KOLHAN UNIVERSITY

CHAIBASA

UNIVERSITY DEPARTMENT OF MATHEMATICS

Course Content of Mathematics

Under NEP 2020

Syllabus Scheme for FYUGP.

Effective from Academic Session 2022-2023.

IRC

Program: Certificate Class: B. Sc.	Year: First/Second	Semester: I/II/III

Subject: Mathematics	
Course Code: IRC	Course Title: Real Analysis, Calculus & Vector

Course Learning Outcomes: This course will enable the students to:
(i) Calculate the differentiation of functions and its applications
(ii) Calculate the integration of functions and its applications.
(iii) Understand the algebra of Matrices and its applications.

Credit: 3	Compulsory/Elective
Max Marks:50	Total Number of Lecture: 45

Unit-1: Differential Calculus

Successive differentiation, Leibnitz theorem, Expansion, Partial Differentiation, Tangent and Normal, Curvature.

Unit-II: Integral Calculus

Integration of rational and irrational functions, Evaluation of definite integral Reduction formula.

Unit-III: Matrices

Product of Matrices, Transpose, Adjoint and Inverse of matrices, Symmetric, Skew Symmetric, Hermitian and Skew Hermitian Matrices. Rank of matrices, Elementary operations on matrices. Normal & Echelon form.

Reference Books:

1. Differential Calculus: Lalji Prasad
2. Integral Calculus: Lalji Prasad
3. Matrices by Lalji Prasasd