

Lesson plan (Govt. College m/krish)

Programming in C and Numerical Methods
Class - B.Sc. (IV Semester)

(2024-2025)
Dr. Reenu Yadav

January 2025 - Programmers model of a computer, operators and expressions, Input / output functions, Data type, Flow charts, Decisions Control structure.

February 2025 - Implementation of loops, switch statement and Case Control structures, functions and arrays. Strings:- character data type, Arithmetic operations on characters

March 2025 - Newton - Raphsons method, order of convergence of above methods; solutions of Algebraic and transcendental equations. Bisection formula or method.

April 2025 - Simultaneous linear algebraic equations - Gauss - elimination method, Gauss - Jordan method, Gauss-Seidals method, Relaxation method.

Subject → Algebra and Number theory
class - B.Sc. (II Sem)
Lesson Plan

Session - 2024-2025

Dr. Reenu Yadav

January 2025 - Matrices - Symmetric, skew-symmetric, Hermitian and skew Hermitian matrices, Rank & Inverse of a matrix, Row and Column rank of a matrix, Cayley - Hamilton th^m and its uses, Unitary and orthogonal matrices.

February 2025 - Relations b/w the roots and Co-efficients of general polynomial eqⁿ in one variable, Common roots & multiple roots, Transformation of eqⁿ, Nature of the roots of an eqⁿ, Descartes' rule of signs.

March 2025 -

Cardan's method, Biquadratic eqⁿ & their solutions.
Divisibility, Greatest Common divisor, Least Common multiple
fundamental theorem of arithmetic.

April 2025 - Linear Congruences, Fermat's th^m, Euler's th^m, Wilson's th^m & its converse, Chinese th^m Remainder, Linear Diophantine eqⁿ in two variables.

Lesson - Plan

Dr. Sandeep Real & Comp

(Govt. College M/brash)

Mathematical foundations of Computer Science.

Class - B.C.A. (II Semester)

(2024-2025)

Dr. Reenu Yadav

January 2025 - Basic statistics :- Measure of central tendency, mean, Mode, median, Range, Variance and standard Deviations, Correlation and Regression.

February 2025 - Algorithms, Linear search, "Big Oh" notation. advantage of logarithmic algorithms over linear algorithms, Complexity. Graphs, degree of vertex, path circuit, Hamiltonian path circuit.

March 2025 - Trees, Minimum weight and minimum distance spanning trees, Merge sort, Insertion sort, Decimal to Binary.

April 2025 - Principle of mathematical induction, GCD, public Key encryption schemes.

Lesson Plan
Linear Algebra

class - B.Sc. (VI Semester)

(Govt. College Mithra)

2024-2025
Dr. Roony Yadav

January 2025 - vector spaces, subspaces, Linear span, Extension n^m for basis of a finitely generated vector space, Dimensions, Quotient space and its dimension.

February 2025 - Homomorphism and isomorphism of vector spaces, Linear transformations and Linear forms on vector spaces, Null space, Range space of a Linear transformation, Rank and Nullity n^m .

March 2025 -

Algebra of Linear transformation, singular and Non-singular Linear transformation, Eigen value and Eigen vectors of Linear transformations.

April 2025 -

Inner product spaces, Cauchy - Schwarz inequality, Bessel's inequality for finite dimensional vector spaces, Unitary Linear transformations.