

Curriculum for
Introduction to
Indic Knowledge System (IKS)
(Value Added Courses)
For
All Undergraduate Programme of Gujarat University, Ahmedabad
(B.Sc., B.Com., B.A, BBA, BCA)

Course Code: VAC-117 (IKS)

Objective Of the Course

This course is designed to understand and enhance the holistic understanding of Indian Knowledge System. This course provides the basic understanding of the rich Indian knowledge system and its traditions. The course will introduce to the various ancient Indian Schools and its relevance in contemporary period with the great achievements of IKS to the world. It helps in understanding and analyzing the Ancient Indian knowledge system.

Outcome of the Course

Learner will be able to ...

- Learn about the process of ancient Indian traditions
- Understand the contribution of Indian minds in various fields
- Link ancient wisdom in the current context
- Learn about the leading Indian inventors and thinkers in various disciplines
- Develop a positive attitude towards Indian traditions and practices
- Increase subject-awareness and self-esteem
- Develop a comprehensive understanding of how all knowledge is ultimately intertwined

Prerequisite: 12th Pass

Corequisite: Learner can join our other online certificate and diploma courses for knowledge enhancement.

1. Certificate Course in Indic Knowledge Tradition

Get a glimpse of Indian scientific and technological heritage, know about the totality of Indic Knowledge & Tradition

2. Diploma in Indic Manuscriptology

Get acquainted with the different types of Indian scripts, their origin, materials used for them, writing styles, etc. as well as cataloging, scribble notes and manuscript libraries, know about Indic Manuscriptology

3. Diploma in Indic Paleography

Get acquainted with the ancient scripts, their origin, style of writing, their preservation techniques and the materials used for them, know about Indic Paleography

4. Diploma in Indic Education System

Ancient learning system process - training for the fulfillment of life and character building to overcome the challenges of life with positivity. Know about Indic Education System

5. Diploma in Indic Philosophy

Develop an understanding of Indian culture and history, know and understand the mysteries of life and nature, know about Indic Philosophy

6. Certificate in Vedant

Comprehensive overview of the teachings of our Shastra along with a roadmap to live a fulfilling life and attaining the highest human goal, that is Moksha through our Online Certificate Course Vedant

Evaluation Pattern

Internal	Attendance	Assignment	Unit Test	Total Marks
	3	7	5	25
External	Online MCQ Test			25

Semester: 1

Course Credit: 2

Course Duration: 40 Hrs.

Unit	Topic
1	Introduction to IKS <ul style="list-style-type: none">○ Introduction to IKS & Its importance<ul style="list-style-type: none">▪ Introduction & importance of IKS▪ Various IKS Systems○ Shashtra – Foundational Literature of Bharatvarsha<ul style="list-style-type: none">▪ What is Shashtra?▪ Importance of Shashtra▪ Classification of Shashtra – Vaidic & A vaidic (with examples of imp. Literature)○ Base of IKS proliferation<ul style="list-style-type: none">▪ Bhartiya Education System and its philosophy▪ History of BES from Ancient to Modern▪ Domains of Education: Gurukul, Pathshala, Vidyalay, Vishvavidyalay
2	Contribution of IKS to the World <ul style="list-style-type: none">○ Mathematics & Astronomy<ul style="list-style-type: none">▪ Number System▪ Algebra & Arithmetic▪ Geometry▪ Trigonometry▪ Planetary System▪ Speed of Light▪ Eclipse○ Life sciences<ul style="list-style-type: none">▪ Physics

	<ul style="list-style-type: none">▪ Chemistry▪ Botany○ Metal Technology<ul style="list-style-type: none">▪ Mining Techniques▪ Types of Metals▪ Tools & Techniques for Metal Smelting with examples○ Town planning & Temple Architecture<ul style="list-style-type: none">▪ Indigenous tools & technologies for town planning & Temple Architecture▪ Science of Architecture▪ Lothal, Mohan Jo Daro, Dholavira▪ Angkorvat, Lepakshi Temple, Jagannath Puri Temple, Thanjavur Temple, Modhera and Konark Sun Temple, Hampi Temple Etc.○ Ayurveda<ul style="list-style-type: none">▪ Introduction of Ayurveda- Definition, Branches of Ayurveda, Books and Pioneers▪ Concept of Tri Dosh and importance of its Balance in the body▪ Indic Medical Science Achievement: Tools & Technology○ Art & Traditions<ul style="list-style-type: none">▪ History and Origin▪ Skill Enhancement with 64 Kala▪ Science behind our traditions and rituals
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Semester - 3

Course Credit: 2

Course Duration: 40 Hrs.

