<u>Lesson Plan</u> MCM DAV College for Women, Sector – 36A, Chandigarh Monthly Teaching Plans-Odd Semester (Semester-III) <u>Session – 2023-24</u>

Department: Mathematics

Class: MSc-II Mathematics

Subject: MATH 617S; Field Theory

Name of the Teacher:Dr Swati Sidana

Month	Date		Topics to be covered	Academic Activity	
				to be Undertaken	
	From	То			
July	24.07.2023	31.07.2023	Fields, examples, characteristic of a	Syllabus,	
			field, subfield and prime field of a field,	Examination pattern	
			field extension, the degree of a field	discussed, Doubt	
			extension.	Session.	
Departmenta plans on 01.0	l Meeting to Co 8.2023	ordinate and	Review the Monthly completion of Syllab	us as per lesson	
August	01.08.2023	31.08.2023	Algebraic extentions and transcendental	Svllabus.	
8			extension. Adjunction of roots, splitting	Examination pattern	
			fields finite fields existence of	discussed, Doubt	
			algebraic closure algebraically closed	Session.	
			fields Separable normal and nurely		
			insenarable extensions		
Denartmenta	 Meeting to Co	ordinate and	Review the Monthly completion of Syllah	us as nor losson	
nlans on 01 0	9 2023	of ufface and	Review the Monthly completion of Synab	us as per lesson	
September	01 09 2023	30.09.2023	Perfect fields primitive elements	Doubt session	
September	01.09.2025	50.09.2025	Langrange's theorem on primitive	Assignments.	
			elements Galois extensions the	revision of a few	
			fundamental theorem of Galois theory	topics.	
			Cyclotomic extensions, and Cyclic		
			cyclotomic extensions, and cyclic		
Donautmonto	 Mooting to Co	andinata and	extensions, Deview the Monthly completion of Sylleh	us as non losson	
plans on 03.1	0.2023	orumate and	Keview the Monthly completion of Synah	us as per lesson	
October	03.10.2023	31.10.2023	Applications of cyclotomic extensions	Doubt session,	
			and Galois theory to the constructability	Assignments, Power	
			of regular polygons.	Point Presentations.	
Departmenta	l Meeting to Co	ordinate and	Review the Monthly completion of Syllab	ous as per lesson	
plans on 01.1	1.2023		- •		
November	01.11.2023	18.11.2023	Solvability of polynomials by radicals.	Doubt session,	
				Assignments, Power	
				Point Presentations,	
				Question papers	
				discussed. Revision	
				of a few topics	
Departmenta plans on 19.1	l Meeting to Co 1.2023	ordinate and	Review the Monthly completion of Syllab	us as per lesson	
End semester	End semester Examination 27.11.2023 to 30.12.2023				

Subject: MATH 618S; Topology

Name of the Teacher: DrSonica

Month	Date		Topics to be covered	Academic Activity
	From	Το		
July	24.07.2023	31.07.2023	Topological Spaces: Definition and Examples, some special topologies, Comparison of topologies, Bases for a topology, the subspace topology, closed sets and limit points.	Syllabus, Doubt Session.
Departmenta	Meeting to Co	ordinate and	Review the Monthly completion of Syllab	us as per lesson
plans on 01.08	8.2023		v i v	A A A A A A A A A A A A A A A A A A A
August	01.08.2023	31.08.2023	Continuity:Continuous functions, the order topology, the product topology, the metric topology, the quotient topology. Connectedness:Connected spaces, connected subspaces of the real line, components and local connectedness.	Syllabus, Examination pattern discussed, Doubt Session.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson				
plans on 01.0	9.2023			
September	01.09.2023	30.09.2023	Compactness: Compact spaces, compact space of a real line, limit point compactness, local compactness, sequentially compact spaces.	Doubt session, Assignments, revision of a few topics.
Departmenta plans on 03.1	I Meeting to Co 0.2023	ordinate and	Review the Monthly completion of Syllab	ous as per lesson
October	03.10.2023	31.10.2023	Countability Axioms and Seperation Axioms: First countability, second countability, Lindelof space, seperable space, T_0 , T_1 , T_2 , T_3 , T_4 spaces, regular spaces, normal spaces, the Uryson Lemma, the UrysohnMetrization Theorem.	Doubt session, Assignments, Power Point Presentations.
Departmenta plans on 01.1	I Meeting to Co 1.2023	ordinate and	Review the Monthly completion of Syllab	us as per lesson
November	01.11.2023	18.11.2023	Seperation Axioms and Nets: The Tietz extension Theorem, The TychonoffThorem and the nets.	Doubt session, Assignments, Power Point Presentations, Question papers discussed. Revision of a few topics
Departmenta plans on 19.1	I Meeting to Co 1.2023	ordinate and $7.11.2022 \pm c.2$	Review the Monthly completion of Syllab	ous as per lesson
End semester Examination 27.11.2023 to 30.12.2023				

