Indian Knowledge Systems (IKS)

Syllabus

Total Credits -2 **Marks: 50**

Course Overview:

The course on **Indian Knowledge Systems (IKS)** introduces students to the rich intellectual traditions of India and their continuing relevance in the modern world. It provides a multidisciplinary perspective on how knowledge was created, preserved, and applied across diverse fields such as philosophy, logic, linguistics, literature, mathematics, astronomy, medicine, architecture, agriculture, metallurgy, ecology, governance, and the arts.

Through this course, students will explore the epistemological foundations of IKS, emphasizing holistic approaches, sustainability, and interconnectedness between humans, society, and nature. The curriculum blends classical texts, oral traditions, and indigenous practices with contemporary research, encouraging critical reflection and comparative understanding with modern scientific paradigms.

The course also aims to highlight the practical applications of IKS in addressing present-day challenges such as environmental conservation, health and well-being, community-based resource management, and social harmony. By engaging with both theoretical concepts and field-based knowledge, students will develop an appreciation of India's knowledge heritage, while cultivating skills to integrate indigenous insights with global knowledge systems for innovation and sustainable development.

Program-Specific Outcomes (PSOs)

On completing the program, learners will be able to:

PSO1. Demonstrate a broad understanding of Indian Knowledge Systems across disciplines such as philosophy, sciences, literature, and arts.
PSO2. Apply indigenous knowledge and practices to contemporary issues in sustainability, healthcare, environment, and technology.
PSO3. Engage in interdisciplinary research and innovation by integrating IKS with modern scientific and social paradigms.
PSO4. Promote cultural literacy, identity, and social harmony by appreciating India's intellectual heritage.
PSO5. Develop skills for lifelong learning through exploration of classical texts, indigenous traditions, and community engagement.

Course Outcomes (COs) – Indian Knowledge Systems (IKS)

By the end of this course, students will be able to:

CO1. Understand the philosophical foundations and historical evolution of Indian Knowledge Systems.

CO2. Explain and interpret the multidisciplinary contributions of IKS in areas such as mathematics, astronomy, medicine, ecology, and governance.

CO3. Analyze the relevance of traditional knowledge in addressing contemporary issues related to sustainability, health, and social well-being.

CO4. Compare and evaluate Indian Knowledge Systems with modern scientific approaches to identify complementarities and differences.

CO5. Apply principles of IKS to propose practical solutions, models, or community projects in fields like sustainable living, wellness, and indigenous technologies.

CO6. Demonstrate cultural awareness and **integrate** indigenous perspectives into academic, social, and professional contexts.

CO7. Create innovative ideas or projects that extend IKS knowledge into modern contexts, showing readiness for lifelong learning and research.

Topics

1: Introduction to IKS

- Definition and characteristics of Indian Knowledge Systems.
- Historical evolution from ancient times to the 18th century CE.
- Impact of colonial education policies and the need for revisiting traditional knowledge.
- Traditional educational institutions: Gurukuls, Pathshalas, Takshashila, and Nalanda.
- Local heritage sites and their relevance.

2: Introduction to Ancient Indian Mathematics and Astronomy

- Mathematics: Ancient numeral systems and mathematical concepts.
- Logic: Indian logic systems and epistemology.
- Overview of Indian astronomy; celestial coordinate systems and calendar systems

- Astronomical Instruments (Yantras)- Application of Physics and Chemistry

3. Introduction to Health and Medicine

- In-depth study of Ayurveda, its diagnostic methods, and therapeutic practices.
- Understanding the holistic approach to health encompassing physical, mental, and spiritual well-being.
- Application of Ayurveda principles in contemporary healthcare systems.
- Ayurvedic perspectives on health, including dietary regimes, disease management, elements of wellness—and their intersections with botany and medical science

4. Introduction to Ancient Governance and Public Administration

- Analysis of ancient Indian governance models and administrative structures.
- Insights from texts like Arthashastra on statecraft and economics.
- Relevance of traditional governance principles in modern administrative practices.
- Concept of Kingship; duties and responsibilities of a monarch
- Three-tier political system: Dharmadanda, Rajdanda, Nyāyadanda
- Law & administration, crime suppression, defence systems, foreign policy
- Concept of wealth, ownership, and distribution
- Kautilya's "Saptanga" model (seven sources of income)
- Taxation, savings, and expenditure in ancient Indian economy

5. Introduction to Ancient Arts and Culture

- Study of traditional Indian art forms, including sculpture, dance, and music.
- Understanding the cultural significance and philosophical underpinnings of these art forms.
- Promotion of cultural heritage through education and practice.
- Temple architecture overview
- Cave and monolithic architecture
- Architectural styles: Chalukya, Pallava, Chola, Hoysala, Mauryan, Vijayanagara
- Buddhist and Jain art & architectural heritage

6. Introduction to Ancient Environmental Sustainability

- Traditional knowledge systems related to agriculture, water management, and ecological balance.
- Application of sustainable practices derived from ancient texts and practices.
- Integration of IKS in contemporary environmental conservation efforts.

Recommended Resources

Books:

- *Introduction to Indian Knowledge System: Concepts and Applications* by B. Mahadevan et al.
- *Indian Knowledge System* by Kapil Kapoor and Avadhesh Kumar Singh
- *Traditional Knowledge System in India* by Amit Jha

Online Courses:

- Introduction to Indian Knowledge Systems by Bharat Vidya
- IKS Concepts and Applications in Engineering by CESE, IIT Roorkee
- IKS – Humanities and Social Sciences by Bhaktivedanta Research Center