

# LESSON PLAN

February 2023 to May 2023

Name of the Assistant Professor: Mr. Bhagwan Dass

Class and Section: B.A. /B.Sc. 3<sup>rd</sup> year (6<sup>th</sup> Semester)

Subject: Mathematics

Paper: Linear Algebra

## February 2023

**Topics** - Vector spaces, subspaces, Sum and Direct sum of subspaces, Linear span, Linearly Independent and dependent subsets of a vector space. Finitely generated vector space, Existence theorem for basis of a finitely generated vector space, Finite dimensional vector spaces, Invariance of the number of elements of bases sets, Dimensions, Quotient space and its dimension.

## March 2023

**Topics** - Homomorphism and isomorphism of vector spaces, Linear transformations and linear forms on vector spaces, Vector space of all the linear transformations Dual Spaces, Bidual spaces, annihilator of subspaces of finite dimensional vector spaces, Null Space, Range space of a linear transformation, Rank and Nullity Theorem,

## April 2023

**Topics**- Algebra of Linear Transformation, Minimal Polynomial of a linear transformation, Singular and non-singular linear transformations, Matrix of a linear Transformation, Change of basis, Eigen values and Eigen vectors of linear transformations.

## May 2023

**Topics**- Inner product spaces, Cauchy-Schwarz inequality, Orthogonal vectors, Orthogonal complements, Orthogonal sets and Basis, Bessel's inequality for finite dimensional vector spaces, Gram-Schmidt, Orthogonalization process, Adjoint of a linear transformation and its properties, Unitary linear transformations.

# Lesson plan

of

Vector Calculus

Feb. 2023 to May 2023

Class - B.Sc 1st Year (2nd Sem.)

Section -

Teacher Name - Mrs. Mukesh Kumari

Dept. - Mathematics

Month	Unit and Chapter Name
February	Unit - 1st Chapter - Scalar and Vector product of three vectors, Product of four vectors, Reciprocal vector, Scalar valued functions, Differentiation of Vectors
March	Unit - 2nd Chapter - Gradient of scalar point function, geometrical interpretation of $\text{grad}\phi$ , Divergence and Curl of vector point function Assignment - I
April	Unit - 3 Chapter - Curvilinear Co-ordinates Assignment - II Test
May	Unit - IVth Chapter - Vector integration, line integral and Gauss's, Green's and Stoke Theorems

  
Teacher Sign

# LESSON PLAN

Session - 2022-2023

En. C. Jind

Name of the Assistant/Associate Professor: Mukesh Redhu

Class and Section: B.Sc 2nd (Sec A)

Subject: Mathematics

Paper: Sequences and Series

February:

Topology of Real Numbers.

Problem related to chapter.

March:

Sequences and Infinite Series

Assignment - 1st

April:

Alternating Series and Arbitrary Series

Assignment - 2nd

Test

May:

Infinite Products

Problem related to chapter

Revision

Amu  
Teacher's Sign

Lesson Plan - B.Sc 6th sem and B.A 6th sem.

Department of Mathematics

Reena Rani (Ext. Lect.)

Paper - Dynamics

Session - 2022-2023 (Even)

February :-

Velocity and acceleration along radial, transverse, tangential and normal directions. Relative velocity and acceleration, Simple harmonic motion.

March :-

Elastic Strings, Mass, Momentum and Force.  
Newton's law of motion. Work, Power and energy definitions of conservative and Impulsive forces.  
Problems on chapters.  
Assignment - 1st

April :-

Motion on smooth and rough plane curves.  
Projection motion of a particle in a plane. Vector  
Angular velocity. central orbits, Kepler's law of motion.  
Assignment - 2nd,  
Unit Test

May :-

Motion of a particle in Three dimensions.  
Acceleration in terms of different co-ordinate systems.  
Revision of chapters.

Reena Rani

Department of Mathematics

Reena Rani (Ext. Lect.)

Lesson Plan - B.Com Ist (sec-B & C)

Paper - ~~exam~~ Business Mathematics

Session - 2022-2023 (Even)

February	Unit and chapters Name.
	Permutation and Combinations and Binomial Theorem.
March	Chapter - Linear Inequalities in two variables and Linear Programming, Data Introduction Assignment - 1st
April	Chapter - Data - Classification and Tabulation and Diagrammatic Representation of Data Assignment - 2nd Test
May	Chapter - Graphical Representation of Data and Data Interpretation Problems and Revision

Reena Rani

# Lesson Plan of Dynamics

Feb 2023 to May 2023


Class - B.Sc 3rd Year (6th Sem.)