Subject: MATH 661S; Probability and Mathematical Statistics-I

Name of the Teacher:MsChitra

Month	Date		Topics to be covered	Academic Activity
	From	То		
July	24 07 2023	31.07.2023	Probability: Bayes' theorem and its	Syllabus
July	21.07.2025	51.07.2025	applications Discrete and Continuous	Examination pattern
			random variables. Probability mass and	discussed. Doubt
			density function Expectation of single	Session
			and two dimensional random variables.	
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 01.08.2023				
August	01.08.2023	31.08.2023	Distributions Binomial. Poisson	Syllabus,
6			distribution, Negative Binomial and	Examination pattern
			Hypergeometric	discussed, Doubt
				Session.
Departmenta	l Meeting to Co	ordinate and	Review the Monthly completion of Syllab	ous as per lesson
plans on 01.0	9.2023			
September	01.09.2023	30.09.2023	Uniform, Normal distribution. Beta,	Doubt session,
			Gamma, Chi-square and Bivariate	Assignments,
			normal distributions.	revision of a few
				topics.
Departmenta	l Meeting to Co	ordinate and	Review the Monthly completion of Syllab	ous as per lesson
plans on 03.1	0.2023	1	1	
October	03.10.2023	31.10.2023	Chebyshev's inequality, weak law of	Doubt session,
			large numbers, Central limit theorems	Assignments, Power
			Measurement scales, Attribute and	Point Presentations.
			variable,Collection, Compilation and	
			Tabulation of data, Measures of central	
			tendency their properties. Standard	
			deviation and Kurtosis, Box and	
			Whisker plot Correlation & Regression	
			Analysis Karl Pearson's and Spearman's	
			rank correlation coefficient.	•
Departmenta plans on 01.1	I Meeting to Co	ordinate and	Review the Monthly completion of Syllab	ous as per lesson
November	01.11.2023	18.11.2023	Linear Regression and its properties.	Doubt session,
			Theory of attributes, independence and	Assignments, Power
			association. Moment generating function	Point Presentations,
			and probability generating functions	Question papers
				discussed. Revision
				of a few topics
Departmenta plans on 19.1	l Meeting to Co 1.2023	ordinate and	Review the Monthly completion of Syllab	ous as per lesson
End semester	• Examination 2	7.11.2023 to 3	80.12.2023	
			····	

