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Accredited By NAAC  
Revised Syllabus For  
Bachelor of Arts  
Part – I  
(Semester I & II)

SCIENCE, TECHNOLOGY AND DEVELOPMENT

(Subject to the modifications to be made from time to time)  
Syllabus to be implemented from June 2013 Onwards.

**Shivaji University, Kolhapur  
Revised Syllabus For  
Bachelor of Arts  
Part –I**

1. TITLE : Subject – Science, Technology and Development (S.T.D) Paper I and II

2. YEAR OF IMPLEMENTATION:- Revised Syllabus will be implemented from June 2013 onwards.

3. GENERAL OBJECTIVES OF THE COURSE/ PAPER/:

- i) To expose B.A.I. students to the inventions in science and Technology and its impact on human life.
- ii) To give knowledge of science and technology and its impact on social and cultural development.
- iii) Acknowledgement of science and Technology to the students of Arts.

4. DURATION

- The course shall be a full time course.

5. PATTERN:-

Pattern of Examination will be Semester.

6. MEDIUM OF INSTRUCTION:

The medium of instruction shall be English or Marathi. (as applicable to the Course programme concerned.)

7. STRUCTURE OF COURSE- -----

(Note – The structure & title of papers of the degree as a whole should be submitted at the time of submission/revision of first year syllabus.

FIRST YEAR ----- (NO.OF PAPERS- 2)

Sr.No.	Semester	Subjects	Paper No.	Marks
1	I	Science, Technology and Development (S.T.D)	I	50
2	II	Science, Technology and Development (S.T.D)	II	50

## 8. SCHEME OF TEACHING

## FIRST YEAR

Sr. No.	Semester	Subject /Paper	Teaching Scheme (Hrs/Week)			
			L	T	P	Total
1	I	Science, Technology and Development (S.T.D) Paper-I	4	-	-	4
2	II	Science, Technology and Development (S.T.D) Paper-II	4	-	-	4

## 9. SCHEME OF EXAMINATION :-

- Question Paper will be set in the view of the in accordance with the entire Syllabus and preferably covering each unit of syllabi.

## 10. STANDARD OF PASSING:-

As Prescribed under rules & regulation for each degree/programme

## 11. EQUIVALENCE IN ACCORDANCE WITH TITLES AND CONTENTS OF PAPERS- (FOR REVISED SYLLABUS)

Sr.No.	Semester	Title of Old Paper	Title of New Paper
1.	I	Science, Technology and Development (S.T.D) - I	Science, Technolog and Development (S.T.D) Paper No. I
2	II	Science, Technology and Development (S.T.D) - II	Science, Technology and Development (S.T.D) Paper No. II

**SYLLABUS**  
**B.A. Part I (Sem- I)**  
(Introduced from June 2013 onwards)

Title Of Paper : **Science, Technology and Development (S.T.D) Paper No. I**

	No. Of .Lectures
Unit –1 Introduction to Science & Technology	- 15
1.1) Science and Technology: Definition Nature, 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) Scientific outlook and social development	
1.6) A brief History of Science and Technology	
Unit – 2 Contribution of eminent Scientist in the Development of Science andTechnology	- 15
2.1) Einstein	2.4) Dr. Homi Bhaba
2.2) Edison	2.5) Dr. Swaminathan
2.3) Louse Pascher	2.6) Dr.A. P. J. Abdul Kalam
Unit -3 Power Resources of India	- 15
3.1 Concept of Resource, Classification of Resources & Conservation .	
3.2 Conventional Power Resources	
1. Coal	
2.Petroleum	
3.2 Non Conventional Power Resources	
1. Solar energy,	
2. Wind energy	
3. Hydel Power energy	
Unit – 4 Science , Technology and Human Health	- 15
4.1) Impact of science and technology on human health	
4.2) Human Blood – Blood Groups, Importance of matching blood groups in human health	
4.3) AIDS - A Challenge before world facts, Figures, Causes, Effects, Treatment, Prevention misbelieves and facts social outlook	
4.4) Addiction a Social problem. Types, causes, Effects and Solution	
4.5) Nutrition and Diseases – Concept of Nurition, Component of Nutrients, Nutrition and Diseases,	

