

B.Sc Programme (NEP 2020) Academic year (2024-25)

VAC – IKS

For B.Sc Students

Semester III & IV



Dr. Darshit Padia



Dr. Gaurav Chauhan



Prof. Subhash Bhandari

B.Sc Programme (NEP 2020)

VAC-IKS

B.Sc Semester -III

Cat.	Course type	Course name	Credits	Hours
1.	Value Added courses (VAC)	IKS – 301 (Ancient Indian Pioneers: Contributions and Architectural Wonders)	2	30 hours

VALUE ADDED COURSES

Sem – III

OBEJECTIVES

Semester	Value Added courses (VAC) --IKS	Credits	Hours
III	IKS-301: Ancient Indian Pioneers, Contributions and Architectural Wonders (Students will know about Indian great researchers in ancient, medieval and modern era. Also, they will learn about selected Indian monuments and sculptures)	2	30 hours

Semester - III

VAC: IKS-301: Ancient Indian Pioneers, Contributions and Architectural Wonders

Total credits-2 Teaching hours: 30

SYLLABUS

This course introduces the learners to the rich and varied knowledge traditions of India from antiquity to the present. This also helps the learner to know and understand their own systems and traditions which are imperative for any real development and progress. Also, it helps the learner to think independently and originally with Indian frameworks and models for solving the problems of present day.

Learning Outcomes:

After completing the unit, students will be able to:

- understand their own systems and traditions which are imperative for any real development and progress
- Role of Indian knowledge torch bearers in Indian past & their contributions
- The sculpture and cultural assets of India in form of monuments/sculptures
- Will be curious to learn more about ancient India

Unit No.	Topics	Credit/hours
Unit-1.	Ancient Indian torchbearers (Brief history and contributions) 1. Adi Sankaracharya – Vedic scholar 2. Chanakya – Teacher, strategist, 3. Charaka & Sushruta - Ancient Indian Physician, Medicine 4. Aaryabhata – Vedic mathematician 5. Nagaarjuna - Metallurgist	15 lectures (1 credit)

Unit-2	Indian Monuments and sculptures: (Introduction & overview) <ul style="list-style-type: none"> • Nalanda University • Ajanta & Ellora Caves • Konark Sun Temple • Taj Mahal • Sun temple: Modhera • Field visits: 1). Student may study monuments based on available literature or field visits. Also students may visit places of historical interest and document the same. (5 lectures of self-learning/activity) 	15 lectures (10 lectures + 5 lectures activity learning)
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Suggested Readings:

India's Glorious scientific tradition by Suresh Soni

Discovery of India by Sonia Mehta

Indian monuments: A golden heritage by Saikrit Gulati

www.iksindia.org

<https://asi.nic.in>

B.Sc Programme (NEP 2020)

Sem-IV Additional courses

Details

Structure overview

Semester	Value Added courses (VAC)-IKS	Credits	Hours
IV	IKS-401: Modern Indian scientist and insights to Indian heritage (Students will know about Indian great researchers in ancient, medieval and modern era. Also, they will learn about selected Indian monuments and sculptures)	2	30 hours

OBJECTIVES

Semester	Value Added courses (VAC)	Credits	Hours
	IKS-401: Modern Indian scientist and insights to Indian heritage (Students will know about Indian great researchers in ancient, medieval and modern era. Also, they will learn about selected Indian monuments and sculptures)	2	30 hours

Sem-IV

VAC: IKS-401: Modern Indian scientist and insights to Indian Heritage

Total credits-2

Teaching hours: 30

SYLLABUS

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Learning Outcomes:

After completing the unit, students will be able to:

- Understand their own systems and traditions which are imperative for any real development and progress
- Role of Indian knowledge torch bearers in Indian past & their contributions
- The sculpture and cultural assets of India in form of monuments/sculptures
- Will be curious to learn more about ancient India

Unit No.	Topics	Credit/hours
Unit-1.	Modern Indian Scientists (Introduction and their contribution to science) <ul style="list-style-type: none">- Dr. C. V. Raman- Homi J. Bhabha- A. P. J Abdul Kalam- Vikram Sarabhai- Jagdish Chandra Bose- Shrinivasa Ramanujan- Prafulla Chandra Ray	15 lectures (1 credit)

<p>Indian Heritage:</p> <ul style="list-style-type: none"> • Ancient rain water harvesting structures – Stepwells; Rani ki vav at Patan, Chand Bawri-Rajasthan. Adalaj ni Vav-Adalaj. • Ancient civilizations in general: Lothal and Dholavira • Introduction to Indian Forts: Mehrangarh Fort-Jodhpur (Rajasthan), Gwalior Fort- Madhya Pradesh, Golconda Fort-Hyderabad, Jaisalmer Fort-Rajasthan <p>Self/Field learning: Visit to ancient monuments/structures and reporting.</p>	<p>15 lectures (10 lectures + 5 lectures activity learning)</p>
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Suggested Readings:

Science in ancient India by O. P. Jaggi

The great Indian Scientists by Prof. Jyoti Singh, Richa Trivedi, Deepika Inda and Tuba Tazeen.

India's Glorious scientific tradition by Suresh Soni

Discovery of India by Sonia Mehta

Indian monuments: A golden heritage by Saikrit Gulati

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VAC Course for Semester III and IV

Subject: Science (All Discipline)

Indian Knowledge System – IKS (VAC)

Course Code:	IKS-301 (Sem-3) & IKS-401 (Sem-4)		
Course Credit	02	Hour of teaching/week	02
Internal Assessment Marks:	25	External Exam Marks:	25
Exam Duration	1 Hr		

University Exam Format

Q. No	Unit	Types of questions	Marks
1	1	Essay questions with choice OR Short notes	10
2	2	Essay questions with choice OR Short notes	10
3	Both 1 & 2	Answer any 5 out of 6 Objective types questions: Definitions/ Fill in the blanks/ true or false/ match the following etc.	5