

**Shivaji University, Kolhapur**  
**Open Elective - Science, Technology and Development (STD) – I & II**  
**as per NEP 2020**

<b>Name of the Programme</b>	:	B. A. / B. A. B. Ed. (Geography)
<b>Class</b>	:	B. Com. I / B.Sc. I
<b>Semester</b>	:	I and II
<b>Name of Vertical Group</b>	:	Open Elective
<b>Course Code</b>	:	BAU0325IDH222A01
<b>Course Title</b>	:	<b>Science, Technology and Development (STD)</b>
<b>Total Credit</b>	:	02 each semester
<b>Workload</b>	:	Theory: 02 credit X 15 Hours = 30 hours in each semester
<b>Duration</b>	:	Semester
<b>Medium of instruction</b>	:	Marathi / English
<b>Eligibility of Admission</b>	:	As per eligibility criteria prescribed by the University
<b>Examination of Pattern</b>	:	80:20
<b>Nature of Question Paper</b>	:	

**Preamble:**

This paper is specially designed to cater to foundation building of the students by imparting knowledge about the science, technology and development. Students of B. Sc. Part-I can betterly understand all latest concepts in Science, Technology and Development in brief but in adequate manner. The objective of this course is to introduce the latest concepts in Science, Technology and Development, specifically fundamental concepts in scientific thinking, human health, disaster management, communication and space research.

**General Objectives of the Course:**

- 1) To study the fundamental concepts of science, technology and development.
- 2) To study impact of science and technology on human health.
- 3) To study various types of disasters and its management.
- 4) To study means of communication and space research.

**Course Outcomes:**

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

- 1) Understand in-depth about the concepts of science, technology and development.
- 2) Understand impact of science and technology on human health.
- 3) Understand types of disasters and its management.
- 4) Understand means of communication and space research.

### Nature of Question Paper:

The student's examination and evaluation methods are as per the guidelines of the Shivaji University.

- Internal evaluation should be based on Home Assignment/Unit Test/Case Study

### Semester - I

### Open Elective - Science, Technology and Development (STD) -I as per

### NEP 2020

### Course I

Module No.	Module Name	Sub-module	No. of hours	Credit
1	<b>Introduction to Science and Technology</b>	1.1 Science and Technology: Definitions, Nature and Scope 1.2 Fundamental Concepts in Scientific Thinking 1.3 Stages in the Study of Science: Observation, Experiment, Analysis, Result and Hypothesis. 1.4 Science and Superstitions 1.5 Development of Science and Technology in India 1.6 Impact of Science and Technology on Society	15	01
2	<b>Science, Technology and Human Health</b>	2.1 Human Blood: Blood Groups, Importance of Matching Blood Groups in Human Health 2.2 Addiction a Social Problem: Types, Causes, Effects and Solutions 2.3 AIDS: A Challenge before World, Facts, Figures, Causes, Effects, Treatment, Social Outlook. 2.4 Cancer: concept, causes, symptoms, types and treatment. 2.5 Need of Cleanliness: Swachh Bharat Abhiyan	15	01

### Suggested Readings

1. Annual Review of Information Science and Technology (ARIST) 39. By Blaise Cronin, Information Today, 2004.

2. Bagila A.V. (Ed) Science and Society, Lavani Publication House, 1972. Encyclopaedia of Computer Science and Technology (Facts on File Science Library) – Import, 15 Jan 2009
3. Bose D.M (Ed), A Concise History Science in India, Indian National Science Academy, 1971.
4. Butle J.A.V, Science and Human Life, Pergamon Press, London. (Year)
5. Encyclopaedia of Space Science and Technology, Wiley Online Library.
6. Encyclopaedia Britannica.
7. Flower W.S, The Development of Scientific Method, Pergamon Press, London, 1962.

#### मराठी पुस्तके

1. विज्ञानाचा समाज धारणेवरील परिणाम – दीक्षित कमलाकर, समाज प्रबोधन संस्था
2. शास्त्रीय विचार पद्धती - अ.भि. शहा, समाज प्रबोधन संस्था
3. जीवनाभिमुख विज्ञान – शिवाजी विद्यापीठ प्रकाशन
4. वैज्ञानिक अभ्यासाची गाथा - शिवाजी विद्यापीठ प्रकाशन
5. विज्ञान, तंत्रज्ञान आणि प्रगती - डॉ. पवार जयसिंगराव, प्रा. सूयवंशी निशांत फडके प्रकाशन कोहापूर
6. विज्ञान, तंत्रज्ञान आणि प्रगती – प्रा. पाटील हरिश्चंद्र, प्रा. घस्ते अनिल, प्रा. पाटील अरुण, प्रा. माने देशमुख रामराजे, निराली प्रकाशन, पुणे
7. मराठी विश्वकोश

#### Websites

e-PG Pathshala: <https://epgp.inflibnet.ac.in/>

MOOCS - NPTEL: <https://nptel.ac.in/>

MOOCS - SWAYAM: <https://swayam.gov.in/>

National Digital Library of India: <https://ndl.iitkgp.ac.in/>

Shivaji University Library (E-Resources): <http://www.unishivaji.ac.in/library/E-Resources>