. 2. Beta and Gamma functions and their properties. 3. The valid situations for the inter-changeability of differentiability and integrability with infinite sum, and approximation of transcendental functions in terms of power series. 4. Compute area of surfaces of revolution and the volume of solids by integrating over cross-sectional areas.				
			UNIT-I	Definite integrals as limit of the sum, Riemann integral, Integrability of continuous and monotonic functions, Fundamental theorem of integral calculus, Mean value theorems of integral calculus, Differentiation under the sign of Integration.	MIN 12 LECTURES	ONLINE &OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-II	Improper integrals, their classification and convergence, Comparison test, μ test, Abel's test, Dirichlet's test, quotient test, Beta and Gamma functions.	MIN 12 LECTURES	ONLINE &OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-III	Rectification, Volumes and Surfaces of Solid of revolution, Pappus theorem, Multiple integrals, change of order of double integration, Dirichlet's theorem, Liouville's theorem for multiple integrals.	MIN 12 LECTURES	ONLINE &OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-IV	Vector Differentiation, Gradient, Divergence and Curl, Normal on a	MIN 14 LECTURES	ONLINE &OFFLINE TEACHING METHOD	STUDENTS WILL GET THE UNDERSTANDING	EVALUATION THROUGH ASSIGNMENTS

				surface, Directional Derivative, Vector Integration, Theorems of Gauss, Green, Stokes and related problems.		(NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	OF THE TOPIC DISCUSSED.	AND DISCUSSIONS
			References: **Text Books:** 1. T.M. Apostol, Calculus Vol. II, John Wiley Publication. 2. Shanti Narayan, P.K. Mittal, Integral Calculus, S. Chand. **Suggested Readings:** 3. Erwin Kreyszig, Advanced Engineering Mathematics, John Wiley & Sons. **Web References:** Digital platforms web links: NPTEL/SWAYAM/ MOOCS/Openstax.org https://openlearninglibrary.mit/edu/courses http://heecontent.upsdc.gov.in/SearchContent.aspx https://www.lkouniv.ac.in/en/article/e-content-faculty-of-science					**FINAL EVALUATION THROUGH INTERNAL ASSESMENT UPLODED ON LU EXAM PORTAL**
3	**BSC (NEP) – I YEAR,** **I I SEMESTER** **CREDITS-4** **T:04**	**P-4** **(MAJOR)** **(GEOMETRY)**	**Course Outcomes:** 1. To learn and visualize the fundamental ideas of coordinate geometry. 2. To describe some surfaces by using analytical geometry. 3. To gain knowledge about regular geometrical figures and their properties.					
			UNIT-I	General equation of second degree, System of conics, Tracing of conics, Confocal conics, Polar equation of conics and its properties.	MIN 12 LECTURES	ONLINE &OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILLGET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-II	Three-Dimensional Coordinates, Projection and Direction Cosine, Plane (Cartesian and vector form), Straight line in three dimension (Cartesian and vector form).	MIN 12 LECTURES	ONLINE &OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-III	Sphere, Cone and Cylinder.	MIN 13 LECTURES	ONLINE &OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS

						VIDEO,CLASS ROOM TEACHING METHOD)		
			UNIT-IV	Central conicoids, Paraboloids, Plane section of conicoids, Generating lines, Confocal conicoids, Reduction of second degree equation.	MIN 13 LECTURES	ONLINE &OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			References: **Text Books:** 1. P. R. Vittal, Analytical Geometry 2. S. L. Loney, The Elements of Coordinate Geometry, Macmillan **Suggested Readings:** 3. Robert J.T. Bell, Elementary Treatise on Coordinate Geometry of three dimensions, Macmillan India Ltd **Web References:** Digital platforms web links: NPTEL/SWAYAM/ MOOCS/Openstax.org https://openlearninglibrary.mit/edu/courses http://heecontent.upsdc.gov.in/SearchContent.aspx https://www.lkouniv.ac.in/en/article/e-content-faculty-of-science					**FINAL EVALUATION THROUGH INTERNAL ASSESMENT UPLODED ON LU EXAM PORTAL**

COLLEGE: MBP GOVT. P.G. COLLEGE, ASHIANA, LUCKNOW

ACADEMIC CALENDAR : SESSION- (2021-2022)

NAME OF TEACHER: DR. POONAM BAJPAI

DEPARTMENT: DEPARTMENT OF **MATHEMATICS**

CLASS: **BSC-II** YEAR (**III SEMESTER**) (APPLICABLE FROM JULY 2021)

