

**KONGUNADU ARTS AND SCIENCE COLLEGE
(AUTONOMOUS)**

COIMBATORE – 641 029



**CURRICULUM AND SCHEME OF EXAMINATIONS (CBCS)
(2025 - 2026 and onwards)**

for the programme

DIPLOMA IN VEDIC MATHEMATICS

Offered by

DEPARTMENT OF MATHEMATICS

DIPLOMA IN VEDIC MATHEMATICS

Curriculum and Scheme of Examinations under CBCS for the candidates
Admitted from 2025 - 2026 and onwards

Semester	Subject Code	Title of the Paper	Instructional Hrs/Cycle	Exam Marks			Duration of Exam	Credits
				CIA	ESE	Total		
I	25DVM101	Core Paper I Vedic Arithmetic	2	25	75	100	2	3
	25DVM102	Core Paper II Vedic Algebra	2	25	75	100	2	3
II	25DVM203	Core Paper III Vedic Geometry	2	25	75	100	2	3
	25DVM2Z1	Project – Viva voce	2	20	80	100	-	3
		Total	8	-	-	400	-	12

CBCS – Choice Based Credit System

CIA – Continuous Internal Assessment

ESE – End of Semester Examinations

*- Duration of Examination is scheduled for 2 Hours to enhance speedy calculation

Components of Continuous Internal Assessment

Components		Marks	Total
Theory			
CIA I	75	(75+75) converted to 15	25
CIA II	75		
Attendance		5	
Others*		5	
Project			
Review		15	20
Attendance		5	

* Class Participation, Case Studies Presentation, Field Work, Field Survey, Group Discussion, Term Paper, Workshop/Conference Participation. Presentation of Papers in Conferences, Quiz, Report/Content writing. Etc.

** Two Assignments to be given. (Each 5 marks).

BLOOM'S TAXONOMY BASED ASSESSMENT PATTERN

(K1-Remembering; K2-Understanding; K3-Applying; K4-Analyzing; K5-Evaluating)

Theory Examination

i) CIA I & II and ESE: 75 Marks

Knowledge Level	Section	Marks	Description	Total
K1 – K2 Q1 to 10	A (Answer all)	10 x 1 = 10	MCQ-10	75
K2 – K5 Q11 to 15	B Either or Pattern	5 x 5 = 25	Short Answers	
K2 – K5 Q16 to 20	C Either or Pattern	5 x 8 = 40	Descriptive / Detailed	

ESE Project Viva Voce:

Knowledge Level	Section	Marks	Total
K3	Project Report	60	80
K4		20	
K5	Viva voce		

Programme Code: 02		Diploma in Vedic Mathematics		
Title of the Paper		Core Paper I Vedic Arithmetic		
Batch 2025 - 2026	Hours/Cycle 2	Total Hours 30	Credits 3	Employability/ Skill Development

Course Objectives

1. To get the knowledge of ancient arithmetic calculations.
2. To Understand the concepts of Nikhilam sutras
3. To Solve the square root problems using Ekadhikensutram

Course Outcomes (CO)

K1 to K5	CO1	Remembering the basic 16 sutras and 13 sub sutras
	CO2	Applying the Nikhilam sutras for arithmetic calculations
	CO3	Analyzing certain sutras in vedic arithmetic
	CO4	Evaluating the concept of vedic arithmetic with modern mathematics
	CO5	Exploring the Vedic sutras in arithmetic.

Syllabus

UNIT – I

(6 Hours)

History of Vedic Mathematics – salient features of Vedic Mathematics – formulae – 16 sutras, 13 sub sutras – terms and operations. High speed addition by using the concept of computing the whole and from left to right – super fast subtraction by Nikhilam sutras from basis 100,1000,10,000.

UNIT – II

(6 Hours)

Multiplication: Ekadhikenpurvensutram – Eknunenpurvensutram - vinculum sutram – NikhilamNavtashchramanDashtahasutram

UNIT – III

(6 Hours)

Meaning of Ekadhikensutram and its applications in finding squaring of numbers ending in 5 – squares of Anurupeyanasutram – squares by Yavdunamthavadunikrityavargamchayojyetsutram – squaring by Dwandvayogasutram – squaring numbers nearest 50 – square roots of perfect square – general method of square roots – cubes by Anurupeyanasutram.

