

Structure & Syllabi

of

Certificate Course in Vedic Mathematics

One Semester Course



Date of BOS -11/06/2024

Center for Vedic Mathematics

Department of Mathematics & Statistics

Dr. Harisingh Gour Vishwavidyalaya Sagar

(M.P.)

Signature
11/6/24

Signature
11/6/24

Signature
14/6/24

Signature
14-06-2024

Signature
14.06.2024

Signature
11/6/24

Signature

Signature
14.6.24
14/6/24

Signature

Passed by Board of Studies Dated. 11/06/24

DOCTOR HARISINGH GOUR VISHWAVIDYALAYA, SAGAR

(A Central University)

Department of Mathematics and Statistics

VDM-OE-101	Vedic Arithmetic	L	T	P	C
		2	0	0	2
		Max. Marks : 100			

Mid Sem-20

Internal Assessment-20

End Sem-60

Unit-I: Multiplication

1. Ekadhikēpurven method (multiplication of two numbers of two digits)
2. Eknunenpurven method (multiplication of two numbers of three digits)
3. Urdhvatiragbhyam method (multiplication of two numbers of three digits)
4. Nikhilam Navtashchramam Dashtaha (multiplication of two numbers of three digits)
5. Combined Operations

Unit-II: Division and Divisibility

Part A: Division

1. Nikhilam Navtashchramam Dashtaha (two digits divisor)
2. Paravartya Yojyet method (three digits divisor)

Part B: Divisibility

1. Ekadhikēpurven method (two digits divisor)
2. Eknunenpurven method (two digits divisor)

Unit-III: LCM and HCF

Unit-IV: Power and Root

Power: (i) Square (two-digit numbers), (ii) Cube (two-digit numbers).

Root: (i) Square root (four digit number) (ii) Cube root (six digit numbers)

Unit-V: 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, Chokhambha Vidya Bhavan, Varanasi.
6. Bharatiya Mathematicians, Sharda Sanskrit Sansthan, Varanasi.

[Signature]
11.6.24

[Signature]

[Signature]

[Signature]

DOCTOR HARISINGH GOUR VISHWAVIDYALAYA, SAGAR

(A Central University)

Department of Mathematics and Statistics

VDM-OE-102	Vedic Algebra	L	T	P	C
		2	0	0	2
		Max. Marks : 100			

Mid Sem-20

Internal Assessment-20

End Sem-60

Unit-I: Multiplication (Quadratic expressions of single variable)

1. Urdhvatiragbhyam Method
2. Combined Operations

Unit-II: Division and Factorization

1. Division (Divisor: Linear expression of single variable)
2. Factorization (Quadratic expression of single variable)

Unit-III: LCM and HCF

Unit-IV: Solution of linear simultaneous equations

Unit-V: 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, Chokhambha Vidya Bhavan, Varanasi.
6. Bharatiya Mathematicians, Sharda Sanskrit Sansthan, Varanasi.

[Signature]
11/6/24

[Signature]
11/6/24

[Signature]

[Signature]

DOCTOR HARISINGH GOUR VISHWAVIDYALAYA, SAGAR

(A Central University)

Department of Mathematics and Statistics

VDM-OE-103	Vedic Geometry	L	T	P	C
		2	0	0	2
		Max. Marks : 100			

Mid Sem-20

Internal Assessment-20

End Sem-60

Unit-I: Concept of Bhaudhayana Number (BN)

1. BN of an angle
2. Multiplication of a constant in a BN
3. BN of complementary angles
4. BN of sum and difference ($\alpha \pm \beta$) of an angle.
5. BN of half angle

Unit-II: Trigonometry

1. Definitions of trigonometric ratios
2. Trigonometric Identities

Unit-III: Co-ordinate Geometry

Different forms of straight lines.

Unit-IV: Complex Numbers

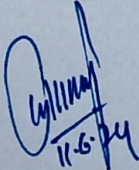
Multiplication, Division and Square root.

