Month	Week	Topics
	Unit-1	
January	1st	Boundedness of the set of real numbers, list upper bound, greatest lower bound of set, interior points, isolated points, limit points, open sets, closed sets, interior of a set
	2nd	Closer of a set in real numbers and their properties, Bolzano weierstrass theorem, open covers, compact sets and Heine borel theorem
	Unit 2	
	3rd	Real sequences and their convergence, theorem on limits of sequence.
	4th	Monotonic sequences, Cauchy's sequence, Cauchy general principle of convergence, subsequences
February	1st	Convergence and divergence of infinite series, comparison tests of positive terms infinite series, convergence and divergence of geometric series, Hyper harmonic series or p series.
	2nd	Test and assignment based on Bolzano weierstrass theorem,Cauchy's sequences and Hyper harmonic series or p series.
	3rd	D'-Alembert's Ratio test, Cauchy's nth root test, Raabe's test, Logarithmic test, de Morgan and Bertrand's test
	4th	Gauss test, Cauchy's integral test, Cauchy's condensation test.
	Unit-4	
March	1st	Leibnitz's test, absolute and conditional covergence Queries based on unit 3
	2nd	Test and assignment unit 3, Group discussion -1
	3rd	Abel's Lemma,Dirichlet's theorem, insertion and removal of parenthesis, Riemann's Rearrangement theorem, Multiplication of series
	4th	Holi festival holidays
April	1st	Test and assignment unit 4, Problems and Queries, Group Discussion-2, Presentation on unit-4
	2nd	Presentation on unit-1, Test, Problems and Queries, Groups discussion-3
	3rd	Presentation on unit-2, Test and assignment, Problems and Queries, Groups discussion-4
	4th	Overall Full Syllabus Test

Month	Week	Topics
	Unit-1	Basic Statistics
January	1st	Preparing Frequency Distribution Table and Cumulative frequency, Measure of Central Tendency, Types: Arithmetic mean, Geometric Mean, Harmonic Mean, Median, Mode. Measure of Dispersion: Range, Quartile Deviation, mean deviation, Coefficient of mean Deviation, Standard Deviation
	2nd	Moments: Moments About mean, Moments about any point. Moment about origin, Moment about mean in terms of moment about any point, Moment about any point in terms of Moment about mean.
	Unit 2	
	3rd	Probability Distribution: Random Variable Discrete Random and Continuous Random variable. Probability Distribution of a Random Variable, Mathematical Expectation
	4th	Types: Binomial, Poisson, Normal Distribution, Mean and Variance of Binomial, Poisson, and Normal Distribution.
February	Unit 3 1st	Correlation: Introduction, Types, Properties, Methods of Correlation: Karl Pearson's Coefficient of Correlation, Rank Correlation and Concurrent Deviation method, Probable error.
	2nd	Regression: Introduction, Aim of Regression Analysis, Types of Regression Analysis. Lines of Regression, Properties of Regression. Coefficient and Regression Lines, Comparison with Correlation.
	3rd	Curve Fitting: Straight Line, Parabolic curve, Geometric Curve.
	4th	Exponential Curve, Baye's Theorem in Decision Making, Forecasting Techniques.
	Unit-4	
March	1st	Sample introduction, Sampling: Meaning, methods of Sampling.
	2nd	Statistical Inference: Test of Hypothesis, Types of hypothesis, Procedure of hypothesis Testing, Type I and Type II error.
	3rd	One Tailed and two tailed Test, Types of test of Significance: Test of significance for Attribute- Test of No. of success.
	4th	Holi festival holidays
April	1st	test of proportion of success, Test of significance for large samples Test of significance for single mean.

	2nd	Test of significance for small samples (t-test) - test the significance between the mean of a random sample, between the mean of two independent samples.
	3rd	Chi square Test, ANOVA: Meaning, Assumptions, One way classification, ANOVA Table for One-Way Classified Data
	4th	Overall Full Syllabus Test

Lesson Plan 2023-24 even semester
Name of the Assistant/ Associate Professor: Dr. Meenu Gupta   Paper code: MM410
Class and Section: ~~BCS~~(2nd sem)   Subject: COMPLEX ANALYSIS

MSc. Maths (2nd Sem)

Month	Week	Topics
	Unit-1	
January	1st	Spaces of analytic functions and their completeness. Hurwitz's theorem, Montel's theorem. Riemann mapping theorem, infinite products, Weierstrass factorization theorem.
	2nd	Factorization of sine function, Gamma function and its properties, functional equation for gamma function, Integral version of gamma function,
	Unit-2	
	3rd	Reimann-zeta function, Riemann's functional equation, Runge's theorem. Mittag-Leffler's theorem.
	4th	Analytic continuation, uniqueness of direct analytic continuation, uniqueness of analytic continuation along a curve, Power series method of analytic continuation. Schwarz reflection principle.
February	Unit-3	
	1st	Monodromy theorem and its consequences. Harmonic function as a disk.
	2nd	Poisson's Kernel. Harnack's inequality, Harnack's theorem, Canonical product, Jensen's formula.
	3rd	Poisson-Jensen formula, Hadamard's three circle theorem
	4th	Dirichlet problem for a unit disk. Dirichlet problem for a region, Green's function.
	Unit-4	
March	1st	Order of an entire function, Exponent of convergence, Borel theorem
	2nd	The range of an analytic function, Bloch's theorem, Little-Picard theorem, Schottky's theorem, Montel-Carathedory theorem
	3rd	Great Picard theorem. v Univalent functions, Bieberbach's conjecture (Statement only), and 1/4 theorem.
	4th	Holi festival holidays
April	1st	Test of Spaces of analytic functions and their completeness , Gamma function and its properties, functional equation for gamma function
	2nd	Test of Reimann-zeta function, Riemann's functional equation , Power series method of analytic continuation, Schwarz reflection principle.
	3rd	Poisson's Kernel. Harnack's inequality, Harnack's theorem, Canonical product, Jensen's formula , The range of an analytic function, Bloch's theorem, Little-Picard theorem, Schottky's theorem, Montel-Carathedory theorem
	4th	Overall Full Syllabus Test