Lesson Plan for the Month April 2022 to July 2022		Subject: Mathematics (Programming in C and Numerical Methods)
Name of the Teacher	Dr. Sachin Kumar	**Class** B.Sc 4th Sem
09-04-2022 To 16-04-2022	Programmer's model of a computer, Algorithms, Flow charts.	
18-04-2022 To 23-04-2022	Data types, Operators and expressions, Input/outputs functions.	
25-04-2022 To 30-04-2022	Decisions control structure: Decision statements, Logical and conditional statements.	
02-05-2022 To 07-05-2022	Implementation of Loops, Switch Statement & Case control structures. Functions, Preprocessors and Arrays.	
09-05-2022 To 14-05-2022	Strings: Character Data Type, Standard String handling Functions, Arithmetic Operations on Characters.	
16-05-2022 To 21-05-2022	Structures: Definition, using Structures, use of Structures in Arrays and Arrays in Structures. Pointers: Pointers Data type, Pointers and Arrays, Pointers and Functions.	
23-05-2022 To 28-05-2022	Solution of Algebraic and Transcendental equations: Bisection method, Regula-Falsi method, Secant method.	
30-05-2022 To 04-06-2022	Newton-Raphson's method. Newton's iterative method for finding pth root of a number, Order of convergence of above methods.	
05-06-2022 To 12-06-2022	**Break**	

13-06-2022 To 18-06-2022	Simultaneous linear algebraic equations: Gauss-elimination method, Gauss-Jordan method. **Unit Test**
20-06-2022 To 25-06-2022	Triangularization method (LU decomposition method), Crout's method
27-06-2022 To 02-07-2022	Iterative method, Cholesky Decomposition method.
04-07-2022 To 09-07-2022	Jacobi's method, Gauss-Seidal's method, Relaxation method.

Lesson Plan for the Month April2022 to July 2022			Subject: Business Mathematics	
Name of the Teacher	Dr Sachin Kumar	Class	B.Com 2nd Sem	
09-04-2022 To 16-04-2022	Matrices: Definition of a matrix. Types of matrices. Algebra of matrices. Applications of matrices operations for solution to simple business and economic problems.			
18-04-2022 To 23-04-2022	Determinants and inverse of a matrix: Calculation of values of determinants up to third order. Finding inverse of a matrix through determinant method. Solution of system of linear equation up to three variables.			
25-04-2022 To 30-04-2022	Compound Interest: Certain different types of interest rate; Concept of present value and amount of a sum			
02-05-2022 To 07-05-2022	Annuities: Types of annuities; Present value and amount of an annuity, including the case of continuous compounding			
09-05-2022 To 14-05-2022	Differentiation: Concept of differentiation.			
16-05-2022 To 21-05-2022	Rules of differentiation – simple standard forms.			
23-05-2022 To 28-05-2022	Rules of differentiation – simple standard forms (Continue).			
30-05-2022 To 04-06-2022	Applications of differentiation -elasticity of demand and supply. Maxima and Minima of functions (involving second or third order derivatives) relating to cost, revenue and profit			
05-06-2022 To 12-06-2022	**Break**			

13-06-2022 To 18-06-2022	Permutations and Combinations: Definition, Formulas, Difference between Permutations and Combinations. **Unit Test**
20-06-2022 To 25-06-2022	Fundamental Principle of Counting, N and R in Permutations and Combinations (Simple Problems).
27-06-2022 To 02-07-2022	Sequence and Series: Definition, Types- Arithmetic Progression.
04-07-2022 To 09-07-2022	Geometric Progression, Formulas, Difference between Sequence and Series (Simple Problems).

Lesson Plan for the Month April2022 to July 2022			**Subject:** Maths (Linear Algebra)
Name of the Teacher	Dr. Sachin Kumar	**Class**	B.Sc 6th Sem
09-04-2022 To 16-04-2022	Vector spaces, subspaces, Sum and Direct sum of subspaces.		
18-04-2022 To 23-04-2022	Linear span, Linearly Independent and dependent subsets of a vector space. Finitely generated vector space.		
25-04-2022 To 30-04-2022	Existence theorem for basis of a finitely generated vector space, Finite dimensional vector spaces.		
02-05-2022 To 07-05-2022	Invariance of the number of elements of bases sets, Dimensions, Quotient space and its dimension.		
09-05-2022 To 14-05-2022	Homomorphism and isomorphism of vector spaces, Linear transformations and linear forms on vector spaces, Vector space of all the linear transformations Dual Spaces		
16-05-2022 To 21-05-2022	Bidual spaces, annihilator of subspaces of finite dimensional vector spaces, Null Space, Range space of a linear transformation, Rank and Nullity Theorem.		
23-05-2022 To 28-05-2022	Algebra of Liner Transformation, Minimal Polynomial of a linear transformation, Singular and non-singular linear transformations.		
30-05-2022 To 04-06-2022	Matrix of a linear Transformation, Change of basis, Eigen values and Eigen vectors of linear transformations.		

05-06-2022 To 12-06-2022	**Break**
13-06-2022 To 18-06-2022	Inner product spaces, Cauchy-Schwarz inequality, Orthogonal vectors, Orthogonal complements. **Unit Test**
20-06-2022 To 25-06-2022	Orthogonal sets and Basis, Bessel's inequality for finite dimensional vector spaces.
27-06-2022 To 02-07-2022	Gram-Schmidt, Orthogonalization process.
04-07-2022 To 09-07-2022	Adjoint of a linear transformation and its properties, Unitary linear transformations.