Subject: MATH-672S: Computational Techniques-I

Month	Date	y	Topics to be covered	Academic Activity
		T		to be Undertaken
T 1	From	To		
July	24.07.2023	31.07.2023	Solution of non-linear equations:	Syllabus, Doubt
			Functional iteration, Bisection,	Session.
			Secant, Regula-Falsi, Newton-	
		~ •	Raphson and Bairstow's methods,	
Department	al Meeting to (on 01 08 2023	Coordinate a	and Review the Monthly completion of	f Syllabus as per
August	01.08.2023	31.08.2023	Rate of convergence of numerical	Syllabus
Tugust	01100.2025	5110012025	methods. Solution of linear system of	Examination pattern
			equations: Gauss elimination Gauss	discussed, Doubt
			Seidal and Triangularization	Session
			methods Condition of convergence	
			of these methods. Interpolation:	
			Finite difference operators Newton	
			interpolation Gauss Forward and	
			hackward interpolation formulae	
			Newton's divided difference	
			formula Lagrange's Formula	
			Inverse interpolation Hermite	
			interpolation	
Denartment	al Meeting to (Coordinate a	and Review the Monthly completion of	f Svllabus as ner
lesson plans	on 01.09.2023			
September	01.09.2023	30.09.2023	Programmer's model of a computer,	Doubt session,
			Types of computers, General	Assignments (MS-
			awareness of Computer Hardware –	WORD), revision of
			CPU, Input, Output and peripherals,	a few topics.
			Software and Programming	Practical classes to
			languages.	footures of MS
			Programming in FORTRAN 77:	WORD
			Character set, constants, variables,	WORD
			Arithmetic expressions, Format	
			specification.	
Departmenta	l Meeting to Co	ordinate and	Review the Monthly completion of Syllab	ous as per lesson
October	03.10.2023	31.10.2023	READ WRITE statements	Doubt session along
2.00001	5511012020	211012020	unformatted I/O Statements	with practical
			Unconditional GO TO Computed	implication in the
			GO TO. Arithmatic and Logical IF	lab. Assignments,
			statements, IF-THEN-ELSE, Nested	Power Point
			IF-THEN-ELSE, ELSE-IF-THEN.	Presentations.
			DO loops, Nested DO loops,	
			CONTINUE Statement. Data	
			statement. Double Precision. Logical	
			Data, Complex Data, WHILE	
			Structure, Arrays-One and	
			multidimensional,	

Name of the Teacher: DrNavjot Kaur

Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 01.11.2023				
November	01.11.2023	18.11.2023	Subscripted Variables, Implied DO loops, Sorting Problem, Function Subprograms and Subroutine subprograms, COMMON, EQUIVALENCE, Simple programs.	Doubt session, Assignments, Power Point Presentations, Question papers discussed. Revision.
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 19.11.2023				
End semester	Examination 2	7.11.2023 to 3	30.12.2023	

Subject: MATH 676S; Fluid Mechanics-I

Name of the Teacher: DrNisha Sharma

Month	Date		Topics to be covered	Academic Activity
	From	Το		
August	16.08.2023	31.08.2023	Real, Ideal fluids, Velocity of fluid particle, Streamline, Pathline, Velocity Potential, Vorticity vector, Local- Particle Rate of change, Equation of continuity, Irrotational and rotational motion, rigid boundary conditions,	Syllabus, Examination pattern discussed, Doubt Session.
Departmenta	l Meeting to Co	ordinate and	Review the Monthly completion of Syllab	ous as per lesson
plans on 01.0	9.2023	T	1	I
September	01.09.2023	30.09.2023	Application of Euler and Bernoulli	Doubt session,
			theorem, Potential theorems, Axis	Assignments,
			symmetric flow, Impulsive motion,	revision of a few
			Kelvin theorem, Stoke stream function	topics.
Departmenta plans on 03.1	l Meeting to Co 0.2023	ordinate and	Review the Monthly completion of Syllab	ous as per lesson
October	03.10.2023	31.10.2023	vorticity equation, 3 D flow, Images in	Doubt session,
			plane and solid sphere, 2D flow,	Assignments,
			Complex potential. Milne Thompson theorem,	Presentations, Viva
Departmenta	l Meeting to Co	ordinate and	Review the Monthly completion of Syllab	ous as per lesson
plans on 01.1	1.2023		· · ·	•
November	01.11.2023	30.11.2023	Blasius theorem with applications,	Doubt session,
			Karman Vortex Street	Assignments,
				Presentations,
				Ouestion papers
				discussed. Revision
Departmenta	Meeting to Co	ordinate and	Review the Monthly completion of Syllab	bus as per lesson
plans on 19.1	1.2023		· · · ·	•
End semester	Examination 2	7.11.2023 to 3	0.12.2023	

