

Corrigendum

Admissions in the Certificate Course in Vedic Mathematics (CCVM)

The Department of Mathematics and Statistics, Central University of Punjab, Bathinda offers a six months certificate course in Vedic Mathematics (CCVM). The aim of this course is to enhance the capability of students of doing mental calculations and complex computation in fraction of seconds without using calculator. The 10+2 examination pass candidates are eligible for admission in the course CCVM. The currently enrolled students of CUPB (except Ph. D. students), faculty members and staff of the university may register in the course. The candidates can register themselves by clicking on the link given below:

<https://forms.gle/ioecbtmQZMJkF7nb7>

Fee Structure for Certificate Course in Vedic Mathematics (CCVM)		
For New Students	For Alumni Students of Central University of Punjab	For Currently Registered CUPB Students
9600.00	9000.00	3510.00

Total seats: **50**

Eligibility: 10+2 pass in any stream

Last date for Application: Dec. 31, 2022

Mode of Classes: Online/offline

For the Syllabus/Prospectus of the course, click on:

http://cup.edu.in/syllabi_2022_24.php

Fee payment link for the course CCVM:

<https://forms.eduqfix.com/centralup/add>

For any query contact:

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**DEPARTMENT
OF
MATHEMATICS AND STATISTICS
CENTRAL UNIVERSITY OF PUNJAB, BATHINDA
(Accredited Grade 'A' by NAAC)**

is offering a

Certificate Course

On

VEDIC MATHETHMATICS

CALL FOR ADMISSIONS

(For the session 2022-23)



ABOUT THE UNIVERSITY

The Central University of Punjab, Bathinda (CUPB) has been established in 2009 along with other new central universities by an ACT of Parliament (No. 25 of 2009). The university accredited with 'A' grade from NAAC. The Central University of Punjab is the youngest university that has secured its position in the top 100 institutions (81st Rank) in the university category and the first amongst new central universities in the MHRD's NIRF Ranking 2022. Currently, CUPB has 31 departments spread over 12 schools in areas ranging from Sciences, Technology, Humanities, Law, and Social Sciences.

ABOUT THE DEPARTMENT

The Department of Mathematics and Statistics at the Central University of Punjab offers programs in the area of pure and applied mathematics and statistics that lead to the Master of Science degree in Mathematics and Statistics. Mathematics plays a critical role in our efforts to understand the nature of the physical universe and our technological society's continuing development. There is also a long tradition that recognizes the value of mathematics for its aesthetic appeal to the human spirit. Many students of the liberal arts decide to study mathematics for one or both of these reasons. Students also study mathematics/statistics to develop critical reasoning skills that can significantly contribute to many personal goals. Of course, the study of mathematics/statistics can lead directly to so many employment opportunities. Department offers two academic programmes each in Mathematics and Statistics, i.e. M.Sc. & Ph.D.

ABOUT THE PROGRAMME

Mathematics is inclusively available in the nature from its creation time. The Vedas are great sources of knowledge. The significance of mathematics is profoundly stated in Vedas, especially in Atharva Veda. It has been regenerated and reinvented by our ancient Rishis and Munis. Vedic mathematics is an ancient technique consisting of 16 sutras and 13 sub-sutras. Brahmagupta (c.598-c.668) has introduced the concept of zero “0”, which is a wonderful gift to the world. The notable contributions in Vedic mathematics are due to Aryabhata (AD 475), Bhāskara II (c. 1114–1185), Madhava and Narayana Pandita (14th century).

The regular way of calculations is sometimes complex and time consuming, but by using the techniques of Vedic mathematics it is possible to perform the calculations quickly and accurately. Vedic mathematics simplifies not only the fundamental arithmetic operations such as multiplication and division, but also more advanced concepts such as simultaneous equations, quadratic equations, the factorization of cubic equations, and so on. Vedic mathematics techniques are rapidly emerging as tools for students appearing in various competitive examinations, where speed and accuracy play a vital role. This programme is designed to introduce with the concepts of Vedic Mathematics which will help students to do complex calculations within the time of few seconds.

