KONGUNADU ARTS AND SCIENCE COLLEGE

(AUTONOMOUS)

COIMBATORE – 641 029

CURRICULUM AND SCHEME OF EXAMINATIONS (CBCS)
(2026 - 2027 and onwards)

for the programme

CERTIFICATE PROGRAMME ON VEDIC MATHEMATICS

Offered by

DEPARTMENT OF MATHEMATICS

PROGRAMME OUTCOME (PO):

PO 1: To provide learners with a comprehensive understanding of the principles and techniques of Vedic Mathematics.

PO 2: To develop strong mental calculation, analytical thinking, and problem-solving abilities through the application of Vedic mathematical methods.

PO 3: To enable learners to apply Vedic Mathematics techniques effectively in academic, Competitive, and professional contexts.

PO 4: To foster intellectual growth, logical reasoning, and mathematical confidence among learners.

PO 5: To introduce learners to the historical and cultural heritage of Vedic Mathematics and its relevance in modern education.

PO 6: To equip graduates with innovative and efficient mathematical approaches that enhance speed, accuracy, and computational skills.

PO 7: To encourage lifelong learning and the practical application of Vedic Mathematics for personal, academic, and professional excellence.

PROGRAM SPECIFIC OUTCOMES (PSO):

PSO 1: Aware about ancient Indian mathematics.

PSO 2: Aware about computational power of sutras

PSO 3: To perform a critical and comparative analysis about mathematics and current Mathematics system.

PSO 4: Acquaint with Vedic mathematics with applications

PSO 5: Ability to do basic maths faster and with ease.

PSO 6: To explore the hidden knowledge in Vedas and Indian ancient knowledge& culture.

CERTIFICATE PROGRAMME ON VEDIC MATHEMATICS

Curriculum and Scheme of Examinations under CBCS for the candidates
Admitted from 2026 - 2027 and onwards

Semester	Subject Code	Title of the Paper	Instructional Hrs/Cycle	Exam Marks			Duration of Exam (Hours)	Credits
				CIA	ESE	Total		
I	26CVM101	Core Paper 1 Introduction to Vedic Mathematics	2	25	75	100	2	2
	26CVM102	Core Paper 2 Contribution of Bharatiya Mathematicians	2	25	75	100	2	2
	26CVM1Z1	Group Project	2	20	80	100	-	2
		Total	**6**	**-**	**-**	**300**	**-**	**6**

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

1. Theory Examinations

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	Viva voce	20	
K5			

26CVM101

Programme Code: 02	Certificate Programme on Vedic Mathematics			
Title of the Paper	Core Paper 1 Introduction to Vedic Mathematics			
Batch 2026 – 2027 Duration: 6 Month	Instruction Hours/Cycle 2	Total Hours 30	Credits 2	Employability/ Skill Development

Course Objectives

1. Cultivate an interest for numbers and the eliminates the math-phobia present in the students.
2. Sharpen students mind, increase mental ability and intelligence.
3. Develop left and right sides of brain by increasing visualization and concentration abilities.

Course Outcome

K1 – K5	CO1	Understand the various techniques in Vedic mathematics
	CO2	Recognize the meaning of mathematical sutras in Sanskrit.
	CO3	Develop the understanding of objectives and features of Vedic maths.
	CO4	Analyze the different methods available for effective calculation.
	CO5	Interpret reverse squaring to find square root of perfect square.

Syllabus

UNIT – I **(6 Hours)**

History of Vedic Mathematics – salient features of Vedic Mathematics – formulae – 16 sutras, 13 sub sutras – terms and operations.

UNIT – II **(6 Hours)**

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.

Multiplication by Urdhavtrighbhyamsutram- Multiplication by vinculum sutram.

UNIT – III **(6 Hours)**

Multiplication by Nikhilamsutram – fast multiplication by 11 – multiplication of numbers consisting of all 9's – multiplication of numbers nearest to the base 10 and multiplication of sub base 50,500,5000.

Meaning of Ekadhikensutram and its applications in finding squaring of numbers ending in 5.

UNIT – IV **(6 Hours)**

Squares of Anurupeyana sutram – Squares by Yavdunam thavadunikrit yavargamchayojyet sutram – Squaring by Dwandvayoga sutram – Squaring numbers nearest 50 – Square roots of perfect square – General method of square roots – Cubes by Anurupeyana sutram.

UNIT – V **(6 Hours)**

Decimals and fractions – division by Nikhilam sutram – division of 1/19, 1/29 by ekadhikenpurven sutram - division by paravartya sutram – division by anurupeyana sutram – division of polynomials – factors of general second degree equation by lopsthapanabhayam sutram.

