

## LESSON PLAN (EVEN SEM. 2023-24)

Name of the Assistant Professor: Dr. Minakshi

Class: B.Sc. 3<sup>rd</sup> Year

Subject: Dynamics

Date	Topic
01.01.2024 to 06.01.2024	Preliminaries related to Motion of a Particle, Velocity, Acceleration, Angular Velocity, Angular Acceleration, Relation between Linear and Angular Velocity
08.01.2024 to 13.01.2024	Radial and Transverse Velocity, Radial and Transverse Acceleration, Related Problems
15.01.2024 to 21.01.2024	Tangential and Normal Components of Velocity and Acceleration of a Particle, Related Problems
22.01.2024 to 27.01.2024	Simple Harmonic Motion, Related Problems, Test
29.01.2024 to 03.02.2024	Elastic Strings: Hooke's Law, Theorems and Related Problems
05.02.2024 to 10.02.2024	Newton's Laws of Motion: Equations of Motion, Motion of a body on a Horizontal Plane
12.02.2024 to 17.02.2024	Vertically Upward and Downward Motion, Test, Assignment
19.02.2024 to 24.02.2024	Motion of two bodies connected by a String, Motion on a smooth and rough horizontal plane, Atwood's Machine, Related Problems
26.02.2024 to 02.03.2024	Work: Definition, Units, Related Problems
04.03.2024 to 09.03.2024	Power, Related Problems, Test
11.03.2024 to 16.03.2024	Energy, Principle of Work and Energy, Related Problems
18.03.2024 to 23.03.2024	Motion of a Particle on a smooth curve in a vertical plane, Inside and Outside of a vertical circle, Cycloidal Motion
25.03.2024 to 30.03.2024	Motion of a Projectile, Related Terms and Problems
01.04.2024 to 06.04.2024	Central Force and Central Orbit, Related Theorems and Expressions, Areal Velocity, APSE and Apsidal Distances, Velocity from Infinity
08.04.2024 to 13.04.2024	Kepler's Law of Planetary Motion, Motion under different conditions, Related Problems, Test
15.04.2024 to 20.04.2024	Motion of a Particle in three dimensions in Spherical and Cylindrical Polar Coordinates, Related Problems
22.04.2024 to 30.04.2024	Revision, Test

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## LESSON PLAN (EVEN SEM. 2023-24)

Name of the Assistant Professor: Dr. Minakshi

Class: B.Sc. 1<sup>st</sup> Year

Subject: Ordinary Differential Equations

Date	Topic
01.01.2024 to 06.01.2024	Introduction to Differential Equations, their Types and Solutions, Formation of Differential Equations
08.01.2024 to 13.01.2024	Exact Differential Equations: Definition, Necessary and Sufficient condition for an Exact Differential Equation, their Solution, Integrating Factor: Meaning, Rules to find Integrating Factor
15.01.2024 to 21.01.2024	Different Methods to solve Exact Differential Equation, Related Problems
22.01.2024 to 27.01.2024	Equations of First order but not of first degree, Equations solvable for p, y and x, Test
29.01.2024 to 03.02.2024	Lagrange's Equations, Clairaut's Equations, Their solutions, Equations reducible to Clairaut's Form
05.02.2024 to 10.02.2024	Singular Solution, p-discriminant and c-discriminant, Related Problems
12.02.2024 to 17.02.2024	Orthogonal Trajectories: Cartesian and Polar Coordinates, Discussion, Test
19.02.2024 to 24.02.2024	Linear Differential Equations with Constant Coefficients: Auxiliary Equation. Particular Integral, Complex Solution, Related Problems, Assignment
26.02.2024 to 02.03.2024	Different Methods to solve Linear Differential Equations With Constant Coefficients
04.03.2024 to 09.03.2024	Homogeneous Linear Equations reducible to Homogeneous Form
11.03.2024 to 16.03.2024	Linear Differential Equations of Second Order: Introduction, Solution by Changing the Dependent Variable, By Removing the First Derivative, Discussion
18.03.2024 to 23.03.2024	Solution of Linear Differential Equations of Second Order by Changing the Independent Variable, Variation of Parameters, Method of Undetermined Coefficients, Test
25.03.2024 to 30.03.2024	Ordinary Simultaneous Differential Equations: Introduction and their solutions, Revision, Assignment
01.04.2024 to 06.04.2024	Total Differential
08.04.2024 to 13.04.2024	Reduction Formulae, Rectification, Assignment
15.04.2024 to 20.04.2024	Quadrature, Revision
22.04.2024 to 30.04.2024	Volumes and Surfaces of solids of revolution, Revision