Key Features:

- Comprehensive course curriculum
- Highly competent faculty
- Low fee structure
- Students already enrolled in some other programme can also join
- Six months course



S. No.	Headings	Particulars	
1.	Title of the Course	Certificate Course in Vedic Mathematics	
2.	Eligibility for Admission	Candidate who passed standard 10+2 Examination from any stream	
3.	Intake Capacity	50 students per batch	
4.	Passing Marks	The candidate must obtain 40% marks in both Internal and End Semester Examination	
5.	Selection	First Come First Served Basis	
6.	Credits	20 credits	
7.	Duration	6 months (July to December; January to June)	
8.	Number of Lectures	15 hours/Credit	
9.	Fee Structure for Certificate Course in Vedic Mathematics (CCVM)		
	For New Students	For Alumni Students of CUPB	For Already Registered Students at CUPB
	9600.00	9000.00	3510.00
10.	Level	Certificate	
11.	Teaching mode	Online / Offline	
12.	Status	To be implemented from 2022-23	
13.	Evaluation Exam pattern	50% Internal + 50% End Semester Examination Internal assessment of 25 marks Midterm examination of 25 Marks And 50 marks End Semester Examination Total marks = 100	

Preamble of the Course:

Vedic Mathematics is a super-fast way of calculation whereby you can do supposedly complex calculations like 996×998 in less than five seconds flat. It is highly beneficial for school and college students and students who are appearing for their entrance examinations.

Vedic Mathematics is far more systematic, simplified and unified than the conventional system. It is a mental tool for calculation that encourages the development and use of intuition and innovation, while giving the student a lot of flexibility, fun and satisfaction. It means giving them a competitive edge, a way to optimize their performance and gives them an edge in mathematics and logic that will help them to shine in the classroom and beyond.

Therefore, it's direct and easy to implement in schools – a reason behind its enormous popularity among academicians and students. It complements the Mathematics curriculum conventionally taught in schools by acting as a powerful checking tool and goes to save precious time in examinations. The methods & techniques are based on the pioneering work of late Swami Shri. Bharati Krishna Tirthaji, Shankracharya of Puri, who established the system from the study of ancient Vedic texts coupled with a profound insight into the natural process of mathematical reasoning.

There are just 16 Sutras or word formulae which solve all known mathematical problems in the branches of Arithmetic, Algebra, Geometry and Calculus. They are easy to understand, easy to apply and easy to remember.

Benefits of Vedic Mathematics:

- Eliminates math-phobia.
- Increases speed and accuracy.
- More systematic, simplified, unified & faster than the conventional system.
- Gives the student flexibility, fun and immense satisfaction.
- Develops left & right sides of the brains by increasing visualization and concentration abilities.
- Helpful for students to crack numerical aptitude part in competitive examinations.

Objectives:

- To enable the learners to explore the power of Vedic Mathematics.
- To make learners strong in Numerical Mathematics.
- To enable learners to recognize and understand simple techniques of Arithmetic Calculations.
- To train learners to use the ideas of Vedic Mathematics in daily calculations and make those calculations with accuracy and speed.

Learning Outcomes:

By successfully completing this course, the learner will be able to:

- Perform simple arithmetic calculations with speed and accuracy
- Will be able to generate tables of any number
- To perform products of large numbers quickly
- Develop confidence in calculating square roots and cube roots of integers
- Perform difficult calculations speedily.
- Face Numerical Aptitude part of any Competitive Examination confidently.

Course Information: The course structure for this course is as follows:

VDM-OE-101	Vedic Arithmetic	L	T	P	C
		4	0	0	4
		Max. Marks : 100			

Internal assessment-25

Mid Sem-25

End Sem-50

Unit-I: Introduction to Vedic Mathematics and Multiplication

History and Evolution of Vedic Mathematics, Brief Introduction to Sutras and Upsutras of Vedic Mathematics, Vinculum Numbers and their Applications in the formation of Tables, Multiplication using Sutras-Ekadhikena Purvena, Ekadhikena Purvena, Urdhva-tiryagbhyam, Nikhilam Navataḥ Carman Dastah, Combined Operations in Addition and Subtraction of Products and Verification of Results in Products using Beejank.

