



# Central University of Himachal Pradesh

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<b>Course Code:</b>	<b>IKS....</b>
<b>Credits:</b>	<b>02</b>
<b>Course Name:</b>	<b>A Basic Course on Indian Knowledge System</b>
<b>Course Duration:</b>	<b>01 Semester</b>

## **Credits Equivalent:**

One credit of theory is equivalent to 10 hours of lectures / organised 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.).

## **Course Aim and Objectives:**

Bhārata has a very rich and versatile knowledge system and cultural heritage. The Bhāratīya knowledge system was developed during the Vedic period, the Saraswatī-Sindhu Civilization, the Middle ages and is being practiced till the conditions of modern times. In this basic course, a special attention is given to the historical prospective of ideas occurrence in the ancient society, and implication to the concept of material world, and religious, social, and cultural beliefs. On the closer examination religion, culture and science have appeared epistemological very rigidly connected in the Bhāratīya knowledge system. As such, this land has provided invaluable knowledge stuff to the society and the world in all the spheres of life; e.g. aeronautics, astronomy, mathematics, life science, medical science, architecture, polity, trade, art, music, dance, literature, and drama.

Over the period, most of the works were either lost or confined to the libraries or personal possessions. However, some of the activities are still in practice of the masses unknowing the scientific and practical values. Given the nature of course and diversity of the learners' fields, the course is designed to provide a broad-spectrum of the Bhāratīya knowledge system. The main objectives of this course are as follows:

- Creating awareness amongst the youths about the true history and rich culture of the country;
- Understanding the scientific value of the traditional knowledge of Bhārata;
- Promoting the youths to do research in the various fields of Bhāratīya knowledge system;
- Converting the Bhāratīya wisdom into the applied aspect of the modern scientific paradigm;
- Adding career, professional and business opportunities to the youths.

It is also believed that after completion of this course the students will get a holistic insight into the understanding the working of nature and life.

## **Attendance Requirements:**

A minimum of 75% attendance is a must failing which a student may not be permitted to appear in the examination.

**Course Contents**

**UNIT -I: Bhāratīya Civilization and Development of Knowledge System (4 hours)**

Genesis of the land, Antiquity of civilization, On the Trail of the Lost River, Discovery of the Saraswatī River, the Saraswatī-Sindhu Civilization, Traditional Knowledge System, The Vedas, Main Schools of Philosophy (6+3), Ancient Education System, the Takṣaśilā University, the Nālandā University, Alumni, Knowledge Export from Bhārata.

**UNIT-II: Arts, Literature, and Scholars (4 hours)**

Art, Music, and Dance, Naṭarāja– A Masterpiece of Bhāratīya Art, Literature, Life and works of Agastya, Lopāmudrā, Ghoṣā, Vālmīki, Patañjali, Vedavyāsa, Yājñavalkya, Gārgī, Maitreyī, Bodhāyana, Caraka, Suśruta, Jīvaka, Nāgārjuna, Kaṇāda, Patañjali, Kauṭīlya, Pāṇini, Thiruvalluvar, Āryabhaṭa, Varāhamihira, Ādi Śaṅkarācārya, Bhāskarācārya, Mādhavācārya.

**UNIT-III: Science, Astronomy, and Mathematics (4 hours)**

Concept of Matter, Life and Universe, Gravity, Sage Agastya’s Model of Battery, Velocity of Light, Vimāna: Aeronautics, Vedic Cosmology and Modern Concepts, Bhāratīya Kāla-gaṇanā, Kerala School for Mathematics and Astronomy, History and Culture of Astronomy, Sun, Earth, Moon, and Eclipses, Earth is Spherical and Rotation of Earth, Archaeoastronomy; Concepts of Zero and Pi, Number System, Pythagoras Theorem, and Vedic Mathematics.

**UNIT-IV: Engineering, Technology, and Architecture (4 hours)**

Pre-Harappan and Sindhu Valley Civilization, Laboratory and Apparatus, Juices, Dyes, Paints and Cements, Glass and Pottery, Metallurgy, Engineering Science and Technology in the Vedic Age and Post-Vedic Records, Iron Pillar of Delhi, Rakhigarhi, Mehrgarh, Sindhu Valley Civilization, Marine Technology, and Bet–Dwārka.

**UNIT-V: Life, Environment, and Health (4 hours)**

Ethnic Studies, Life Science in Plants, Anatomy, Physiology, Agriculture, Ecology and Environment, Āyurveda, Integrated Approach to Healthcare, Medicine, Microbiology, Medicine, Surgery, and Yoga, etc.

**Text books:**

1. Textbook on The Knowledge System of Bhārata by Bhag Chand Chauhan,
2. History of Science in India Volume-1, Part-I, Part-II, Volume VIII, by Sibaji Raha, et al. National Academy of Sciences, India and The Ramkrishan Mission Institute of Culture, Kolkata (2014).

**Reference Books:**

1. Pride of India- A Glimpse of India’s Scientific Heritage edited by Pradeep Kohle et al. Samskrit Bharati (2006).
2. Vedic Physics by Keshav Dev Verma, Motilal Banarsidass Publishers (2012).
3. India’s Glorious Scientific Tradition by Suresh Soni, Ocean Books Pvt. Ltd. (2010).