

TEACHER'S LESSON PLAN FOR YEAR 2020-21

Teacher's name	Department	Course	Subjects
Suruchi singh	Mathematics	BA prog	Mathematics

SEC-1: Computer Algebra System	Sub Topics of Units		No. of Lectures
	UNITS	sub topics	

1. Introduction to CAS and Graphics	Computer Algebra Systems (CAS), Use of a CAS as a calculator, Simple programming in a CAS. [1] Chapter 12 (Sections 12.1 to 12.5).		4Lect+8 Prac
Unit 2: Applications in Algebra	Computing and plotting functions in 2D, Customizing plots, Animating plots, Producing table of values, Working with piecewise defined functions, Combining graphics		4Lect+8 Prac
Unit 3: Applications of Calculus	Factoring, Expanding and finding roots of polynomials, Working with rational and trigonometric functions, Solving general equations.		6Lect+12 Prac
Unit 4: Working with Matrices	: Computing limits, First and higher order derivatives, Maxima and minima, Integration, computing definite and indefinite integrals.		2Lect+4Prac
	Performing Gaussian elimination, Operations (transpose, determinant, and inverse), Minors and cofactors, matrix, Eigenvalue, eigenvector and diagonalization.		4Lect+8 Prac
	Solving systems of linear equations, Rank and nullity of a		2Lect+4Prac

SEC-2: Mathematical Typesetting System: LaTeX	Sub Topics of Units		No. of Lectures
	UNITS	sub topics	

Unit 1: Getting Started with LaTeX	Introduction to TeX and LaTeX, Creating and typesetting a simple LaTeX document, Displayed material.		4Lect+8 Prac
Unit 2: Mathematical Typesetting	adding basic information to documents, Environments, Footnotes, Sectioning, Accents and symbols; Mathematical typesetting (elementary and advanced): Subscript/Superscript Delimiters, Multiline formulas, Putting one thing above another, Spacing and changing style in math mode.		2L+4P
Unit 3: Graphics and PSTricks	, Fractions, Roots, Ellipsis, Mathematical symbols, Arrays, Pictures and graphics in LaTeX, Simple pictures using PS Tricks,		4Lect+8 Prac
Unit 4: Getting Started with Beamer	Plotting of functions		2L+4P
	Beamer, Frames, Setting up beamer document, Enhancing beamer presentation.		4Lect+8 Prac
			2L+4P