## Reference Books

1. Bagila A.V. (Ed), Science and Society, Lavani Publication HOUSE, 1972.
2. Bose D.M. (Ed), A Concise History Science in India, Indian National Science Academy, 1971.
3. Butle J.A.V., Science and Human Life, Pergamon Press, London.
4. Encyclopedia Britannica.
5. Every Man's Science, Vol. 4 (1), 1969; 6 (1),1971;7 (2) 1972; 9 (3), 1974; 10 (3), 1975; 10 (6), 1975.
6. Flower W.S.,The Development of Scientific Method, Pergamon Press, London, 1962.
7. Giorgio de santilama, The Origins of Scientific Thought, New American Library,1961.
8. Gupta S.P.,Science Technology and Society in the Modern Age, Ajanta Books Inteernational, Delhi.
9. Monk house W. (Ed), Science and Human Condition in India and Pakistan, Popular Prakashan, 1968.
10. Sarabhai Vikram, Science, Policy and National Development, McMilln,Publication, New Delhi, 1974.

मराठी पुस्तके :-

- १ विज्ञानाचा समाज धारणेवरील परिणाम- कमलाकर दिक्षीत समाज प्रबोधन संस्था
२. शास्त्रीय विचार पध्दती - अ.भि. शहा. समाज प्रबोधन संस्था
३. जीवनाभिमुख विज्ञान- शिवाजी विद्यापीठ प्रकाशन
४. वैज्ञानिक अभ्यासाची गाथा- शिवाजी विद्यापीठ प्रकाशन
५. विश्वकोष

**SYLLABUS**  
**B.A. Part I (Sem- II)**  
(Introduced from June 2013 onwards)

Title Of Paper : **Science, Technology and Development (S.T.D) Paper No. II**

	No. Of .Lectures
Unit – 1. Disaster Management	- 15
1.1) Types of Disasters	
1) Earthquake	
2) Flood	
3) Drought	
4) Fire	
5) Accident	
6) Crowds	
Unit – 2 Means of Communication and Information Technology	- 15
2.1) A brief history of communication	
2.2) Information Technology	
2.3) Origin, Development and Importance of Computer	
2.4) Computer Network	
2.5) Internet	
2.6) Computer Viruses	
2.7) Introduction of a) Geographical Information System (GIS) b) Geographical Positioning System (GPS)	
Unit -3 Science, Technology and Agriculture	- 15
3.1) Science and Technological advances in agriculture such as Irrigation, Fertilizers, High Yielding varieties, Plant Protection methods.	
3.2) Green Revolution	
3.3) Bio-technology in agriculture, Tissue Culture, Genetic Engineering.	
Unit – 4 Science Technology in Space & Ocean Research	15
4.1) Beginning Of Satellite Era in the World	
4.2) Rocket Technology	
4.3) Artificial Satellite-Types and uses	
4.4) Satellite Programme of India.	
4.5) Importance of Oceanic Study	
4.6) Indian Institute of Oceanography	

## Reference Books

1. Bagila A.V. (Ed), Science and Society, Lavani Publication HOUSE, 1972.
2. Bose D.M. (Ed), A Concise History Science in India, Indian National Science Academy, 1971.
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मराठी पुस्तके :-

१. विज्ञानाचा समाज धारणेवरील परिणाम- कमलाकर दिक्षीत समाज प्रबोधन संस्था
२. शास्त्रीय विचार पध्दती - अ.भि. शहा. समाज प्रबोधन संस्था
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४. वैज्ञानिक अभ्यदयाची गाथा- शिवाजी विद्यापीठ प्रकाशन
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