Program	BACHELOR OF VOCATION (B.Voc.)	**Semester - 1**
Type of Course	-	
Prerequisite		
Rationale	-	
Effective From A.Y.	2024-25	

Teaching Scheme (Contact Hours)				Examination Scheme				
Lecture	**Tutorial**	**Lab**	**Credit**	**Theory Marks**		**Practical Marks**		**Total Marks**
				SEE T	**IAT**	**SEE P**	**CCE**	
3	1	-	4	50	-	-	20	70

SEE - Semester End Examination, IAT - Internal Assessment Test, CCE - Continues & Comprehensive Evaluation

Course Content		**T** - Teaching Hours | **W** - Weightage		
Sr.	**Topics**		**T**	**W**
1	**CURVE FITTING**		7	15
	Curve fitting by of method of least squares, fitting of straight lines, second degree parabola and more general curves.			
2	**MATRICES**		8	20
	Basics of determinants, Matrices of order, Row and Column transformation, Matrices operation – Addition, Subtraction, Multiplication, Inverse, Transpose, Solving system of linear equations			
3	**INTERPOLATION**		8	20
	Finite Differences, Forward, Backward and Central operators and their relationships, Interpolation by polynomials: Newton's forward, Backward interpolation formulae, Newton's divided formulae and Lagrange's interpolation formulae for unequal intervals			
4	**DIFFERENTIATION & INTEGRATION**		9	20
	Basic Differentiation Formulae, u v Rule, u/v Rule, Chain Rule.Basic Integration Formulae, Properties of Definite Integrals.			
5	**FIRST ORDER ODE**		10	25
	Order and Degree, Formation of a differential equations, Method of solving First order ordinary differential equations: Separable variable, linear differential equations.			
		Total	42	100

Course Outcomes	
At the end of this course, students will be able to:	
CO1	Calculate unknown value of given data by Curve fitting.
CO2	Perform matrix computation in a comprehensive manner.
CO3	Find unknown value of given data by using various interpolation methods.
CO4	Find differentiation & integration of basic functions.
CO5	Form and solve first order ordinary differential equations