S.NO.	CLASS (YEAR, SEMESTER)	PAPER	UNIT	TOPIC NAME	MONTHLY/WEEKLY PLAN	TEACHING PEDAGOGY	LEARNING OUTCOMES	ANY OTHER DETAIL
01	02	03	04	05	06	07	08	09
I	BSC-II YEAR, III SEM	PAPER –I ALGEBRA	UNIT-I	Equivalence relations and partitions, Congruence modulo n, Definition of a group with examples and simple properties, Subgroups, Generators of a group, Cyclic groups.	MIN. 14 LECTURES	ONLINE & OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-II	. Permutation groups, Even and odd permutations, The alternating group, Cayley's theorem, Direct products, Coset decomposition, Lagrange's theorem and its consequences, Fermat and Euler theorems	MIN 12 LECTURES	ONLINE & OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-III	Normal subgroups, Quotient groups, Homomorphism and isomorphism, Fundamental theorem of homomorphism, Theorems on isomorphism.	MIN 12 LECTURES	ONLINE & OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-IV	Rings, Subrings, Integral domains and fields, Characteristic of a	MIN 14 LECTURES	ONLINE & OFFLINE TEACHING METHOD	STUDENTS WILL GET THE UNDERSTANDING	EVALUATION THROUGH ASSIGNMENTS

				ring, Ideal and quotient rings, Ring homomorphism, Field of quotient of an integral domain.		(NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	OF THE TOPIC DISCUSSED.	AND DISCUSSIONS
								FINAL EVALUATION THROUGH INTERNAL ASSESMENT UPLODED ON LU EXAM PORTAL
II	**BSC-II YEAR, III SEM**	**PAPER-II** **MATHEMATICAL METHODS**	**UNIT-1**	Limit and Continuity of functions of two variables, Differentiation of function of two variables, Necessary and sufficient condition for differentiability of functions two variables, Schwarz's and Young theorem, Taylor's theorem for functions of two variables with examples, Maxima and minima for functions of two variables, Lagrange multiplier method, Jacobians.	MIN 14 LECTURES	ONLINE & OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-II	Existence theorems for Laplace transforms, Linearity of Laplace transform and their properties, Laplace transform of the derivatives and integrals of a function, Convolution theorem, inverse Laplace transforms, Solution of the differential equations using Laplace transforms.	MIN 14 LECTURES	ONLINE & OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-III	Fourier series, Fourier expansion of piecewise monotonic functions, Half and full range expansions,	MIN 10 LECTURES	ONLINE & OFFLINE TEACHING METHOD (NOTES IN FORM OF	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC	EVALUATION THROUGH ASSIGNMENTS AND

				Fourier transforms (finite and infinite), Fourier integral.		PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	DISCUSSED.	DISCUSSIONS
			UNIT-IV	Calculus of variations-Variational problems with fixed boundaries-Euler's equation for functionals containing first order derivative and one independent variable, Extremals, Functionals dependent on higher order derivatives, Functionals dependent on more than one independent variable, Variational problems in parametric form.	MIN 14 LECTURES	ONLINE & OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
								FINAL EVALUATION THROUGH INTERNAL ASSESMENT UPLODED ON LU EXAM PORTAL

COLLEGE: MBP GOVT. P.G. COLLEGE, ASHIANA, LUCKNOW

ACADEMIC CALENDAR : SESSION- (2021-2022)

NAME OF TEACHER: DR. POONAM BAJPAI

DEPARTMENT: DEPARTMENT OF **MATHEMATICS**

CLASS: **BSC-II** YEAR (**IV SEMESTER**) (APPLICABLE FROM JANUARY 2022)

S.NO.	CLASS (YEAR, SEMESTER)	PAPER	UNIT	TOPIC NAME	MONTHLY/WEEKLY PLAN	TEACHING PEDAGOGY	LEARNING OUTCOMES	ANY OTHER DETAIL
01	02	03	04	05	06	07	08	09
I	**BSC-II YEAR, IV SEM**	**PAPER –I** DIFFERENTIAL EQUATIONS	**UNIT-I**	Second order linear differential equations with variable coefficients: Use of a known solution to find another, normal form, method of undetermined coefficient, variation of parameters, Series solutions of differential equations, Power series method.	MIN. 12 LECTURES	ONLINE &OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-II	Bessel, Legendre and Hypergeometric functions and their properties, recurrence and generating relations.	MIN 14 LECTURES	ONLINE &OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-III	Origin of first order partial differential equations. Partial differential equations of the first order and degree one, Lagrange's solution, Partial differential equation of first order and degree greater than one. Charpit's method of solution, Surfaces Orthogonal to the given system of surfaces.	MIN 14 LECTURES	ONLINE &OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS

