# 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 of 100

**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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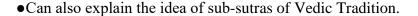


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• Can take quick decisions through the use of Sutras and their corollaries.

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#### **Evaluation Criteria:**

1.Mid Term Examination: 20% 2.End Term Examination: 60%

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, Puranapuranabyham, Chalana-Kalanabyham, Yaavadunam, Vyashtisamanstih, ShesanyankenaCha.ramena, Sopaantyadvayamantyam, Ekanyunena Purvena, Gunitasamuchyah, Gunakasamuchyah

#### **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.

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HRS)

#### **Practicum**

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

आज़ादी<sub>का</sub> अमृत महोत्सव

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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).