RECOMMENDED BOOKS FOR STUDY

1. Vedic Mathematics, JagadguruSankaracarya Swami Sri BharatiKrsnaTirthaji Maharaja, MotilalBanarsidass Publishers, New Delhi.
2. Vedic Ganita: Vihangama Drishti-1,ShikshaSanskritiUtthanNyas,New Delhi.
3. Bharatiya Mathematicians, Sharda Sanskrit Sansthan, Varanasi.
4. Leelavati, ChokhambhaVidyaBhavan, Varanasi.

e-Resources

1.https://www.youtube.com/watch?v=zAt365xAFc&list=PL37kVxuLUBb7WJUQZFLOFN1n70bfRCauP

2.https://www.youtube.com/watch?v=tNL9_JG6XJM&list=PL37kVxuLUBb7WJUQZFLOFN1n70bfRCauP&index=24

3.https://www.youtube.com/watch?v=HgGIPVRVnnk&list=PL37kVxuLUBb7WJUQZFLOFN1n70bfRCauP&index=51

4.https://www.youtube.com/watch?v=2XehegXxueo&list=PL37kVxuLUBb7WJUQZFLOFN1n70bfRCauP&index=39

5. https://www.youtube.com/watch?v=OxYI3Z_mlek

Mapping

PSO / CO	PSO1	PSO2	PSO3	PSO4	PSO5
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

Content prepared by (Based on Inputs) Signature of the Course in-charge	 Signature of the HOD

26CVM102

Programme Code: 02	Certificate Programme on Vedic Mathematics			
Title of the Paper	**Core Paper 2 Contribution of Bharatiya Mathematicians**			
Batch **2026 – 2027** **Duration: 6 Month**	**Instruction Hours/Cycle** **2**	**Total Hours** **30**	**Credits** **2**	**Employability/ Skill Development**

Course Objectives

1. Role of Mathematics in various walks of life.
2. It helps in enhancing the reputation.
3. Better understanding of the subject.

Course Outcome

K1 – K5	**CO1**	Understand Indian Mathematicians made great strides in developing arithmetic.
	CO2	Remember the various techniques and ideas in ancient mathematics
	CO3	Solve general equations using sutras.
	CO4	Analyze modern mathematics with Ancient mathematics.
	CO5	Apply various sutras for complex problems.

Syllabus

UNIT – I **(6 Hours)**

Contribution of Indian Mathematicians in light of Arithmetic- Aryabhatt – Brahmagupta – Mahaveeracharya – Bharti Krishna Tritha.

UNIT – II **(6 Hours)**

Contribution of Indian Mathematicians in light of Algebra –Varahmihir – Bhaskaracharya – NeelkanthSomayya – Bharti Krishna Tritha.

UNIT – III **(6 Hours)**

Contribution of Indian Mathematicians in light of Geometry –Bhaskaracharya – Madhavan – Parameshvaran.

UNIT – IV **(6 Hours)**

Contribution of Indian Mathematicians in light of Geometry - Bharti Krishna Tritha - Baudhayana.

UNIT – V **(6 Hours)**

General Equations – Tips for Competitive Exams.

RECOMMENDED BOOKS FOR STUDY

1. Bharatiya Mathematicians, Sharda Sanskrit Sansthan, Varanasi.
2. Leelavati, ChokhambhaVidyaBhavan, Varanasi.
3. Vedic Mathematics Made easy ,DhavalBathia, Jaico Publication, 8th Edition 2017, Mumbai- 400 001

e-Resources

1. https://www.youtube.com/watch?v=Ghhslz7HOqo
2. https://www.youtube.com/watch?v=sOSjEUurMvc
3. https://www.youtube.com/watch?v=MF1-bhV6xRM
4. https://www.youtube.com/watch?v=GkpmLB12Xhs
5. https://www.youtube.com/watch?v=gNJNmPJqXJc

Mapping

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

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

Content prepared by (Based on Inputs) Signature of the Course in-charge	 Signature of the HOD

26CVM1Z1

Programme Code: 02		**Certificate Programme in Vedic Mathematics**		
Title of the Paper		**Group Project**		
Batch **2026 – 2027** **Duration: 6 Month**	**Hours/Cycle** **2**	**Total Hours** **30**	**Credits** **2**	**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**	Develop the understanding of objectives and features of Vedic Mathematics
	CO2	Recognize the meaning of Mathematical sutras.
	CO3	Applying the various techniques or Sutras in real life problems.
	CO4	Analyze the result with existing result.
	CO5	Interpret the results with suitable examples.

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 onletter head of the institute duly signed and stamped.

Distribution of Marks in ESE

Project Report	:	60
Viva voce	:	20
Total		**80**

Internal

Project Review	:	15
Regularity	:	5
Total		**20**

To be awarded jointly by the internal and external examiners

Mapping

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

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

Content prepared by (Based on Inputs) Signature of the Course in-charge	 Signature of the HOD