Section - B

Teacher Name - Mrs. Pragati

Dept. - Mathematics


Month	Unit and Chapter Name
February	Unit-1st Chapter - Velocity and acceleration along radial, transverse, tangential and normal directions. Simple harmonic motion. Elastic strings
March	Unit-2nd Chapter - Mass, Momentum and Force. Newton's Laws of motion. Work, power and energy Definitions of conservative forces and impulsive forces. Assignment-I
April	Unit-3rd Motion on smooth and rough plane curves. Projectile motion of a particle in a plane Assignment-2 Test
May	Unit-IVth Chapter - General motion of a rigid body: Central Orbits, Kepler's Laws of Motions, Motion of a particle in three dimensions Problems on chapters

  
Teacher Sign

Lesson plan  
of  
Element of Business Mathematics  
Feb. 2023 to May 2023  
Class - B.Com 1st Year (2nd Sem.)

Teacher Name - Mrs. PRAGATI Section - D Dept - Mathematics

Month	Unit and Chapter Name
February	Permutation and Combinations and Binomial Theorem.
March	Chapter - Linear Inequalities in two variables and linear Programming Assignment - I
April	Chapter - Data - Introduction, Classification and Tabulation and Diagrammatic Representation of Data Assignment - 2nd Test
May	Chapter - Graphical Representation of Data and Data Interpretation Problems on Chapters

  
Teacher Sign

Lesson plan  
of  
Vector Calculus


Feb 2023 to May 2023

Class - BSc 1st year (2nd Sem)

Teacher Name - Mrs Pragati  
Section - C & D

Dept - Mathematics

Month	Unit and Chapter Name
February	Unit-1st Chapter - Scalar and Vector product of three vectors, Product of four vectors, Reciprocal vector, Scalar valued functions, Differentiation of Vectors
March	Unit-2nd Gradient of a scalar point function, geometrical interpretation of $\text{grad } \phi$ , Divergence and Curl of vector point function. Gradient, divergence and curl of sums and product and their related vector identities
April	Unit-3 Chapter - Curvilinear Co-ordinates Assignment-I Test
May	Unit-IVth Chapter - Vector integration, line integral and Gauss's, Green's and Stoke's Theorems Assignment-II

  
Teacher Sign




# Lesson plan

## of Elements of Computer Oriented Statistical Methods

Feb. 2023 to May 2023

Teacher Name - Mrs. PRAGATI Class - B.CA 2nd Year (4th Sem.)  
Dept. - Mathematics

Month	Unit and Chapter Name
February	Chapter - Basic Statistics, Measure of Central Tendency, Measure of Dispersion and Moments and Moment Generating Function
March	Chapter - Probability Distributions, Correlation and Regression Assignment - I
April	Chapter - Statistical Inference, Chi-Square Test and Curve Fitting Assignment - II Test
May	Chapter - Analysis of Variance (ANOVA) and Baye's Theorem in Decision making & Forecasting Techniques Revisim

  
Teacher Sign

**LESSON PLAN**  
**February 2023 to May 2023**

Gov. P.G college, JIND

Name of the Assistant/Associate Professor: Anil kumari
Class and Section: BSc 3 <sup>rd</sup> year (6 <sup>th</sup> Semester), section – A
Subject: Mathematics
Paper: DYNAMICS

**FEBRUARY**

Chapter Section- 1
Velocity and acceleration along radial, transverse, tangential and normal directions. Relative velocity and acceleration. simple harmonic motion. Elastic strings.

**MARCH**

Chapter Section- 2
Mass, Momentum and Force. Newton's laws of motion. Work, power and energy. definitions of conservative forces and impulsive forces.
ASSIGNMENT 1st

**APRIL**

Chapter Section- 3
Motion on smooth and rough plane curves. Projectile motion of a particle in a plane. Vector angular velocity.
Assignment – 2
Test

**MAY**

Chapter Section- 4
General motion of a rigid body : central orbits, Kepler's laws of motions. Motion of a particle in three dimensions. Acceleration in terms of different co-ordinate systems.
Problems on chapters

*Anil Kumari*

**LESSON PLAN**  
**February 2023 to May 2023**

Name of the Assistant/Associate Professor: Anil kumari
Class and Section: BSc 2 <sup>ND</sup> year (4 <sup>th</sup> Semester) SECTION -B & B.A.
Subject: Mathematics
Paper: SPECIAL FUNCTIONS & INTEGRAL TRANSFORMS

**FEBRUARY**

Chapter Section- 1
Bessel equation and its solution : Bessel functions and their properties conversance, recurrence, relations and generating functions, orthogonality of Bessel functions.

