

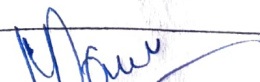
GOVERNMENT COLLEGE BIROHAR (JHAJJAR)

Summary of Lesson Plans of College Faculty for Academic Session 2025-26

Name of Assistant Professor: Dr MONIKA

Class & Sem.: B.S.C 2nd, 4th Sem Subject: Mathematical Computing using Python (Minor)

Months	Topics/Chapters to be covered
Jan 2026	Thrust area of Python, Installing Anaconda Python Distribution, Installing PyCharm, Getting started with Python, Python as a Calculator, Installing and using Jupyter Notebook. Identifiers, keywords, Statement and Expressions, variables, Mathematical operators, Precedence & Associativity, Data Types, Comments, Reading input output.
Feb 2026	Control flow statements the if, if else, decision Control flow statement, Nested if statements, the while loop, the for loop, the continue and break statements, Catching exceptions using try and except statement. Mathematical fun. Built-In fun, commonly used mathematical Modules,
March 2026	Mathematical fun ⁿ Def ⁿ and Calling the fun ⁿ . The return statement & Void fun, scope and lifetime of variables. Strings Creating & Storing strings, Basic string operations & Accessing characters in string by Index & Number, String slicing & joining string methods.
April 2026	Formatting strings, Creating list, Basic list operations, Indexing & slicing in lists, Built-In fun ⁿ used in lists, list methods, The del statement Basic matrix Computations using Python programming


Signature of Assistant Professor

GOVERNMENT COLLEGE BIROHAR (JHAJJAR)

Summary of Lesson Plans of College Faculty for Academic Session 2025-26

of Assistant Professor: Dr MONIKA

& Sem.: Bolam Ist, 2nd Sem Subject: Business Statistical Applications

Months	Topics/Chapters to be covered
Jan 2026	Probability Distribution: binomial, poisson & amp: Normal distribution.
Feb 2026	Correlation Analysis: meaning, significance, types & methods, probable error, Coefficient of determination / Regression analysis - meaning Equations, lines, Standard error of estimate Difference between correlation and regression
March 2026	Time Series: Components, models, trend analysis including second degree parabola and exponential formula measurement of seasonal, cyclical and irregular variations, shifting the trend origin.
April 2026	Statistical Decision theory: Ingredients, expected opportunity loss, optimal decisions with maximin, minimax and Bayes principle with prior, pre-posterior and posterior analysis Statistical Quality Control


Signature of Assistant Professor

GOVERNMENT COLLEGE BIROHAR (JHAJJAR)

Summary of Lesson Plans of College Faculty for Academic Session 2025-26

Name of Assistant Professor: Dr MONIKA

Class & Sem.: B.Sc 3rd, 6th sem Subject: Linear Algebra

Months

Topics/Chapters to be covered

Jan
2026

Vector spaces, Subspaces, Sum & Direct sum of subspaces, Linear span, Linearly Independent & dependent subsets of a vector space. finitely generated vector space, Existence t^m for basis of a finitely generated vector space, finite dimensional vector spaces.

Feb
2026

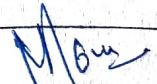
Invariance of the number of elements of basis sets, Dimension, Quotient space and its dimension. Homomorphism and Isomorphism of vector spaces, Linear transformation and linear forms on vector spaces, vector space of all the linear transformation, Dual spaces, Bidual spaces, annihilator of subspaces of finite dimensional vector spaces.

March
2026

Null space, Range space of a linear transformation, Rank, Nullity t^m Algebra of linear transformations, minimal polynomial of a linear transformation, singular & non-singular linear transformation, matrix of a linear transformation, Change of basis, Eigen values & Eigen vectors of linear transformations.

April
2026

Inner Product Space, Cauchy - Schwarz inequality, orthogonal vectors, Orthogonal Complements, Orthogonal sets, Basis, Bessel's inequality for finite dimensional vector spaces, Gram-Schmidt orthogonalization process, Adjoint of a linear transformation & its properties, Unitary linear transformations.



Signature of Assistant Professor