



हिमाचल प्रदेश केंद्रीय विश्वविद्यालय
Central University of Himachal Pradesh
(Established under Central Universities Act 2009)
शाहपुर परिसर, शाहपुर, ज़िला काँगड़ा (हि.प्र.) - 176206
Shahpur Parisar, Shahpur, Distt. Kangra (HP) - 176206
Website: www.cuhimachal.ac.in



**Course Contents of Interdisciplinary Courses offered by the Srinivasa
Ramanujan Department of Mathematics**

Spring Semester 2023

Course Code: IAM 412

Course Name: Vedic Mathematics

Course credit: 02

Course Instructor: Dr. Pankaj Kumar S/o Lt. Sh. Maniram

Credits Equivalent:

(One credit is equivalent to 10 hours of lectures / organized classroom activity / contact hours; 5 hours of laboratory work / practical / field work / Tutorial / teacher-led activity and 15 hours of other workload such as independent individual/ group work; obligatory/ optional work placement; literature survey/ library work; data collection/ field work; writing of papers/ projects/dissertation/thesis; seminars, etc.)

Attendance Requirements:

Students are expected to attend all lectures in order to be able to fully benefit from the course. A minimum of 75% attendance is a must failing which a student may not be permitted to appear in examination.

Evaluation Criteria:

1. Mid Term Examination:20%
2. End Term Examination:60%
3. Continuous Internal Assessment: 20%. i.e. 20 marks out of100

Course Outcomes: On completion of the course, the students will be able:

- To understand the idea of different vedic sutras and sub-sutras.
- To apply 16 sutras and 13 sub-sutras.

Learning Outcomes

The deliverables Learning Outcomes of this paper with students are following:

- Can explain the idea of sixteen sutras of Vedic Tradition.



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- Can also explain the idea of sub-sutras of Vedic Tradition.
- Can take quick decisions through the use of Sutras and their corollaries.

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3. Continuous Internal Assessment: 20%

Course Contents:

Unit I: The 16 Sutras: Ek adhikina Purvena, Nikhilam Navatashcaramam Dashatah, Urdhva-Tiryagbyham, ParaavartyaYojayet, Shunyam Saamyasamuccaye, (Anurupye) Shunyamanyat, Sankalana-vyavakalanabhyam, Puranapuranyam, Chalana-Kalanabyham, Yaavadunam, Vyashtisamanstih, ShesanyankenaCharamena, Sopaantyadvayamantyam, Ekanyunena Purvena, Gunitasamuchyah, Gunakasamuchyah **(10 HRS)**

Practicum

- Solving the Exercises of the selected Chapters
- Implementation on the selected real world problems

Unit II: Corollary: Anurupyena, Sisyate Sesasamjnah, Adyamadyenantyamantyena, Kevalaih Saptakam Gunyat, Vestanam, Yavadunam Tavadunam, Yavadunam Tavadunikritya Varga Yojayet, Antyayordashake'pi, Antyayoreva, Samuccayagunitah, Lopanasthapanabhyam, Vilokanam, Gunitasamuccayah Samuccayagunitah, Dhvajanka, Dwandwa Yoga, Adyam Antyam Madhyam.

(10 HRS)

Practicum

- Solving the Exercises of the selected Chapters
- Implementation on the selected real world problems



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General Practicum:

- i. Class Room Presentation
- ii. Model/Chart/PowerPoint based presentations
- iii. Assignment/ Write Up/Creative work
- iv. Books/Journals Readings
- v. Tutorials/PBL

Essential Reading:

1. Bharati Krishna Tirtha, Vedic Mathematics, Motilal Banarsidass, New Delhi, (2001).