Subject: MATH 678S; Linear Programming Problems Name of the Teacher:DrLeetika

Month	Date		Topics to be covered	Academic Activity	
	Enom	То		to be Undertaken	
T.,1.,	FFOIII	10	Lincor Droomming and avamples	Svillabug	
July	24.07.2025	51.07.2025	Convey Sets Hymemoleus, Open and	Synabus, Examination nottom	
			Convex Sets, Hyperplane, Open and	Examination pattern	
			Closed nan-spaces, reasible, basic	Cassien	
			Feasible and Optimal Solutions,	Session.	
D ()		 	Extreme Point & graphical methods		
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 01.08.2023					
August	01.08.2023	31.08.2023	Simplex method, Charnes-M method,	Syllabus,	
			Two phase method, Determination of	Examination pattern	
			Optimal solutions, unrestricted	discussed, Doubt	
			variables, Duality theory, Dual linear	Session.	
			Programming Problems, fundamental		
			properties of dual Problems,		
			Complementary slackness, Unbounded		
			solution in Primal. Dual Simplex		
			Algorithm,		
Departmenta plans on 01.0	ll Meeting to Co 9.2023	ordinate and	Review the Monthly completion of Syllab	ous as per lesson	
September	01.09.2023	30.09.2023	Sensitivity analysis, Parametric	Doubt session,	
			Programming, Revised Simplex method,	Assignments,	
			Transportation Problems, Balanced and	revision of a few	
			unbalanced Transportation problems, U-	topics.	
			V method, Paradox in Transportation		
			problem		
Departmenta plans on 03.1	ll Meeting to Co 0.2023	ordinate and	Review the Monthly completion of Syllab	ous as per lesson	
October	03.10.2023	31.10.2023	Assignment problems, Integer	Doubt session,	
			Programming problems: Pure and Mixed	Assignments, Power	
			Integer Programming problems, 0-1	Point Presentations.	
			programming problem, Gomary's		
			algorithm, Branch & Bound Technique.		
			Travelling salesman problem		
Departmenta plans on 01.1	ll Meeting to Co 1.2023	ordinate and	Review the Monthly completion of Syllab	ous as per lesson	
November	01.11.2023	18.11.2023	, Gomary's algorithm, Branch & Bound	Doubt session,	
			Technique. Travelling salesman problem	Assignments, Power	
				Point Presentations,	
				Question papers	
				discussed. Revision	
				of a few topics	
Departmenta plans on 19.1	I Meeting to Co 1.2023	ordinate and	Review the Monthly completion of Syllab	bus as per lesson	
End semester	r Examination ?	7.11.2023 to 3	30.12.2023		
End seniester Examination 27.11.2025 to 30.12.2025					

Even Semester (Semester-IV)

Subject: MATH 637S; Linear Algebra

Name of the Teacher: Dr Swati Sidana

Month	Date		Topics to be covered	Academic Activity
	From	То	-	to be Undertaken
Ionuory	FF0III	10 31.01.2024	Definition and examples of vector	Syllabus
January	09.01.2024	51.01.2024	Definition and examples of vector	Examination nattern
			spaces (over arbitrary fields), subspaces,	discussed Doubt
			direct sum of subspaces, linear	Session
			dependence and independence, basis	56551011.
			and dimensions.	
Departmenta	l Meeting to Co	ordinate and	Review the Monthly completion of Syllab	ous as per lesson
plans on 01.0	2.2024		1	
February	01.02.2024	29.02.2024	linear transformations, quotient spaces,	Doubt session,
			algebra of linear transformations, linear	Assignments,
			functions, dual spaces, matrix	revision of a few
			representation of a linear	topics.
			transformation, rank and nullity of a	
			linear transformation, invariant	
			subspaces.	
Departmenta	l Meeting to Co	ordinate and	Review the Monthly completion of Syllab	ous as per lesson
plans on 01.0	3.2024			
March	01.03.2024	30.03.2024	Characteristic polynomial and minimal	Doubt session,
			polynomial of a linear transformation,	Assignments, Power
			eigenvalues and eigenvectors of a linear	Point Presentations.
			transformation, diagonalization and	
			triangularization of a matrix. Jordan and	
			Rational canonical forms.	
Denartmenta	 Meeting to Co	ordinate and	Review the Monthly completion of Syllah	bus as per lesson
plans on 01.0	4.2024			
April	01.04.2024	22.04.2024	Bilinear forms, symmetric bilinear	Doubt session,
-			forms, Sylvester's theorem, quadratic	Assignments, Power
			forms, Hermitian forms, Inner product	Point Presentations,
			spaces. Gram-	Question papers
			schmidtorthonormalization process.	discussed. Revision
			р. составля р. составл	of a few topics.
Departmenta	l Meeting to Co	ordinate and	Review the Monthly completion of Syllab	ous as per lesson
plans on 23.0	4.2024			
End semester Examination 02.05.2024 to 05.06.2024				