Unit-II: Power and Root

Square using Nikhilam and Duplex, Addition and Subtraction of Squared Numbers, Square root by Sutra-Nikhilam and Duplex, Cube by Sutra-Anurupyena and Nikhilam, Cube root by Vilokanam up to 9 Digits Numbers.

Unit-III: Division and Divisibility

Division by Sutras-Nikhilam Navatascaramam Dastah, Paravartya Yojayet and Dhvajank, Divisibility (2-99) by Sutra-Ekadhikena Purvena Ekanyunena Purvena, L.C.M. and H.C.F.

Unit-IV: Contribution of Indian Mathematicians (In light of Arithmetic)

1. Aryabhatt
2. Brahmagupt
3. Mahaveeracharya
4. Bharti Krishna Tirtha

Recommended Books:

1. Vedic Mathematics, *Motilal Banarsi Das, New Delhi.*
2. Vedic Ganita: Vihangama Drishti-1, *Siksha Sanskriti Uthana Nyasa, New Delhi.*
3. Vedic Ganita Praneta, *Siksha Sanskriti Uthana Nyasa, New Delhi.*
4. Vedic Mathematics: Past, Present and Future, *Siksha Sanskriti Uthana Nyasa, New Delhi.*
5. Leelavati, *Chokhambba Vidya Bhavan, Varanasi.*
6. Bharatiya Mathematicians, *Sharda Sanskrit Sansthan, Varanasi.*

VDM-OE-102	Vedic Algebra	L	T	P	C
		4	0	0	4
		Max. Marks : 100			

Internal assessment-25

Mid Sem-25

End Sem-50

Unit-I: Introduction & Basic Operations

Addition, Subtraction, Combined operations in Addition and Subtraction Multiplication in Linear and Quadratic Expressions, Addition and Subtraction of Products, Division by linear and Quadratic expressions Divisor.

Unit-II: Division and Factorization

Factorization of Quadratic by Anurupyena and Urdhva-tiryagbhyam, Factorization of Cubic Expressions by Vilokanam, Factorization of Cubic by Sutra- Gunitah Samuccayah Samuccaye Gunitah and Lopana-Sthapanabhym.

Unit:-III: Solution of Equations

LCM and HCF, Solution of Quadratic Equations, Solution of Cubic Equations, Solution of Linear Simultaneous Equations using Urdhva-tiryagbhyam and Sunyam Samya Samuccaye.

Unit-IV: Contribution of Indian Mathematicians (In light of Algebra)

1. Varahmihir
2. Bhaskaracharya
3. Neelkanth Somayya
4. Bharti Krishna Tirtha

Recommended Books:

1. Vedic Mathematics, *Motilal Banarsi Das, New Delhi.*
2. Vedic Ganita: Vihangama Drishti-1, *Siksha Sanskriti Uthana Nyasa, New Delhi.*
3. Vedic Ganita Praneta, *Siksha Sanskriti Uthana Nyasa, New Delhi.*
4. Vedic Mathematics: Past, Present and Future, *Siksha Sanskriti Uthana Nyasa, New Delhi.*
5. Beejganitam, *Chokhambba Vidya Bhavan, Varanasi.*
6. Bharatiya Mathematicians, *Sharda Sanskrit Sansthan, Varanasi.*

VDM-OE-103	Vedic Geometry	L	T	P	C
		4	0	0	4
		Max. Marks : 100			

Internal assessment-25

Mid Sem-25

End Sem-50

Unit-I: Concept of Baudhayana Number (BN)

BN of an Angle, Multiplication of a Constant in a BN, BN of Complementary Angles, BN of Sum and Difference ($\alpha \pm \beta$) of an Angle, BN of Half Angle

Unit-II: Trigonometry

Definitions of Trigonometric Ratios, Formulation of Trigonometric Identities and their Applications

Unit-III: Co-ordinate Geometry:

Formation of Different Forms of Straight Lines, Complex Numbers-Multiplication, Division and Square root.

