

KONGUNADU ARTS AND SCIENCE COLLEGE
(AUTONOMOUS)
COIMBATORE – 641 029



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

for the programme

CERTIFICATE PROGRAMME ON VEDIC MATHEMATICS

Offered by

DEPARTMENT OF MATHEMATICS

CERTIFICATE PROGRAMME ON 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	25CVM101	Core Paper I Introduction to Vedic Mathematics	2	25	75	100	2	2
	25CVM102	Core Paper II Contribution of Bharatiya Mathematicians	2	25	75	100	2	2
	25CVM1Z1	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		20	
K5	Viva voce		

Programme Code: 02	Certificate Programme on Vedic Mathematics			
Title of the Paper	Introduction to Vedic Mathematics			
Batch 2025 - 2026	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 Urdhavtrigbhyamsutram- 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 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 – V**(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.

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.

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	Certificate Programme on Vedic Mathematics			
Title of the Paper	Contribution of Bharatiya Mathematicians			
Batch 2025 - 2026	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, Chokhambha Vidya Bhavan, Varanasi.
3. Vedic Mathematics Made easy, Dhaval Bathia, Jaico Publication, 8th Edition 2017, Mumbai-400 001

Mapping

PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO					
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

Programme Code: 02		Certificate Programme in Vedic Mathematics		
Title of the Paper		Group Project		
Batch 2025 - 2026	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 on letter head of the institute duly signed and stamped.

Distribution of Marks in ESE

Internal

Project Report : 60
Viva voce : 20
Total 80

Project Review : 15
Regularity : 5
Total 20

To be awarded jointly by the internal and external examiners

Mapping

CO \ PSO	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