

Name of the Programme : UG General Education Programmes
Course Code : VAC-122
Title of the Course : Vedic Mathematics
Number of Credits : 02 (T)
Effective from AY : 2025-26

Pre-requisites for the Course:	Nil	
Course Objectives:	To make students understand the Vedic sutras for arithmetic and algebraic calculations.	
Content	Unit I Vedic Sutras for Arithmetic Calculations-1: Introduction to Vedic Mathematics and its 16 sutras and 13 sub-sutras. Addition using the sutras <i>Purna puranabhyam</i> , <i>Sankalan Vyavkalanabhyam</i> and <i>Ekadhikena Purvena</i> . Subtraction using the sutras <i>Nikhilam Navatascaramam Dastatah</i> and <i>Vinculum</i> method, Digit separator method. Multiplication using <i>Nikhilam Navatascaramam Dastatah</i> , <i>Urdhva-Tiryagbhyam</i> method. Multiplication in special cases by using <i>Antyayordashakepi</i> , <i>Antyayoshatakepi</i> , <i>Vamanlvavoh Dasake Api</i> , <i>Ekanyunena Purvena</i> . Multiplication by special numbers like 11, 111, 1111, 5, 25, 50, 125, 625.	15 hours
	Unit II Vedic Sutras for Arithmetic Calculations – II: Division using the <i>Nikhilam</i> method, <i>Paravartya Yojyet</i> method and <i>Urdhva-Tiryagbhyam</i> method. Finding square using <i>Ekadhikena purvena</i> , Duplex method and square roots using <i>Vilokanam</i> method. Finding cube using <i>Yavadunam</i> method, Anurupyen method and cube roots by <i>Vilokanam</i> method. Multiplying two polynomials using <i>Urdhva-Tiryagbhyam</i> method. Solving quadratic equations using <i>Vilokanam</i> method and <i>Shunyam Sama samuchchaye</i> method.	15 hours
Pedagogy:	Lectures/Problem Solving/Self-study/ E-resources	
References/ Readings:	Essential Text: 1. Rajesh Kumar Thakur, <i>The Essentials of Vedic Mathematics</i> , Rupa Publications, New Delhi, 2013. References: 1. Atul Gupta, <i>The Power of Vedic Maths with Trigonometry</i> , Jaico Publishing House, Mumbai, 2011.	

	2. Dhaval Bathia, <i>Vedic Mathematics Made Easy</i>, Jaico Publishing House, Mumbai, 2010. 3. Rajesh Kumar Thakur, <i>Advanced Vedic Mathematics</i>, Rupa Publications, New Delhi, 2019. 4. Sri Bharati Krishna Tirthaji, <i>Vedic Mathematics</i>, Motilal Banarasidass, New Delhi, 1965.
Course Outcomes:	The student will be able to, 1. Understand fundamental Vedic sutras for arithmetic operations. 2. Demonstrate Vedic multiplication and division techniques for efficient calculation. 3. Apply Vedic sutras to accurately determine square, square roots, cube and cube roots. 4. Develop Skills in Vedic Mathematics for polynomial multiplication and quadratic equations.