Subject: MATH 638S; Functional Analysis

Name of the Teacher: Dr Sonica

Month	Date		Topics to be covered	Academic Activity	
	From	Το			
January	09.01.2024	31.01.2024	Normed Linear spaces: Normed linear spaces , its examples, Banach Spaces with examples of l ^p spaces, L ^p ([a,b]) spaces and C ([a,b]), Hahn Banach theorems, open mapping theorem, closed graph theorem, Baire Category theorem.	Syllabus, Examination pattern discussed, Doubt Session.	
Departmenta plans on 01.02	l Meeting to Co 2.2024	ordinate and	Review the Monthly completion of Syllab	ous as per lesson	
February	01.02.2024	29.02.2024	Principle of Uniform Boundedness: BanachSteinhauns theorem (uniform boundedness principle), Boundedness and continuity of linear transformation, Dual Spaces, embedding in second dual.	Doubt session, Assignments, revision of a few topics.	
Departmenta plans on 01.03	l Meeting to Co 3.2024	ordinate and	Review the Monthly completion of Syllab	ous as per lesson	
March	01.03.2024	30.03.2024	Hilbert Spaces: Hilbert spaces, orthonormal basis, Bessel's inequality, Riesz Fischer theorem, Parseval's identity, bounded Linear functional, projections, Riesz Representation theorem.	Doubt session, Assignments, Power Point Presentations.	
Departmenta plans on 01.04	l Meeting to Co 4.2024	ordinate and	Review the Monthly completion of Syllab	ous as per lesson	
April	01.04.2024	22.04.2024	Operators: Adjoint operators, self adjoint, normal, unitary and isometric operators.	Doubt session, Assignments, Power Point Presentations, Discussion of previous year question papers, Revision of a few topics.	
Departmenta plans on 23.04	l Meeting to Co 4.2024	ordinate and	Review the Monthly completion of Syllab	ous as per lesson	
End semester	End semester Examination 02.05.2024 to 05.06.2024				

