

(Proposed from A.Y 2020-2021)

**NIRMA UNIVERSITY**  
**Institute of Technology**  
**Bachelor of Technology (ALL)**  
**(Semester V/VI)**

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<b>Course Code</b>	<b>2HSXXX</b>
<b>Course Title</b>	<b>History of Science and Technology in India</b>

**Course Learning Outcomes (CLO):**

At the end of the course, students will be able to-

1. understand scientific heritage which will help them in giving a realistic sense of their place in the world
2. study, preserve, and revive traditional knowledge systems

**Syllabus:**

**Teaching hours:**

<b>Unit I</b>	<b>6</b>
<b>Concepts And Perspectives:</b> Meaning of History, Objectivity, Determinism, Relativism, Causation, Generalization in History; Moral, judgment in history, Extent of subjectivity, contrast with physical sciences, interpretation and speculation, causation verses evidence, concept of historical inevitability, Historical Positivism, Science and Technology-Meaning, Scope and Importance, Interaction of science, technology & society, Sources of history on science and technology in India.	
<b>Unit II</b>	<b>6</b>
<b>Historiography Of Science And Technology In India:</b> Introduction to the works of D.D. Kosambi, Dharmpal, Debiprasad Chattopadhyay, Rehman, S. Irfan Habib, Deepak Kumar, Dhruv Raina, and others.	
<b>Unit III</b>	<b>9</b>
<b>Science And Technology In Ancient India:</b> Technology in pre-historic period, Beginning of agriculture and its impact on technology. Science and Technology during Vedic and Later Vedic times, Science and technology from 1st century AD to C-1200.	
<b>Unit IV</b>	<b>6</b>
<b>Science And Technology In Medieval India:</b> Legacy of technology in Medieval India, Interactions with Arabs, Development in medical knowledge, interaction between Unani and Ayurveda and alchemy, Astronomy and Mathematics: interaction with Arabic Sciences, Science and Technology on the eve of British conquest.	

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**Unit V** 9

**Science And Technology In Colonial India:** Science and the Empire, Indian response to Western Science, Growth of techno-scientific institutions

**Unit VI** 9

**Science And Technology In A Post-Independent India:** Science, Technology and Development discourse, Shaping of the Science and Technology Policy, Developments in the field of Science and Technology, Science and technology in globalizing India, Social implications of new technologies like the Information Technology and biotechnology

**Self-Study:**

Self-study contents will be declared at the commencement of the semester. Around 10% of the questions will be asked from the self-study contents.

**Suggested Readings^:**

1. Dr. Binod Bihari Satpathy, History Of Science And Technology In India, Ddce/History (M.A)/Sln/Paper
2. Essays From History Of Indian Science And Technology
3. [Http://Www.Indianscience.Org/Bibliography/Bibliographies.Shtml](http://Www.Indianscience.Org/Bibliography/Bibliographies.Shtml)

L = Lecture, T = Tutorial, P = Practical, C = Credit

^ this is not an exhaustive list