



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	Complex Number Basic Properties of Complex Numbers, Algebra of Complex Number, Modulus, Argument, Quadratic Equation	7	15
2	Vector and Matrices Vector, Dot Product, Scalar Multiplication, Basics of determinants, Matrices of order $m \times n$, Row and Column transformation, Matrices operation – Addition, Subtraction, Multiplication, Inverse, Transpose, Solving system of linear equations.	8	20
3	Boolean Algebra Definition & Examples of Boolean Algebra, De-Morgan's Law, Truth Tables, Boolean Functions, Representation and minimization of Boolean Functions, Design example using Boolean algebra.	8	20
4	Differentiation & Integration Basic Differentiation Formulae, $u v$ Rule, u/v Rule, Chain Rule. Basic Integration Formulae, Properties of Definite Integrals.	9	20
5	First Order ODE Order and Degree, Formation of a differential equations, Method of solving First order ordinary differential equations: Separable variable, linear differential equations.	10	25
Total		42	100

Course Outcomes	
At the end of this course, students will be able to:	
C01	Use the concepts of complex numbers.
C02	Perform matrix computation in a comprehensive manner and understand vector and algebra.
C03	Implement fundamentals of Boolean algebra.
C04	Find differentiation & integration of basic functions.
C05	Form and solve first order ordinary differential equations