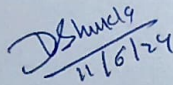
Unit-V: Contribution of Bharatiya Mathematicians (In the light of Geometry)

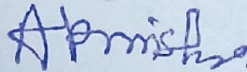
1. Bhaskaracharya
2. Madhavan
3. Parmeshvaran
4. Bharti Krishna Tirtha
5. Baudhayana

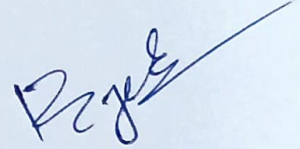
Recommended Books:

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, Chokhambha Vidya Bhavan, Varanasi.
6. Bharatiya Mathematicians, Sharda Sanskrit Sansthan, Varanasi.


11/6/24


11/6/24





Passed by Board of Studies Dated..11/06/24

DOCTOR HARISINGH GOUR VISHWAVIDYALAYA, SAGAR

(A Central University)

Department of Mathematics and Statistics

VDM-OE-104	Assignment & Presentation Work	L	T	P	C
		0	0	2	2
		Max. Marks : 100			

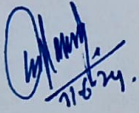
Mid Sem-20
Internal Assessment-20
End Sem-60

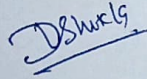
1. Original Manuscript on any one of the following subjects:

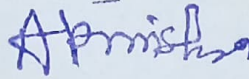
- Vedic Mathematics
- Contribution of Indian Mathematicians
- Ancient Bharatiya Mathematical Work (Leelavati, Sulba Sutra, Ganita Kaumudi etc. or any other Ancient Indian Text)

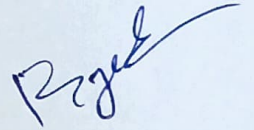
The manuscript may be a review article based upon personal observations or research article giving some new idea.

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


11/06/24.







Passed by Board of Studies Dated. 11/06/24

School Board Meeting held on 14th June, 2024

The School Board has approved the minute of meeting of BOS of Department of Mathematics and Statistics held on 11/06/2024.

Prof. A.K. Saxena
External Member

Department of Mathematics, Maharaja Chhatrasal
University, Chhatarpur (M.P.)

Prof. K.S. Varsney
External Member

HoD Physics, D.S. College, Aligarh, U.P.

Prof. Narendra Pandey
External Member

Department of Physics,
University of Lucknow (U.P.)

Prof. Diwakar Shukla
Member

HoD, Department of Mathematics & Statistics
Dr. Harisingh Gour V.V., Sagar (M.P.)

Prof. Ashish Verma
Member

HoD, Department of Physics
Dr. Harisingh Gour V.V., Sagar (M.P.)

Prof. R.K. Rawat
Member

Department of Applied Geology,
Dr. Harisingh Gour V.V., Sagar (M.P.)

Prof. Ranveer Kumar
Member

Department of Physics
Dr. Harisingh Gour V.V., Sagar (M.P.)

Prof. U.K. Patil
Member

Department of Pharmaceutical Science,
Dr. Harisingh Gour V.V., Sagar (M.P.)

Dr. Abhishek Bansal
Member & Associate Professor

HoD, Department of Computer Science & Applications
Dr. Harisingh Gour V.V., Sagar (M.P.)

Prof. U.K. Khedlekar

Member & Associate Professor
Department of Mathematics & Statistics,
Dr. Harisingh Gour V.V., Sagar (M.P.)

Dr. Rekha Garg Sonaki
Member & Associate Professor
Department of Physics

Dr. Harisingh Gour V.V., Sagar (M.P.)

Prof. Kamal Kant Ahirwar
Member & Assistant Professor

Dept. of Computer Science & Applications
Dr. Harisingh Gour V.V., Sagar (M.P.)

Dr. Mahesh Kumar Yadav
Member & Assistant Professor
Department of Physics
Dr. Harisingh Gour V.V., Sagar (M.P.)

Dr. Maheshwar Panda
Member & Assistant Professor
Department of Physics
Dr. Harisingh Gour V.V., Sagar (M.P.)

Ms. Shivani Khare
Member & Assistant Professor
Department of Vedic Studies
Dr. Harisingh Gour V.V., Sagar (M.P.)

Prof. R.K. Wangele
Chairman, School Board & Dean, SMPS
Dr. Harisingh Gour V.V., Sagar (M.P.)