UNIT – IV

(6 Hours)

Decimals and fractions – division by Nikhilamsutram – division of $1/19$, $1/29$ by ekadhikenpurvensutram - division by paravartyasutram – division by anurupeyanasutram – division of polynomials – factors of general second degree equation by lopsthapanabhayamsutram.

UNIT – V**(6 Hours)**

Contribution of Indian Mathematicians in light of Arithmetic– Aryabhatta – Brahmagupta – Mahaveeracharya – Bharti Krishna Tirtha.

Teaching Methods

Smart Classroom /Powerpoint presentation /Seminar /Quiz/Discussion /Flipped Class/ peer Learning/ Experiential Learning/Blended learning

RECOMMENDED BOOKS FOR STUDY

1. Vedic Mathematics, JagadguruSankaracarya Swami Sri Bharati KrsnaTirthaji Maharaja, Motilal Banarsidass Publishers, New Delhi.
2. Vedic Ganita: Vihangama Drishti-1,ShikshaSanskritiUtthanNyas, New Delhi.
3. Bharatiya Mathematicians, Sharda Sanskrit Sansthan, Varanasi.
4. Leelavati, Chokhambha Vidya Bhavan, Varanasi.

Mapping

PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO					
CO1	S	S	H	M	M
CO2	H	M	S	S	H
CO3	M	H	M	S	S
CO4	S	S	H	M	H
CO5	S	H	M	S	H

S-Strong; H-High; M-Medium; L-Low

Programme Code: 02		Diploma in Vedic Mathematics		
Title of the Paper		Core Paper II Vedic Algebra		
Batch 2025 - 2026	Hours/Cycle 2	Total Hours 30	Credits 3	Employability/ Skill Development

Course Objectives

1. To get the knowledge of ancient algebraic calculations.
2. To Understand the concepts of Urdhvataragbhyamsutram
3. To Solve the factorization problems using Urdhvataragbhyamsutram

Course Outcomes (CO)

K1 to K5	CO1	Remembering the basic 16 sutras and 13 sub sutras
	CO2	Applying Urdhvataragbhyamsutram for algebraic calculations
	CO3	Analyzing certain sutras in vedic algebra
	CO4	Evaluating the concept of vedic algebra with modern mathematics
	CO5	Exploring the Vedic sutras in Algebra.

Syllabus

UNIT – I

(6 Hours)

Multiplication: Quadratic expressions of single variable – Urdhvataragbhyamsutram – combined operations

UNIT – II

(6 Hours)

Division and factorization : Linear expression of single variable - Quadratic expressions of single variable.

UNIT – III

(6 Hours)

LCM AND HCF

UNIT – IV

(6 Hours)

Solution of Linear Simultaneous Equations

UNIT – V

(6 Hours)

Contribution of Indian Mathematicians in light of Algebra – Varahmihir – Bhaskaracharya – Neelkanth Somayya – Bharti Krishna Tirtha.

Teaching Methods

Smart Classroom /Powerpoint presentation /Seminar /Quiz/Discussion /Flipped Class/ peer Learning/ Experiential Learning/Blended learning

RECOMMENDED BOOKS FOR STUDY

1. Vedic Mathematics, JagadguruSankaracarya Swami Sri Bharati KrsnaTirthaji Maharaja, Motilal Banarsidass Publishers, New Delhi.
2. Vedic Ganita: Vihangama Drishti-1, ShikshaSanskritiUtthanNyas, New Delhi.
3. Bharatiya Mathematicians, Sharda Sanskrit Sansthan, Varanasi.
4. Beejganitam, Chokhambha Vidya Bhavan, Varanasi.