Subject: MATH 681S; Probability and Mathematical Statistics-II

Name of the Teacher: MsChitra

Month	Date		Topics to be covered	Academic Activity
	Enom	Ta		to be Undertaken
т	From	10		0 11 1
January	09.01.2024	31.01.2024	Point estimation, unbiasedness,	Syllabus,
			Consistency, efficiency and Sufficiency.	Examination pattern
			Factorization theorem, completeness,	discussed, Doubt
			Rao-Blackwell theorem, Cramer-Rao	Session.
			inequality. Maximum likelihood method	
			of estimation and method of moments.	
			Interval estimation, confidence intervals	
			for means, difference of means and	
			variances.	
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson				
plans on 01.02	2.2024	T		
February	01.02.2024	29.02.2024	The basic idea of significance test. Null	Doubt session,
			and alternative hypothesis, Type-I and	Assignments,
			TypeII errors. Uniformly most powerful	revision of a few
			tests, Likelihood Ratio tests.	topics.
Departmenta	l Meeting to Co	ordinate and	Review the Monthly completion of Syllab	ous as per lesson
plans on 01.0.	3.2024	1		
March	01.03.2024	30.03.2024	t, Chi-square and F-distributions. Tests	Doubt session,
			of significance based on t, Chi-square	Assignments, Power
			and F Distribution	Point Presentations.
Departmenta	l Meeting to Co	ordinate and	Review the Monthly completion of Syllab	ous as per lesson
plans on 01.04	4.2024			
April	01.04.2024	22.04.2024	One way and two way Analysis of	Doubt session,
			Variance (ANOVA). Non-Parametric	Assignments, Power
			Tests: Sign test, Wilcoxon signed rank	Point Presentations,
			test, Mann-whitney test.	Question papers
				discussed. Revision
				of a few topics.
Departmenta	l Meeting to Co	ordinate and	Review the Monthly completion of Syllab	ous as per lesson
plans on 23.04	4.2024			-
End semester	Examination 0	2.05.2024 to 0	95.06.2024	

Subject: MATH-692S : Computational Techniques-II

Name of the Teacher: Dr NAVJOT KAUR

Month	Date		Topics to be covered	Academic Activity
	Enom	То		to be Undertaken
January	09.01.2024	31.01.2024	MS Excel: Introduction, Functions and Formulae, Graphics and Data base. Numerical Differentiation, Numerical Integration: General formulae, Trapeziodal rule, Simpson's 1/3 and 3/8 rule, Romberg integration, Newton-Cotes formulae, Gaussian integration.	Syllabus, Examination pattern discussed, Doubt Session along with practical implication in the lab.
Departmenta	n Mieeting to Co 2 2024	orumate and	Review the Monthly completion of Synab	ous as per lesson
February	01.02.2024	29.02.2024	Programming in C: Historical development of C, Character set, Constants, Variables, Keywords, Operators, Hierarchy of arithmetic operations, if and if-else statements, Logical and Conditional Operators, Switch structure, while structure, do- while and for-Loops, Nested loops, Break and Continue statements. Solution of Ordinary Differential Equations: Taylor's series, Picard method of Successive approximations, Euler's method, Modified Euler's method, RungeKutta Method-2nd and 4th order.	Doubt session, Assignments, revision of a few topics. Practical implementation of the content covered (Program writing and compile).
Departmenta	l Meeting to Co	ordinate and	Review the Monthly completion of Syllab	bus as per lesson
plans on 01.0	3.2024	1		-
March	01.03.2024	30.03.2024	Solution of ordinary differential equations, Predictor-Corrector methods, Milne-Simpson's method, Adam's – Bashforth method, Finite difference method for boundary value problems. Arrays, Functions, Print Function, Function Declaration and Function Prototype, Return Statement, Local and Global Variables, Passing Arrays as parameter, Recursion and Library Functions, Files in C.	Doubt session, Power Point Presentations. Practical implementation.
Departmenta	I Meeting to Co 4.2024	ordinate and	Review the Monthly completion of Syllab	ous as per lesson

April	01.04.2024	22.04.2024	Introduction to pointers, Simple programs to illustrate the usage. Approximation of functions: Chebyshev Polynomials, Orthogonality of Chebyshev polynomials, Lanczos Economization of Power series.	Doubt session, Practical implementation of the topic. Discussion of previous year question papers followed by revision of a few topics.	
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 23.04.2024					
End semester	· Examination 0	2.05.2024 to 0	5.06.2024		