Unit	Topic
1	Understanding of IKS <ul style="list-style-type: none">○ Unique aspects of IKS: Idea Vs Ideology, IKS in present perspective○ Vocabulary related to IKS – Dharma, Sanatan, Moksha, Karma etc.○ Science of Sastra<ul style="list-style-type: none">▪ Shruti & Smriti Parampara▪ Methods to Study Shashtra▪ Overview of Shastrartha Parampara○ Manuscriptology: Art of preserving Knowledge<ul style="list-style-type: none">▪ Script & Language, Sanskrit Language and it's importance▪ Manuscripts: It's History, types and Its preservation Techniques▪ Famous Manuscript repositories
2	Contribution of IKS in <ul style="list-style-type: none">○ Science & Technology<ul style="list-style-type: none">▪ Astronomy▪ Encryption Method used in ancient India▪ Introduction to Yantra Shashtra – Vaimanik Shashtra▪ Textile Technologies▪ Agriculture Technologies▪ Forest Management and Water management techniques○ Trade & Commerce<ul style="list-style-type: none">▪ Concept of Indic Economy (ArthVyavastha)

	<ul style="list-style-type: none"> ▪ Trade and Commerce ○ Administration & Governance <ul style="list-style-type: none"> ▪ Concept Introduction: Indic Administration ▪ Administrative Structure in Ancient India ▪ Niti Sashtra (Law & Orders) ○ Fine Art & Performing Art <ul style="list-style-type: none"> ▪ Performing Art: Bhav, Ras, Types, Process, Famous Literature, Famous Art & Artists ▪ Fine Art: Types, Process, Famous Literature, Famous Art and Artists ▪ Case Studies Local Art & Tradition ○ Experiential sessions <ul style="list-style-type: none"> ▪ Introduction to Ashtang Yog and practice of Yogasan & Pranayam ▪ Methods of Chanting the Mantra and Chanting Practice
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Reference Books

Text Books:

- **Introduction to Indian Knowledge System- Concept and Application by B. Mahadevan, Vinayak Rajat Bhat, Nagendra Pavan R.N.**
- **R.M. Pujari, Pradeep Kolhe, N. R. Kumar, 'Pride of India: A Glimpse into India's Scientific Heritage', Samskrita Bharati Publication.**
- **'Indian Contribution to science', compiled by Vijnana Bharati.**
- **'Knowledge traditions and practices of India', Kapil Kapoor, Michel Danino, CBSE, India.**

Reference Books:

- **Dr. Subhash Kak , Computation in Ancient India,Mount, Meru Publishing (2016)**

- **Dharampal, Indian Science and Technology in the Eighteenth Century, Academy of Gandhian Studies, Hyderabad, 1971, republ. Other India Bookstore, Goa, 2000**
- **Robert Kanigel, The Man Who Knew Infinity: A Life of the Genius Ramanujan, Abacus, London, 1999**
- **Alok Kumar, Sciences of the Ancient Hindus: Unlocking Nature in the Pursuit of Salvation, CreateSpace Independent Publishing, 2014**
- **B.V. Subbarayappa, Science in India: A Historical Perspective, Rupa, New Delhi, 2013**
- **S. Balachandra Rao, Indian Mathematics and Astronomy: Some Landmarks, Jnana Deep Publications, Bangalore, 3rd edn, 2004**
- **S. Balachandra Rao, Vedic Mathematics and Science In Vedas, Navakarnataka Publications, Bengaluru, 2019**
- **Bibhutibhushan Datta, Ancient Hindu Geometry: The Science of the Śulba, 1932, repr. Cosmo Publications, New Delhi, 1993**
- **Bibhutibhushan Datta & Avadhesh Narayan Singh, History of Hindu Mathematics, 1935, repr. Bharatiya Kala Prakashan, Delhi, 2004**
- **George Gheverghese Joseph, The Crest of the Peacock, Penguin Books, London & New Delhi, 2000**
- **J. McKim Malville & Lalit M. Gujral, Ancient Cities, Sacred Skies: Cosmic Geometries and City Planning in Ancient India, IGNCIA & Aryan Books International, New Delhi, 2000).**
- **Clemency Montelle, Chasing Shadows: Mathematics, Astronomy and the Early History of Eclipse Reckoning, Johns Hopkins University Press, 2011**
- **Anisha Shekhar Mukherji, Jantar Mantar: Maharaja Sawai Jai Singh's Observatory in Delhi, AMBI Knowledge Resources, New Delhi, 2010**
- **Thanu Padmanabhan, (ed.), Astronomy in India: A Historical Perspective, Indian National Science Academy, New Delhi & Springer (India), 2010**
- **Acharya Prafulla Chandra Ray, A History of Hindu Chemistry, 1902, republ., Shaibya Prakashan Bibhag, centenary edition, Kolkata, 2002**
- **R. Balasubramaniam, Delhi Iron Pillar: New Insights, Indian Institute of Advance Study, Shimla & Aryan Books International, New Delhi, 2002**

- **R. Balasubramaniam, Marvels of Indian Iron through the Ages, Rupa & Infinity Foundation, New Delhi, 2008**
- **Anil Agarwal & Sunita Narain, (eds), Dying Wisdom: Rise, Fall and Potential of India's Traditional Water-Harvesting Systems, Centre for Science and Environment, New Delhi, 1997**
- **Fredrick W. Bunce: The Iconography of Water: Well and Tank Forms of the Indian Subcontinent, DK Print world, New Delhi, 2013**