**MARCH**

Chapter Section- 2
Legendre and Hermite differential equations and their solutions: Legendry and Hermites functions and their properties, recurrence, relations and generating functions, orthogonality of Legendre and Hermite polonomials.
ASSIGNMENT 1st

**APRIL**

Chapter Section- 3
Laplace transform: Existence theorem for Laplace transform, linearity of the laplace transform, shifting theorms, laplace transforms of derivatives and integrals, differentiation and integration of laplace transforms, convolution theorem.
Assignment – 2
Test

**MAY**

Chapter Section- 4
Fourier transforms of derivatives relations between Fourier transforms and LaPlace transforms Parseval identity for Fourier transforms.
Problems on chapters

*Anil kumari*

**LESSON PLAN**  
**February 2023 to May 2023**

Name of the Assistant/Associate Professor: Anil kumari
Class and Section: BCA (4 <sup>th</sup> Semester)
Subject: Mathematics
Paper: DISCRETE MATHEMATICS

**FEBRUARY**

Chapter Section- 1
Set theory, Relations and functions: Their Properties, graph and theory.

**MARCH**

Chapter Section- 2
Propositional Calculus and Counting: Their types, principals and methods.
ASSIGNMENT 1st

**APRIL**

Chapter Section- 3
Advanced Counting Techniques, Latices and Boolean Algebra: their relations, functions, diagram and principals.
Assignment – 2
Test

**MAY**

Chapter Section- 4
Graphs and tree: Their types, Properties, Notations and Representation.
Problems on chapters

Anil Kumari

**LESSON PLAN**  
**Feb. to May 2023**

Gov. P.G college, JIND

<b>Name of the Assistant/Associate Professor: Mannu Arya</b>
<b>Class and Section: B.Com. 1st year ( 2nd Semester), Sec-A</b>
<b>Subject: Mathematics</b>
<b>Paper: Business Mathematics-II</b>
<b>Feb.</b>
<b>Chapter: 1- "</b>
<b>Exercise and problem related to permutation</b>
<b>Chapter- combination</b>
<b>Assignment-1</b>

<b>March</b>
<b>Chapter- Binomial Theorm</b>
<b>Exercise of binomial theorem</b>
<b>Linear inequality</b>
<b>Solution of linear inequality in system of two variables</b>
<b>Test</b>
<b>Chapter - linear programming</b>
<b>Formulation of equation</b>
<b>Graphical method of solution</b>

<b>April</b>
<b>Mixed constraints solution</b>
<b>DATA INTRODUCTION</b>
<b>CLASSIFICATION AND TABULATION</b>
<b>Assignment-2</b>

<b>May</b>
<b>Graphical representation of data</b>
<b>Data interpretation</b>
<b>Revision of all chapters</b>

*Mannu*

Dept. of Mathematics (2022-23)  
Even Semester  
Neeru (Guest Lecturer)

Lesson Plan - B.A. / B.Sc. 2nd Sem 'C' & 'D'  
Paper - Ordinary Differential Equation.

February - Exact Differential Equations  
Equations of First Order but not of first  
degree

March - Linear Differential Equations with constant  
coefficients  
Homogeneous Linear Equations  
Assignment 1

April - Linear Differential Equations of Second Order  
Ordinary Simultaneous Differential Equations  
Assignment 2  
Test

May - Total Differential Equations  
Revision

Neeru

# LESSON PLAN

Feb. 2023 - May 2023

Gov. P.G college, JIND

Name of the Assistant/Associate Professor: Mani
Class and Section: Bsc 2nd year
Subject: Mathematics
Paper: Programming in C and Numerical Methods
<b>Feb.</b>
Chapter-Computers: A general Introduction
Chapter- Introduction to C
Chapter- Data-types
Assignment-1

<b>March</b>
Chapter-Operators and Expressions
Chapter-Decision Control Structures
Chapter- Loops
CHAPTER- Functions
Test

<b>April</b>
Chapter - Solution of algebraic and transcendental equations.
Chapter - Bisection method, Regula falsi method, Stair case method
Chapter- Newton-Raphson method
Assignment-2
<b>May</b>
Chapter- Simultaneous linear algebraic equations
Chapter - Gauss Seidel method, Relaxation method
Revision of all chapters

Signature: 

Dept. of Mathematics (2022-23)  
Even Semester  
Neeru (Guest Lecturer)

Lesson Plan - B.A. / B.Sc. 2nd Sem 'C' & 'D'  
Paper - Ordinary Differential Equation.

