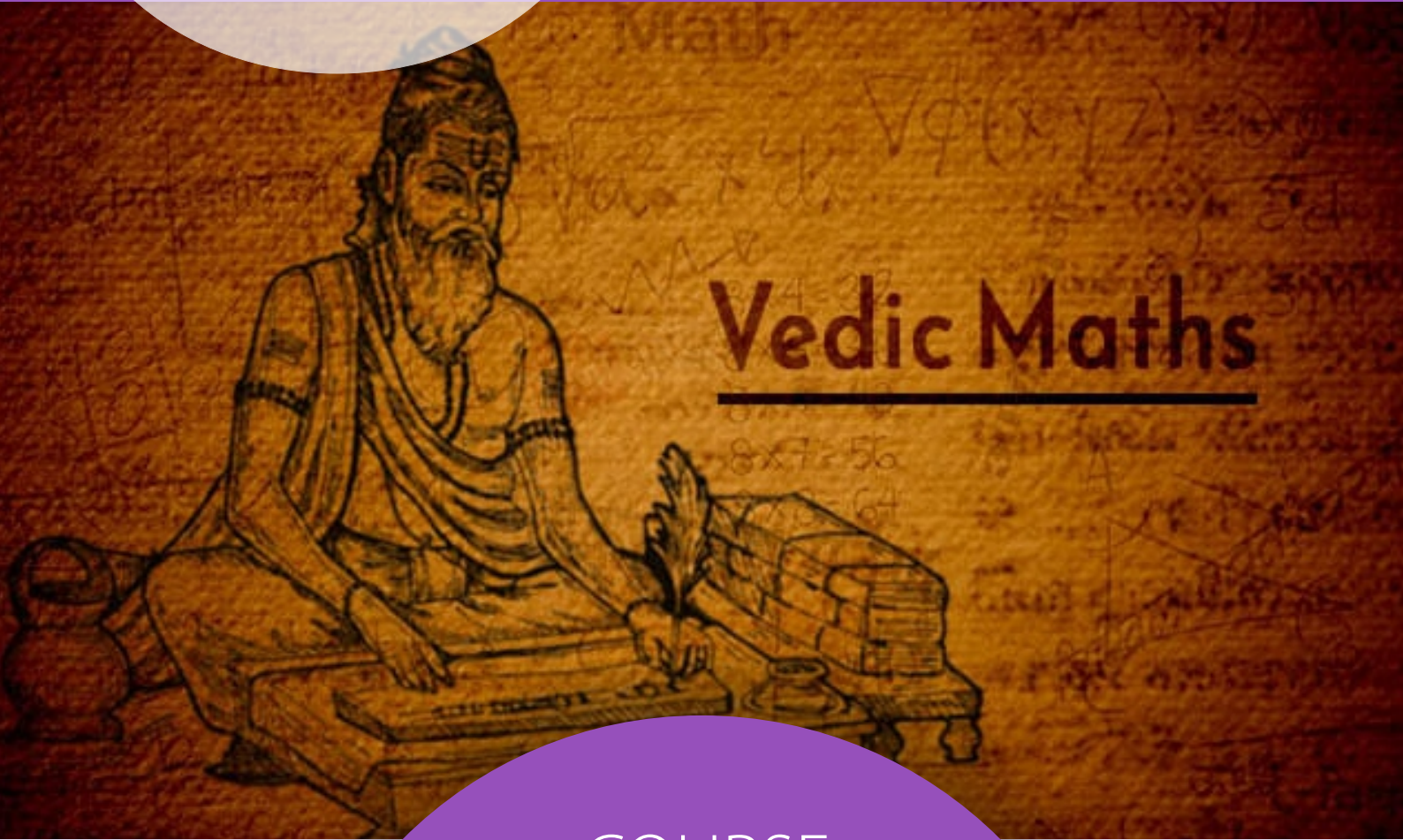




SHARDA
UNIVERSITY
Beyond Boundaries



**SHARDA SCHOOL OF
BASIC SCIENCES
& RESEARCH**



Vedic Maths

— COURSE —

**VEDIC MATHEMATICS:
SIMPLIFYING COMPLEX
CALCULATION
(NV34017)**

**VALUE ADDED
COURSE BROCHURE-30 HRS
2024-25**

ABOUT THE UNIVERSITY

Sharda University is a leading Educational institution based out of Greater Noida, Delhi NCR. A venture of the renowned Sharda Group of Institutions (SGI), The University has established itself as a high quality education provider with prime focus on holistic learning and imbuing competitive abilities in students.

The University is approved by UGC and prides itself in being the only multi-discipline campus in the NCR, spread over 63 acres and equipped with world class facilities.

Sharda University promises to become one of the India's leading universities with an acknowledged reputation for excellence in research and teaching. With its outstanding faculty, world class teaching standards, and innovative academic programs, Sharda intends to set a new benchmark in the Indian education system. Sharda School of Basic Sciences and Research (SSBSR) boasts of providing an interdisciplinary approach, exposure to different disciplines in science including Chemistry, Bio-Chemistry, Physics, Mathematics, Life Sciences, and Environmental Sciences.

ABOUT SCHOOL

Sharda School of Basic Sciences and Research (SSBSR) boasts of providing an interdisciplinary approach, exposure to different disciplines in science including Chemistry, Bio-Chemistry, Physics, Mathematics, Life Sciences, and Environmental Sciences.