Mapping

PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO					
CO1	S	S	H	M	M
CO2	H	M	S	S	H
CO3	M	H	M	S	S
CO4	S	S	H	M	H
CO5	S	M	S	M	H

S-Strong; H-High; M-Medium; L-Low

Programme Code: 02		Diploma in Vedic Mathematics		
Title of the Paper		Core Paper III Vedic Geometry		
Batch 2025 - 2026	Hours/Cycle 2	Total Hours 30	Credits 3	Employability/ Skill Development

Course Objectives

1. To get the knowledge of Bhaudhayana Number
2. To Understand the concepts of sutras in geometry
3. To Solve the complex square root problems using sutras in geometry

Course Outcomes (CO)

K1 to K5	CO1	Remembering the basic concept of Bhaudhayana Number
	CO2	Applying the ancient sutras for solving geometric problems
	CO3	Analyzing certain sutras in vedic geometry
	CO4	Evaluating the concept of vedic geometry with modern mathematics
	CO5	Exploring the Vedic sutras in Geometry.

Syllabus

UNIT – I

(6 Hours)

Concept of Bhaudhayana Number (BN) – BN of an angle – Multiplication of a constant in a BN – BN of complementary angles – BN of sum and difference ($a +$ or $- b$) of an angle – BN of half angle.

UNIT – II

(6 Hours)

Trigonometry: Definitions of trigonometric ratios – trigonometric identities.

UNIT – III

(6 Hours)

Co-ordinate Geometry: Different forms of straight lines.

UNIT – IV

(6 Hours)

Complex Numbers: Multiplication, Division and Square root.

UNIT – V

(6 Hours)

Contribution of Indian Mathematicians in light of Geometry – Bhaskaracharya – Madhavan – Parmeshvaran - Baudhayana.

Teaching Methods

Smart ClassRoom /Powerpoint presentation /Seminar /Quiz/Discussion /Flipped Class/ peer Learning/ Experiential Learning/Blended learning

RECOMMENDED BOOKS FOR STUDY

1. Vedic Mathematics, JagadguruSankaracarya Swami Sri Bharati KrsnaTirthaji Maharaja, Motilal Banarsidass Publishers, New Delhi.
2. Vedic Ganita: Vihangama Drishti-1, ShikshaSanskritiUtthanNyas, New Delhi.
3. Bharatiya Mathematicians, Sharda Sanskrit Sansthan, Varanasi.
4. Beejganitam, Chokhambha Vidya Bhavan, Varanasi.

Mapping

PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO					
CO1	S	S	H	M	M
CO2	H	M	S	S	H
CO3	M	H	M	S	S
CO4	S	S	H	M	H
CO5	S	H	H	S	M

S-Strong; H-High; M-Medium; L-Low

Programme Code: 02		Diploma in Vedic Mathematics		
Title of the Paper		Project and Viva voce		
Batch 2025 - 2026	Hours/Cycle 2	Total Hours 30	Credits 3	Employability/ Skill Development

Course Objectives

1. To study the basic sutras related to the practical problems.
2. To know about the ancient Bharathiya Mathematicians.
3. To share our knowledge to the young buds in the modern society

Course Outcomes

K3 - K5	CO1	Applying the basic sutras in modern Problems
	CO2	Analyzing the sub sutras with basic 13 sutras
	CO3	Deducting the unsolved problems in modern techniques
	CO4	Adopting to the ancient solving technique
	CO5	Discussing an exact result in minimum time

Students can opt anyone of the following to complete the course

1. Contributions of Indian Mathematicians
2. Ancient Bharatiya Mathematical Work (Leelavati, Sulba Sutra, GanitaKaumudi etc., or any other Ancient Indian Text)
3. The manuscript may be a review article based upon personal observations or research article giving some new idea.
4. Candidates may deliver a lecture in any educational institute (School or College) on VedicMathematics and feedback from head of the institute may be submitted.
Feedback must be on letter head of the institute duly signed and stamped.

Distribution of marks for option 1-3

Distribution of Marks in ESE

Dissertation	:	60
Viva voce	:	20
Total		80

Internal

Project Review	:	15
Attendance	:	5
Total		20

To be awarded jointly by the internal and external examiners

25DVM2Z1

Distribution of marks for option 4

For producing the feedback letter from the head of the institution duly signed and stamped will be awarded 100 marks by the Internal Examiner.

Mapping

CO \ PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	H	M	S	H
CO2	H	M	H	M	S
CO3	S	H	M	H	M
CO4	S	S	H	H	M
CO5	M	S	S	H	S

S - Strong; **H**-High; **M**-Medium; **L**-Low