			UNIT-IV	Origin of second order PDE, Solution of partial differential equations of the second and higher order with constant coefficients, Classification of linear partial differential equations of second order, Solution of second order partial differential equations with variable coefficients, Monge's method of solution.	MIN 12 LECTURES	ONLINE &OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
								FINAL EVALUATION THROUGH INTERNAL ASSESMENT UPLODED ON LU EXAM PORTAL
II	**BSC-II YEAR, IV SEM**	**PAPER-II** MECHANICS	**UNIT-1**	Frame of reference, work energy principle, Forces in three dimensions, Poinsot's central axis, Wrenches, Null lines and planes.	MIN 12 LECTURES	ONLINE &OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-II	Virtual work, Stable and Unstable equilibrium, Catenary, Catenary of uniform strength.	MIN 14 LECTURES	ONLINE &OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-III	Velocities and accelerations along radial and transverse directions, and along tangential and normal directions, Simple Harmonic motion, Motion under other law of forces. Elastic strings, Motion in resisting medium, Constrained motion, Motion on smooth and rough plane curves.	MIN 14 LECTURES	ONLINE &OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS

			UNIT-IV	Motion of particles of varying mass, Rocket motion, Central orbit, Kepler's laws of motion,, Motion of particle in three dimensions, Rotating frame of reference, Rotating Earth, Acceleration in terms of different coordinates systems.	MIN 12 LECTURES	ONLINE &OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
								FINAL EVALUATION THROUGH INTERNAL ASSESMENT UPLODED ON LU EXAM PORTAL

COLLEGE: MBP GOVT. P.G. COLLEGE, ASHIANA, LUCKNOW

ACADEMIC CALENDAR : SESSION- (2021-2022)

NAME OF TEACHER: DR. POONAM BAJPAI
DEPARTMENT: DEPARTMENT OF **MATHEMATICS**
CLASS: **BSC-III** YEAR (**V SEMESTER**) (APPLICABLE FROM JULY 2021) EACH PAPER CARRIES 100 MARKS (4 CREDITS)

S.NO.	CLASS (YEAR, SEMESTER)	PAPER	UNIT	TOPIC NAME	MONTHLY/ WEEKLY PLAN	TEACHING PEDAGOGY	LEARNING OUTCOMES	ANY OTHER DETAIL
01	02	03	04	05	06	07	08	09
I	BSC-III YEAR, V SEM	PAPER –I NUMERICAL ANALYSIS	UNIT-I	Solution of equations: bisection, Secant, Regular Falsi, Newton Raphson's method, Newton's method for multiple roots, Interpolation, Lagrange and Hermite interpolation, Difference schemes, Divided differences, Interpolation formula using differences.	MIN. 10 LECTURES	ONLINE & OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-II	Numerical differentiation, Numerical Quadrature: Newton Cotes Formulas, Gaussian Quadrature Formulas, System of Linear equations: Direct method for solving systems of linear equations (Gauss elimination, LU Decomposition, Cholesky Decomposition), Iterative methods (Jacobi, Gauss Seidel, Relaxation methods). The	MIN 09 LECTURES	ONLINE & OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS

				Algebraic Eigen value problem: Jacobi's method, Givens method, Power method.				
			UNIT-III	Numerical solution of Ordinary differential equations: Euler method, single step methods, Runge-Kutta method, Multi-step methods: Milne-Simpson method, Types of approximation: Last Square polynomial approximation, Uniform approximation, Chebyshev polynomial approximation.	MIN 10 LECTURES	ONLINE & OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-IV	Difference Equations and their solutions, Shooting method and Difference equation method for solving Linear second order differential equation with boundary conditions of first, second and third type.	MIN 09 LECTURES	ONLINE & OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			Reference Books: 1. Numerical Methods for Engineering and scientific computation by M. K. Jain, S.R.K. Iyengar & R.K. Jain. 2. Introductory methods of Numerical Analysis by S. S. Sastry					**FINAL EVALUATION THROUGH INTERNAL ASSESMENT UPLODED ON LU EXAM PORTAL**
II	**BSC-III YEAR, V SEM**	**PAPER-II** **LINEAR AND ABSTRACT ALGEBRA**	**UNIT-1**	Automorphism, inner automorphism, automorphism groups and their computations, Conjugacy relations, Normaliser, Counting principle and the class equation of a finite group, Center of group of prime power order. Sylow's theorems.	MIN 10 LECTURES	ONLINE & OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-II	Prime and maximal ideals,	MIN	ONLINE & OFFLINE	STUDENTS WILL	EVALUATION