The Sharda School of Basic Sciences and Research is unique from other institutions of higher learning as it is committed to imparting knowledge in pure and applied sciences, which not only forms the foundation for further academic pursuits in science and technology but also acts as the foundation for students to pursue a career in multi facet directions.

The academic programs are designed to meet the requirement of the latest technological developments and envisages to become a state-of-the-art department that cater the students at Graduate, Post- Graduate and Research level along with providing high-quality education and cutting-edge interdisciplinary research in sciences. SSBSR has well-equipped laboratories for Physics, MATLAB, Microbiology, Molecular Biology, Cell Culture, Virology, Bio-Chemistry, Physical, Organic and Inorganic chemistry for Graduate and Post-Graduate Programs. In addition, there are Central Instrumentation Facility (CIF) and other advance research labs to promote research culture.

ABOUT COURSE

"Vedic Mathematics" is a system of reasoning and mathematical working based on ancient Indian teachings called Veda. Vedic Mathematics forms part of Jyotish Shastra which is one of the six parts of Vedangas. It is a magical tool to reduce scratch work and finger counting, increases concentration and reducing silly mistakes. Vedic Mathematics introduces the wonderful applications to Arithmetical computations, theory of numbers, special multiplications, squaring, square root and Division.

COURSE SCHEDULE

Week	Content
2.	Contribution of Indian Mathematicians
2.	Introduction -Fast methods for calculation
2.	Vedic Maths using sutras-1
2.	Vedic Maths using sutras-2
2.	Square and cube root using sutras

RESOURCE PERSONS

Dr. Anshu Kumar

Department: Department of Mathematics, SSBSR Sharda University

Dr. Anshu Kumar have joined Sharda group of institutions in 2007. At present, he is working as an Assistant Professor in the department of mathematics in the School of basic sciences and Research of Sharda University. He have done Ph.D. from Motilal Nehru National Institute of Technology.

School: SSBSR
 Programme: UG.
 Branch: B.Sc. Mathematics,
 B.Sc. Data Science & Analytics

Batch : 2024-2027
 Current Academic Year: 2024-2025
 Semester : II

1. Course Code	NV34017	
2. Course Title	Vedic Mathematics: Simplifying Complex Calculation	
3. Credits	Audit Course	
4. Contact Hours (L-T-P)	30 Hours	
Course Type	Value added course	
5. Course Objective	1.To introduce the fundamental concepts of Vedic Mathematics. 2.To increase concentration and help in reducing silly mistakes. 3.To appreciate the mathematical advancements of Ancient India.	
6. Course Outcomes	CO1: The student will be able to appreciate ancient Indian Mathematics and its contribution to the world. CO2: The student will be able to understand the need of conceptual knowledge over procedural processes. CO3: The student will be able to know how to use sutras in multiplication. CO4: The student will be able to develop conceptual knowledge of mathematical concepts of division. CO5: The student will be able to develop conceptual knowledge of mathematical concepts of squaring. CO6: The student will be able to know how to find square of a number using reverse squaring method and general method of square root.	
7. Course Description	This is an introductory course that provides an in-depth understanding of Vedic Mathematics. This course introduces the wonderful applications of Vedic Mathematics to Arithmetical computations, theory of numbers, special multiplications, squaring, square root and division.	
8. Outline syllabus		CO Mapping
Unit 1	Contribution of Indian Mathematicians	
A	Introduction of Bharti Krishna Tirtha, Brahmagupta	CO1
B	Srinivasa Ramanujan, Varahmihir, Aryabhata I, II	CO1
C	Neelkanth Somayya, Bhaskara I, II, Lilavati	CO1
Unit 2	Introduction -Fast methods for calculation	
A	Multiply 2 digit, 3 digit, 4 digit & 5 digit number by 11	CO2
B	Multiply 2 digit, 3 digit, 4 digit & 5 digit number by 111	CO2
C	Square of any 2 digit & 3 digit number ending with 5	CO2
D	Special multiplication using vedic maths (unit digit sum 10)	CO2
Unit 3	Vedic Maths using sutras-1	
A	Multiply with 9999... series	CO3
B	Smart way to multiply by 5, 25, 125	CO3
C	Nikhilam Sutra- multiplication method as per opted base	CO3
D	Tiryak Sutra- multiplication on particular pattern	CO3
E	Duplex method- (Dvandva yoga)- for squaring of numbers	CO3
F	Anurupya Sutra- For cube	CO3
Unit 4	Vedic Maths using sutras-2	
A	Dharjanka Sutra- Division Trick – without opted base	CO4
B	Mihhlm Sutra – Division using opted base	CO4
C	Division Trick – without opted base	CO4
Unit 5	Square and cube root using sutras	
A	Simple equation	CO6
B	Simultaneous equation – Pravarthi sutra	CO5, CO6
C	Square root of exact square & cube root	CO5, CO6
Mode of Examination	Assignment/Quiz	
Text Book	1. Dr. Anil Kumar Teotia Fundamentals and Applications of Vedic Mathematics, Published by SCERT New Delhi, 2014.	
Other Reference	1. Vedic Mathematics Made easy by Dhaval Bhatia	