Subject: MATH 696S; Fluid Mechanics-II

Name of the Teacher: DrNisha Sharma

Month	Date		Topics to be covered	Academic Activity			
	Б	7 5		to be Undertaken			
-	From	10		~ !! !			
January	09.01.2024	31.01.2024	Viscous Flows: Stress components,	Syllabus,			
			Stress and strain tensor, coefficient of	Examination pattern			
			viscosity and Laminar flow, plane	discussed, Doubt			
			Poiseuille flows and Couette flow	Session.			
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson							
plans on 01.02.2024							
February	01.02.2024	29.02.2024	. Flow through tubes of uniform cross	Doubt session,			
-			section in the form of circle, Ellipse,	Assignments,			
			equilateral triangle, annulus, under	revision of a few			
			constant pressure gradient. Diffusion of	topics.			
			vorticity. Energy dissipation due to	1			
			viscosity				
Denartmenta	 Meeting to Co	ordinate and	Review the Monthly completion of Syllah	us as ner lesson			
plans on 01 03 2024							
March	01 03 2024	30.03.2024	steady flow past a fixed sphere	Doubt session			
iviaren	01.05.2021	50.05.2021	dimensional analysis Reynold numbers	Assignments Power			
			Prandtl's boundary layer Boundary	Point Presentations			
			layer equation in two dimensions				
			Karman integral equation Elements of				
			wave motion, waves in fluids, surface				
			wave motion, waves in nuids, surface				
		1. 4 1	gravity waves,	1			
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson							
plans on 01.04.2024							
Aprıl	01.04.2024	22.04.2024	standing waves, dispersion relation, path	Doubt session,			
			of particles, waves at the interface of	Assignments, Power			
			two liquids, equipartition of energy,	Point Presentations,			
			group velocity, energy of propagation of	Question papers			
			waves.	discussed. Revision			
				of a few topics.			
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson							
plans on 23.04.2024							
End semester Examination 04.05.2024 to 01.06.2024							

Subject: MATH-698S; Non-Linear Programming Problems

Name of the Teacher: DrLeetika

Month	Date		Topics to be covered	Academic Activity		
	From	Το				
January	09.01.2024	31.01.2024	Nonlinear Programming: Convex	Svllabus.		
buildury	0,10112021	5110112021	functions. Concave functions	Examination pattern		
			Definitions and basic properties	discussed Doubt		
			subgradients of convex functions	Session		
			Differentiable convex functions Minima			
			and Maxima of convex function and			
			concave functions. Generalizations of			
			convex functions and their basic			
			properties Unconstrained problems			
Denartmenta	 Meeting to Co	ordinate and	Review the Monthly completion of Syllah	us as ner lesson		
plans on 01.02.2024						
February	01.02.2024	29.02.2024	Necessary and sufficient optimality	Doubt session,		
			criteria of first and second order. First	Assignments,		
			order necessary and sufficient Fritz John	revision of a few		
			conditions and Kuhn-Tucker conditions	topics.		
			for Constrained programming problems			
			with inequality constraints, with			
			inequality and equality constraints.			
			Kuhn Tucker conditions and linear			
			programming problems.			
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson						
plans on 01.0.	5.2024	20.02.2024	Destitution New line of Destination	Dealtheant		
March	01.03.2024	30.03.2024	Weak Duality Theorem Welfe's Duality	Doubt session,		
			Theorem Hanson Huard strict converse	Assignments, rower		
			duality theorem Dorn's duality theorem	romit riesentations.		
			strict converse duality theorem. Dorn's			
			Converse duality theorem Unbounded			
			dual theorem theorem on no primal			
			minimum Duality in Quadratic			
			Programming Quadratic			
			Programming: Wolfe's method Beale's			
			method for Quadratic programming			
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as nor lesson						
plans on 01.04.2024						
April	01.04.2024	22.04.2024	Linear fractional programming, method	Doubt session,		
			due to Charnes and Cooper. Nonlinear	Assignments, Power		
			fractional programming, Dinkelbach's	Point Presentations,		
			approach. Game theory - Two-person,	Question papers		
			Zero-sum Games with mixed strategies,	discussed. Revision		
			graphical solution, solution by Linear	of a few topics.		
			Programming.			
Departmenta	l Meeting to Co	ordinate and	Review the Monthly completion of Syllab	ous as per lesson		
Plans 011 23.04.2024 End somestor Examination 02 05 2024 to 05 06 2024						
End semester Examination 02.05.2024 to 05.06.2024						