Unit-IV: Contribution of Bharatiya Mathematicians (In the light of Geometry)

Bhaskaracharya, Madhavan, Parmeshvaran, Bharti Krishna Tirth, Baudhayana

Recommended Books:

1. Vedic Mathematics, *Motilal Banarsi Das, New Delhi.*
2. Vedic Ganita: Vihangama Drishti-1, *Siksha Sanskriti Uthana Nyasa, New Delhi.*
3. Vedic Ganita Praneta, *Siksha Sanskriti Uthana Nyasa, New Delhi.*
4. Vedic Mathematics: Past, Present and Future, *Siksha Sanskriti Uthana Nyasa, New Delhi.*
5. Beejganitam, *Chokhambba Vidya Bhavan, Varanasi.*
6. Bharatiya Mathematicians, *Sharda Sanskrit Sansthan, Varanasi.*

VDM-OE-104	Project work and Seminar	L	T	P	C
		0	0	16	8
		Max. Marks : 100			

Internal assessment-25

Mid Sem-25

End Sem-50

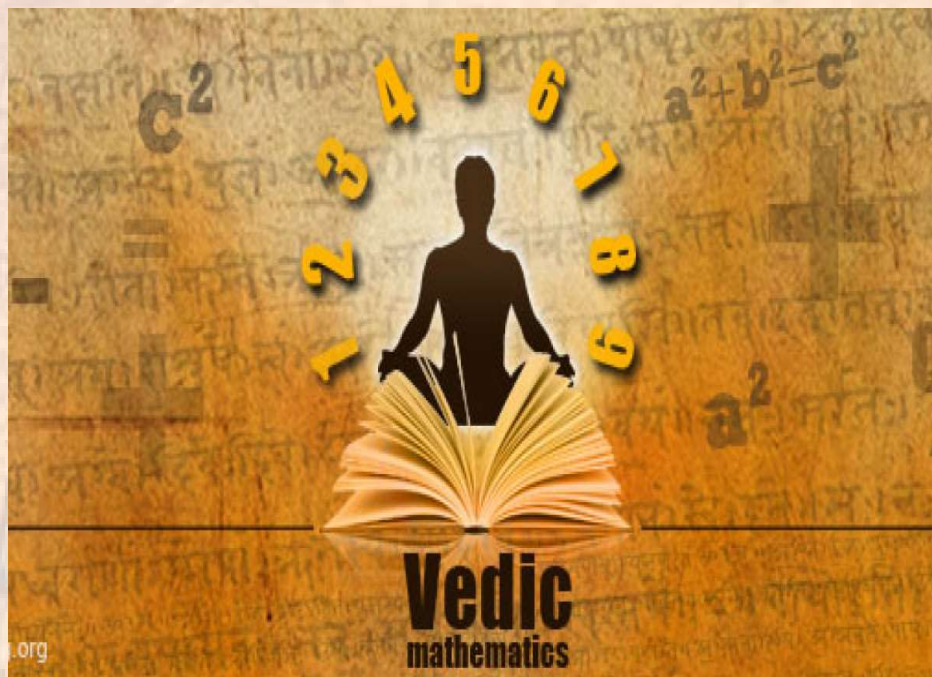
1. Original Manuscript on any one of the following subjects:

- (i) Vedic Mathematics
- (ii) Contribution of Indian Mathematicians
- (iii) Ancient Bharatiya Mathematical Work (Leelavati, Sulba Sutra, Ganita Kaumudi etc. or any other Ancient Indian Text)

The manuscript may be a review article based upon personal observations or a research article giving some new idea.

- 2.** Candidates may deliver lectures in any educational institute (School or College) on Vedic Mathematics and feedback from the head of the institute may be submitted to the University. Feedback must be on the letter head of the institute duly signed and stamped.





Eligibility: 12th in any stream

Course Fee and Registration: Rs. 7000/-

Registration Deadline: To be announced

Contact Details:

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