February - Exact Differential Equations  
Equations of First Order but not of First  
Degree

March - Linear Differential Equations with Constant  
Co-efficients  
Homogeneous Linear Equations  
Assignment 1

April - Linear Differential Equations of Second Order  
Ordinary Simultaneous Differential Equations  
Assignment 2  
Test

May - Total Differential Equations  
Revision.

Neeru



Deptt. of Mathematics 2022-23 EVEN Semester  
Neeru (Guest Lecturer)

Lesson Plan - B.A./B.Sc. 2nd year 4th Sem)  
Paper - Sequence & Series

February - Topology of Real Numbers

March - Sequences  
Infinite Series  
Assignment 1.

April - Infinite Series (Continued)  
Alternating Series  
Arbitrary Series  
Class-Test

May - Infinite ~~Series~~ Products  
Assignment 2.  
Revision

Neeru

(Dept. of Maths) GURDEEP (Ext. Lect) - 2022-23  
Lesson Plan BA/BSc. Ind sem Sec - A, C, D.  
Paper - Number theory and Trigonometry.

February →

- \* Divisibility.
- \* Congruences
- \* Chinese remainder theorem

March →

- \* Fermat, Wilson's theorem
- \* Euler function and Residue system.
- \* Some function of Number theory.
- \* Quadratic Residue and Reciprocity law
- \* Assignment - 1st.

April →

- \* De Moivre's Theorem and Application
- \* Circular function of a complex variable
- \* Hyperbolic function
- \* Logarithm of complex quantity.
- \* Assignment Ind, Test

May →

- \* Inverse circular and hyperbolic func
- \* Summation of series
- \* Revision.

Gurdeep  
(Ext. Lect Maths)

Dept of Maths, GURDEEP (Ext. Lectures) - 2022-23

Lesson Plan B.A 4th sem.

Paper - Programming in C & Numerical Methods

February →

- \* Computer: a General Introduction
- \* Introduction to C.
- \* Data-Types.
- \* Operator and Expressions
- \* Decision control structures.

March →

- \* Loops.
- \* Functions.
- \* The ~~the~~ C Processor
- \* Arrays.
- \* Puppeting of Strings

April →

- \* structures and Unions
- \* Pointers
- \* files in C.
- \* Solution of Algebraic and Transcendental Equations

May →

- \* simultaneous linear Algebraic Equations
- \* Revision

Gurdeep  
(Ext. Lectures Maths)

(Dept. of Maths) ASAT SINGH (Ext. Lect.) - 2022-23

Lesson Plan BSc-6th Sem & B.A.-6th Sem

Paper - Real ~~Analysis~~ and Complex Analysis.  
BSc-6th, Section - A, B, C, & BA-6th.

February :- Jacobians, Beta & Gamma Functions.

March :- Double and Triple Integral,  
Fourier Series.  
Assignment - I

April :- Calculus of Complex functions,  
Elementary Functions and Mobius  
Transformations.  
Assignment - II, Test

May :- Critical Mappings.  
Revision.

Asat Singh.  
(Dept. of Maths)  
Ext. Lect. ).

**LESSON PLAN**  
**February 2023 to May 2023**

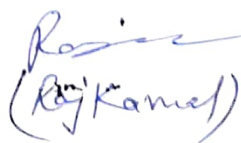
Govt. College, JNU

<b>Name of the Assistant/Associate Professor : Raj kamal</b>
<b>Class and Section: BSc 2nd year (4th Semester), Section -A &amp; C</b>
<b>Subject: Mathematics</b>
<b>Paper: Special functions and integral transforms</b>
<b>February 2023</b>
<b>Chapter- Power Series</b>
<b>Chapter- Bessel equation and function</b>
<b>Chapter- Legendre's equation</b>
<b>Assignment-1</b>

<b>March 2023</b>
<b>Chapter- Hermite's equation</b>
<b>Exercise of Hermite's equation</b>
<b>Chapter- Laplace transforms</b>
<b>CHAPTER- inverse Laplace transforms</b>
<b>Test</b>

<b>April 2023</b>
<b>Chapter - Inverse Laplace transforms</b>
<b>Chapter - Use of Laplace transforms in integral equations</b>
<b>Chapter- Solution of differential equations by Laplace transforms</b>
<b>Assignment-2</b>

<b>May 2023</b>
<b>Chapter- Fourier transforms</b>
<b>Chapter - Solution of differential equations by Fourier transforms</b>
<b>Revision of all chapters</b>

  
(Raj Kamal)