

COURSE TITLE	INDIAN KNOWLEDGE SYSTEM
COURSE CODE	04BC0331
COURSE CREDITS	2

Objective:

- 1 NA

Course Outcomes: After completion of this course, student will be able to:

- 1 Explain the foundations and historical development of Indian Knowledge Systems
- 2 Analyze the scientific contributions of ancient India in field of mathematics, astronomy, engineering, metallurgy, and environmental science.
- 3 Interpret architectural and planning frameworks through the lens of traditional knowledge systems.
- 4 Explore classical Indian contributions to language, grammar, literature, wellness (Ayurveda), mental health (Yoga), psychology, and performing arts.
- 5 Evaluate the societal and philosophical dimensions of IKS for integrating IKS in modern contexts.

Pre-requisite of course:NA

Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
2	0	0	50	50	0	0	0

Contents : Unit	Topics	Contact Hours
1	Foundations of Indian Knowledge Systems - History of Indian Knowledge System (IKS) - India's Characteristic Knowledge & India's Epistemology -Definition and scope of IKS - Importance and relevance today - Domains of IKS - Vedas and their classifications - Insights into Upanishads	6
2	Scientific Approaches of IKS Mathematics and Measurements in Ancient India - Ancient numeral systems - Measurement systems - Contributions to algebra, geometry, trigonometry - Mathematical texts Astronomy, Engineering & Technology - Observations and instruments - Calendrical systems - Metallurgy, material science - Civil engineering and water management - Khagol Vijnana (Astronomy) Miscellaneous - Ayurveda - Krishi Vijnana (Agricultural) Practices - Paryavaran Vijnana (Environmental Sciences) - Yuddha Vidhya (Military Sciences)	6

Contents : Unit	Topics	Contact Hours
3	Architecture and Knowledge Frameworks - Indus Valley urban planning - Temple architecture - Vastu principles - Knowledge categorization - Epistemology in IKS	6
4	Language, Literature, Health, and Psychology - Chandashastra (Prosody) - Bhasa Va Vyakarana (Language and Grammar) - Structure of Sanskrit - Panini's linguistic theory - Ayurveda and holistic wellness - Yoga and mental health - Psychology from ancient texts - Bharata's Natyashastra (Science of Drama, Dance and Music) - Niyuddha Kala (Martial Arts) - Ancient Scripts	6
5	Societal Involvement of IKS -Pramana Vijnana (Cognitive Science) -Anviksiki (Logic and Disputation) -Rajya, Samaj Va shasan Tantra (State, Society and Polity) -IKS way forward, possibilities& Challenges: systematic, methodological, pedagogical, competencies.	6
Total Hours		30

Textbook :

- 1 Introduction to Indian Knowledge System: Concepts and Applications, Mahadevan, B., Bhat Vinayak Rajat, Nagendra Pavana R.N., PHI Learning Private Ltd. Delhi, 2022

References:

- 1 Indian Knowledge Systems Vol – I & II, Indian Knowledge Systems Vol – I & II, Kapoor Kapil, Singh Avadhesh , Indian Institute of Advanced Study, Shimla, H.P., 2021
- 2 Mathematics in Ancient and Medieval India, Mathematics in Ancient and Medieval India, Bag, A.K. , Chaukhamba Orientalia, New Delhi, 1979
- 3 History of Hindu Mathematics: Parts I and II, , History of Hindu Mathematics: Parts I and II, , Datta, B. and Singh, A.N, Asia Publishing House, Mumbai, 1962
- 4 Indian Astronomy: A Source Book, Indian Astronomy: A Source Book, Subbarayappa, B.V. and Sarma, K.V. , Nehru Centre, Mumbai, 1985
- 5 History of Technology in India, Vol. I, History of Technology in India, Vol. I, Bag, A.K. , Indian National Science Academy, New Delhi, 1997
- 6 Indian Architecture, Indian Architecture, Acarya, P.K. , Munshiram Manoharlal Publishers, New Delhi, 1996

Suggested Theory Distribution:

The suggested theory distribution as per Bloom's taxonomy is as follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process

Distribution of Theory for course delivery and evaluation

Remember / Knowledge	Understand	Apply	Analyze	Evaluate	Higher order Thinking / Creative
0.00	20.00	30.00	30.00	20.00	

Instructional Method:

- 1 Lecture

Supplementary Resources:

- 1 ---