				Euclidean Rings, Principal ideal rings, Polynomial Rings, Polynomial over the Rational Field, The Eisenstein Criterion, Polynomial Rings over Commutative Rings, unique factorization domain.	09 LECTURES	TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-III	Vector spaces, Subspaces, Linear independence and dependence of vectors, Basis and Dimension, Quotient space, Linear transformations, The Algebra of linear transformations, rank nullity theorem, their representation as matrices.	MIN 09 LECTURES	ONLINE & OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-IV	Linear functionals, Dual space, Characteristic values, Cayley Hamilton Theorem, Inner product spaces, Cauchy-Schwarz inequality, Orthogonal vectors, Orthonormal sets and bases, Bessel's inequality for finite dimensional spaces, Gram-Schmidt orthogonalization process, Bilinear and Quadratic forms.	MIN 09 LECTURES	ONLINE & OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			Reference book 1. Topics in Algebra by I. N. Herstein. 2. Linear Algebra by K. Hoffman and R. Kunze.					**FINAL EVALUATION THROUGH INTERNAL ASSESMENT UPLODED ON LU EXAM PORTAL**

II	**BSC-III YEAR, V SEM**	**PAPER-III** **LINEAR PROGRAMMING**	**UNIT-1**	Linear programming problems, Slack and surplus variables, Standard and matrix forms of linear programming problem, Basic feasible solution.	MIN 09 LECTURES	ONLINE & OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-II	Convex sets, Fundamental theorem of linear programming, Simplex method.	MIN 09 LECTURES	ONLINE & OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-III	Artificial variables, Big-M method, Two phase method, Revised simplex method.	MIN 09 LECTURES	ONLINE & OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-IV	Duality in linear programming problems, Dual simplex method, Primal-dual method integer programming.	MIN 09 LECTURES	ONLINE & OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			Reference book: 1. Linear Programming by G. Hadley					**FINAL EVALUATION THROUGH INTERNAL ASSESMENT UPLODED ON LU EXAM PORTAL**

COLLEGE: MBP GOVT. P.G. COLLEGE, ASHIANA, LUCKNOW

ACADEMIC CALENDAR : SESSION- (2021-2022)

NAME OF TEACHER: DR. POONAM BAJPAI
DEPARTMENT: DEPARTMENT OF **MATHEMATICS**
CLASS: **BSC-III** YEAR (**VI SEMESTER**) (APPLICABLE FROM JANUARY 2022) EACH PAPER CARRIES 100 MARKS(4CREDITS)

S.NO.	CLASS (YEAR, SEMESTER)	PAPER	UNIT	TOPIC NAME	MONTHLY/ WEEKLY PLAN	TEACHING PEDAGOGY	LEARNING OUTCOMES	ANY OTHER DETAIL
01	02	03	04	05	06	07	08	09
I	BSC-III YEAR, VI SEM	PAPER –I ANALYSIS	UNIT-I	Definition and examples of metric spaces, Neighborhoods, Interior points, Limit Points, Open and closed sets, Convergent and Cauchy sequences, Completeness, Cantor's intersection theorem. Uniform convergence of sequences and series of functions, Uniform convergence and continuity, Uniform convergence and integration, Uniform convergence and differentiation, Power series.	MIN. 10 LECTURES	ONLINE & OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-II	Stereographic projection, Continuity and Differentiability of complex functions, Analytic functions, Cauchy Riemann equations, Harmonic functions.	MIN 09 LECTURES	ONLINE & OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-III	Complex integration, Cauchy-Goursat theorem, Cauchy's Integral formula, Formulae for first, second and nth derivatives,	MIN 10 LECTURES	ONLINE & OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS

				Cauchy's Inequality, Maximum Modulus Theorem, Liouville's Theorem, Elementary functions, Mapping by elementary functions, conformal mapping.		TEACHING METHOD)		
			UNIT-IV	Taylor and Laurent Series, Absolute and uniform convergence of Power series, Residues and Poles, Residue theorem, Zeros and poles of order m, Evaluation of improper real integrals, Definite integrals involving sines and cosines.	MIN 09 LECTURES	ONLINE & OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			REFERENCE BOOK: 1. MATHEMATICAL ANALYSIS BY SHANTI NARAIN. 2. COMPLEX VARIABLE AND APPLICATIONS BY BROWN & CHURCHILL.					**FINAL EVALUATION THROUGH INTERNAL ASSESMENT UPLODED ON LU EXAM PORTAL**
II	**BSC-III YEAR, VI SEM**	**PAPER-II** **DIFFERENTIAL GEOMETRY & TENSOR ANALYSIS**	**UNIT-1**	Local theory of curves-Space curves, Examples, Plane Curves, tangent and normal and binormal, Osculating Plane, normal plane and rectifying plane, Helices, Serret-Frenet apparatus, contact between curve and surfaces, tangent surfaces, involutes and evolutes of curves, Bertrand curves, Intrinsic equations, fundamental existence theorem for space curves.	MIN 10 LECTURES	ONLINE & OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-II	Metric-first fundamental form and arc length, Direction	MIN 09 LECTURES	ONLINE & OFFLINE TEACHING METHOD	STUDENTS WILL GET THE UNDERSTANDING	EVALUATION THROUGH ASSIGNMENTS