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## LESSON PLAN (EVEN SEM. 2023-24)

Name of the Assistant Professor: Dr. Minakshi

Class: B.Sc. 2<sup>nd</sup> Year

Subject: Programming in C and Numerical Methods

Date	Topic
01.01.2024 to 06.01.2024	Computer: A general Introduction, Algorithms and Flowcharts: Definition, Advantages, Disadvantages, Examples
08.01.2024 to 13.01.2024	Introduction to C, Its Importance and Related Terms
15.01.2024 to 21.01.2024	Data Types, Variable Declaration, Statement, A Typical C Program, Test
22.01.2024 to 27.01.2024	Operators and Expressions, Precedence of various operators
29.01.2024 to 03.02.2024	Introduction to Numerical Methods, Bisection Method and Related Problems
05.02.2024 to 10.02.2024	Regula Falsi Method, Newton Raphson Method, Assignment
12.02.2024 to 17.02.2024	Decision Control Structures, If-else Statement, Nested If-else Statement, Computer Programs
19.02.2024 to 24.02.2024	Else-If ladder, Switch Statement, Test
26.02.2024 to 02.03.2024	Introduction to Loops, Their Types
04.03.2024 to 09.03.2024	do-while Statement, for Loop, Related Programs
11.03.2024 to 16.03.2024	Introduction to Functions, Local and Global Variables, C-Preprocessor, Introduction to Arrays, Their Types, Test
18.03.2024 to 23.03.2024	Introduction to Simultaneous Linear Algebraic Equations, Gauss Elimination Method, Gauss Jordan Method, Related Problems
25.03.2024 to 30.03.2024	Crout's Method, Square Root Method, Iterative Method, Assignment
01.04.2024 to 06.04.2024	Structures: Definition, Using Structure in a Program
08.04.2024 to 13.04.2024	Pointers: Pointer Data Type, Pointers and Arrays, Pointers and Functions
15.04.2024 to 20.04.2024	Triangularization Method, LU Decomposition Method, Cholesky Decomposition Method, Test
22.04.2024 to 30.04.2024	Jacobi's Method, Gauss-Seidal Method, Relaxation Method, Revision

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## LESSON PLAN (EVEN SEM. 2023-24)

Name of the Assistant/Associate Professor: Mr. Satish, Dr. Anil Kumar, Dr. Minakshi

Class: B.Com 1<sup>st</sup> Year

Subject: BUSINESS MATHEMATICS

Date	Topic
01.01.2024 to 06.01.2024	Introduction of Syllabus and Scheme of Examination, Matrices: Definition, Types, Algebra
08.01.2024 to 13.01.2024	Determinants: Definition, How to find determinant of matrices of different orders, Adjoint of Matrix
15.01.2024 to 21.01.2024	Elementary row and column operations, Inverse of a matrix, Test
22.01.2024 to 27.01.2024	Differentiation: Using First Principal, General Theorems, Product of two functions, Quotient of two functions
29.01.2024 to 03.02.2024	Chain Rule, Differentiation of Logarithmic, Exponential, Implicit and Parametric Functions
05.02.2024 to 10.02.2024	Derivatives of Higher Order, Application of Derivatives, Test
12.02.2024 to 17.02.2024	Introduction of Simple and Compound Interest, Related Problems, Assignment
19.02.2024 to 24.02.2024	Determination of Compound Interest for various periods: Annually, Half-yearly, Quarterly, Continuous compounding of interest, Test
26.02.2024 to 02.03.2024	Annuities: Definition, Types, Formulas, Related Problems
04.03.2024 to 09.03.2024	Present value of an Annuity for different cases
11.03.2024 to 16.03.2024	Solution of Practical problems related to Annuities, Related Problems
18.03.2024 to 23.03.2024	Ratio: Definition, Related terms, Their Comparison, Types, Test
25.03.2024 to 30.03.2024	Proportion: Definition, Types, Properties, Related Problems
01.04.2024 to 06.04.2024	Addendo Theorem and Related problems, Assignment
08.04.2024 to 13.04.2024	Percentage and Related problems
15.04.2024 to 20.04.2024	Profit and Loss, Related problems
22.04.2024 to 30.04.2024	Revision, Test

  
Signature

