

Sant Gadge Baba Amravti University Amravati
Syllabus for B.Sc. I as per NEP 2020
Semester I
Course Title: Indian Knowledge System (IKS)
Course Code:125301

Level	Semester	Course Code	Course Name	Credits	Teaching Hours	Exams Duration	Max Marks
4.5	I	125301	Indian Knowledge System (IKS)	2	30	2 Hrs	30

Course Objectives	1. To review and analyse the importance and significance of the scientific value of the traditional knowledge of Bhārata 2. To help student to understand the knowledge, art and creative practices, skills and values in ancient Indian system. 3. To introduce the contribution from Ancient Indian system & tradition to modern science & Technology 4. To develop the knowledge and analysis on the understanding of scientific planning and architecture system of ancient India. 5. To understand the importance of functional, aesthetic, psychological, culture and socio-religious concept of ancient India architecture. 6. To help students to trace, identify, practice and develop the significant Indian mathematics and astronomical knowledge. 7. To build the learners a deep rooted pride in Indian aesthetic knowledge, committed to universal human right, well-being and sustainable development.		
Course Outcome	By the end, the students will be able to - 1. To assess the the foundational Concepts & Principles of IKS. 2. To analyse the historical development and evolution of Indian Intellectual traditions. 3. To compare the knowledge key texts, thinkers, and schools of thought within the IKS. 4. To analyze the interdisciplinary nature of Indian knowledge, integrating philosophy, spirituality, science, arts, and literature though the study of IKS. 5. To value the holistic and multidimensional nature of Indian Thought. 6. To analyze various branches of knowledge developed in India. 7. To plan to make research and innovative thinking which can result in global contribution at later stage.		
Unit System	Contents	Workload Allotted	Weightage of Marks Allotted
Unit I	Bhāratiya Civilization and Development of Knowledge System i. Introduction of IKS and its importance	8 Hrs	8 Marks

	ii. Bhāratīya Culture and Civilization iii. Methodology of Indian Knowledge System iv. Ancient Education System, the Takṣaśilā University, the Nālandā University, Alumni, Knowledge Export from Bhārata.		
Unit II	Arts, Literature, and Scholars i. Foundational Literature of Indian Civilization ii. Oral tradition in Indian Languages iii. Philosophy and Spirituality iv. Indian Classical Music, Dance and Theatre Traditions	7 Hrs	7 Marks
Unit III	Science & Technology in Ancient India : i. Indian Mathematics & Astronomy ii. Metallurgical Discoveries in India iii. Indian Architecture and Town Planning iv. Indian Military and Weaponry Science	8 Hrs	8 Marks
Unit IV	Humanities & Social Sciences in Ancient India i. Introduction to Yoga and Ayurveda ii. Indian Traditional Knowledge : Science and Practice iii. Agriculture, Trade and Commerce iv. Administration and Governance	7 Hrs	7 Marks

Reference:

1. Amit Jha, 2024, Traditional Knowledge System In India, Atlantic Publisher.
2. B. Mahadevan et al, 2024, Introduction to Indian Knowledge System: Concepts and Applicati, phi learning
3. Baladev Upadhyaya, Samskrta Śāstrom ka Itihās, Chowkhambha, Varanasi, 2010.
4. Bhag Chand Chauhan, 2023, Textbook on The Knowledge System of Bhārata, Garuda Prakashan,
5. Chengalpattu, in J. K. Bajaj ed., Indian Economy and Polity, Centre for Policy Studies, Chennai, 1995, pp. 63-84.
6. D. M. Bose, S. N. Sen and B. V. Subbarayappa, Eds., A Concise History of Science in India, 2nd Ed., Universities Press, Hyderabad, 2010.
7. Dharampal Classics Series, Rashtrotthana Sahitya, Bengaluru, 2021.
8. Dharampal, Indian Science and Technology in the Eighteenth Century: Some Contemporary
9. Dharampal, Some Aspects of Earlier Indian Society and Polity and Their Relevance Today, New Quest Publications, Pune, 1987.
10. Dr. Ravindra Singh Rana et al, 2023, Indian Knowledge System of Materials in Science and Technology, Walnut Publication.
11. Dr. Shripad Dattatrya Kulkarni, 1998 History of Science, Arts & Technology, Bhishma Prakashan, Mumbai
12. European Accounts, Dharampal Classics Series, Rashtrotthana Sahitya, Bengaluru, 2021.

13. History of Science in India Volume-1, Part-I, Part-II, Volume VIII, by Sibaji Raha, et al.
14. J. K. Bajaj and M. D. Srinivas, 2001, Timeless India Resurgent India, Centre for Policy Studies, Chennai.
15. J. K. Bajaj and M. D. Srinivas, Indian Economy and Polity in Eighteenth century
16. Keshav Dev Verma, 2012, Vedic Physics, Motilal Banarsidass Publishers
17. M. D. Srinivas, The methodology of Indian sciences as expounded in the disciplines of Nyāya, Vyākaraṇa, Ganita and Jyotisa, in K. Gopinath and Shailaja D. Sharma (eds.),
18. National Academy of Sciences, India and The Ramkrishnan Mission Institute of Culture, Kolkata (2014).
19. Pradeep Kohle et al, 2006, Pride of India- A Glimpse of India's Scientific Heritage edited by . Samskrit Bharati
20. Suresh Soni, 2010, India's Glorious Scientific Tradition, Ocean Books Pvt. Ltd.

Internal Assessment:

Total 20

The course should be conducted in an interactive mode through demonstration, using appropriate tools.

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| 1) Class Test | 10 |
| 2) Mini Projects | 10 |

Note for Internal Assessment:-

1. Internal assessment the subject teacher shall be the sole examiner.
2. At least 8 MCQs shall be for Internal Assessment
3. The Project shall be based on prescribed syllabus with minimum 8-10 pages or 3-5 minutes video uploaded on YouTube

Suggestive Projects: Students will take up team activities/ projects of their region exploring the historical or relevant topics mentioned in the syllabus.

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Pattern of Question paper and Distribution of Marks

Maximum Marks: 30

Time: Two Hours

Que. 1 A : Students shall have to answer 4 out of 6 short answer questions based on Unit I to Unit II. $4 \times 2 = 8$

Que. 1 B: Students shall have to answer 4 out of 6 short answer questions based on Unit III to Unit IV $4 \times 2 = 8$

Que. 2 Students shall have to answer 4 out of 6 long answer questions based on Unit I to Unit IV. $3.5 \times 4 = 14$