				coefficients, families of curves, intrinsic properties, geodesics, canonical geodesic equations, normal properties of geodesics, geodesics curvature, Gauss-Bonnet theorem, Gaussian curvature, normal curvature, Meusneir's theorem, mean curvature, Gaussian curvature, umbilic points, lines of curvature, Rodrigue's formula, Euler's theorem.		(NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	OF THE TOPIC DISCUSSED.	AND DISCUSSIONS
			UNIT-III	Tensor algebra: Vector spaces, the dual spaces, tensor product of vector spaces, transformation formulae, contraction, special tensor, inner product, associated tensor. Tensor Analysis: Contravariant and covariant vectors and tensors, Mixed tensors, Symmetric and skew-symmetric tensors, Algebra of tensors, Contraction and inner product, Quotient theorem, Reciprocal tensors, Christoffel's symbols, Covariant differentiation.	MIN 09 LECTURES	ONLINE & OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-IV	Gradient of scalars, Divergence of a contra-variant vector, covariant vector and conservative vectors, Laplacian of an invariant, curl of a covariant vector, irrotational vector,	MIN 09 LECTURES	ONLINE & OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS

				Riemannian space, Riemannian curvatures and their properties, Ricci tensor, and scalar curvature, Einstein space and Einstein tensor, Geodesics. .				
			REFERENCE BOOK: 1.AN INTRODUCTION TO DIFFERENTIAL GEOMETRY BY T. J. WILLMORE					**FINAL EVALUATION THROUGH INTERNAL ASSESMENT UPLODED ON LU EXAM PORTAL**
III	**BSC-III YEAR, VI SEM**	**PAPER-III** **DISCRETE MATHEMATICS**	**UNIT-1**	**Propositional Logic-** Proposition logic, basic logic, logical connectives, truth tables, tautologies, contradiction, normal forms (conjunctive and disjunctive), modus ponens and modus tollens, validity, predicate logic, universal and existential quantification, proof by implication, converse, inverse contrapositive, contradiction, direct proof by using truth table. **Relation**- Definition, types of relation, domain and range of a relation, pictorial representation of relation, properties of relation, partial ordering relation.	MIN 09 LECTURES	ONLINE & OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-II	**Boolean Algebra-** Basic definitions, Sum of products and products of sums, Logic gates and Karnaugh maps. **Graphs-** Simple graph, multi graph, graph terminology, representation of graphs,	MIN 09 LECTURES	ONLINE & OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS

				Bipartite, regular, planar and connected graphs, connected components in a graph, Euler graphs, Hamiltonian path and circuits, Graph colouring, chromatics number, isomorphism and homomorphism of graphs.				
			UNIT-III	**Combinatories-** Inclusion-exclusion, recurrence relations (nth order recurrence relation with constant coefficients, Homogeneous recurrence relations, Inhomogeneous recurrence relations), generating function (closed form expression, properties of G.F., solution of recurrence relations using G.F. solution of combinatorial problem using G.F.)	MIN 09 LECTURES	ONLINE & OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS
			UNIT-IV	**Finite Automata-** Basic concepts of automation theory, Deterministic Finite Automation (DFA), transition function, transition table, Non Deterministic Finite Automata (NDFA), Mealy and Moore machine, Minimization of finite automation.	MIN 09 LECTURES	ONLINE & OFFLINE TEACHING METHOD (NOTES IN FORM OF PDF,AUDIO/ VIDEO,CLASS ROOM TEACHING METHOD)	STUDENTS WILL GET THE UNDERSTANDING OF THE TOPIC DISCUSSED.	EVALUATION THROUGH ASSIGNMENTS AND DISCUSSIONS

			REFERENCE BOOK: 1. DISCRETE MATHEMATICS BY C. L.LIU. 2. DISCRETE MATHEMATICS WITH COMPUTER APPLICATION BY TREMBLEY AND MANOHAR.	**FINAL EVALUATION THROUGH INTERNAL ASSESMENT UPLODED ON LU EXAM PORTAL**