

SOLAPUR UNIVERSITY, SOLAPUR

Class – B.A. I
(Choice Based Credit System)

Semester I

S.T.D.

Paper I :Introduction to STD

(w. e. f. June 2016)

Code No.:

Course No.: STD 101

No. of Credit: 04

Total Lectures: 60

Total Marks: 100

Course objectives:

1. Provide knowledge to students about the development of science and technology and contribution of some scientist.
2. To make acquaint the student with the dynamic aspects of development of science and technology.

Topic No.	Name of the Topic	Details	No. of Lectures
1	Introduction	1.1 Definition of Science and Technology 1.2 Fundamental concepts in scientific thinking 1.3 Scientific methodology of study, Analysis, Results 1.4 Science and Superstitions 1.5 Scientific orientation	15
2	Science and Technology Development	2.1 A brief survey of development of science and Technology. 2.2 Contribution of Newton, Bhaskaracharya, Aryabhata, Dr. C. V. Raman, Dr. Homi Bhabha, Dr. A. P. J. Abdul Kalam, Dr. Jayant Naralikal, Dr. Satish Dhawan.	15
3	Solar System and Our Earth	3.1 Solar System: Position of Earth 3.2 Origin of Earth 3.3 Forces acting on the Earth centrifugal, centripetal and gravitational – effects of forces.	15

4	Resources	4.1 Concept, Classification and Conservation of resources. 4.2 Conventional power resources: Coal, Petroleum, Natural Gas, Hydal Power. 4.3 Non-conventional power Resources: Solar energy, Wind and Atomic energy	15
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References:

1. Dury G. H. (1980): The Face of the Earth, Penguins.
2. Ernst W. G. (2000): Earth System – Process & Issues, Cambridge University press.
3. Encyclopaedia of Science and Technology, Dreamland Publication
4. ICSSR (1983): A Survey of Research in Physical Geography, Concept, New Delhi.
5. Kale V. & Gupta (2001): An Element of Geomorphology, Oxford Uni. Press Calcutta.
6. Monnkhouse F. J. (1974) : Principles of Physical Geography, Hodder & Stoughton, London
7. Singh Savindar (1998) : Geomorphology, PrayagPustakalata, Allahabad.
8. Ministry if Home affairs, Govt. of India 2015.
9. खतीब के.ए.– प्राकृतिक भूगोल, संजोग प्रकाशन कोल्हापूर

SOLAPUR UNIVERSITY, SOLAPUR

Class – B.A. I
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Semester II

S.T.D.

Sub.: Application of STD

(w. e. f. June 2016)

Code No.:

Course No.: STD 101

No. of Credit: 04

Total Lectures: 60

Total Marks: 100

Course objectives:

1. To understand the scope and content STD in relation to agriculture, transport and communication etc.
2. Provide knowledge to students about the importance of resources, human health and contribution of various scientific research institutes in India.

Topic No.	Name of the Topic	Details	No. of Lectures
1	Science Technology and Agriculture	1.1 Science and Technological Advances in agriculture such as Irrigation, Fertilizers, High Yielding Variety Seeds, plant protection methods. 1.2 Green Revolution 1.3 Bio-technology in agriculture, genetic, engineering, tissue culture and cloning. 1.4 Problems of Modern agriculture and their solutions.	15
2	Science Technology & Human Health	2.1 Brief history of Medical Science with special reference to India. 2.2 Concept of nutrition, components of nutrition & balanced diet 2.3 Diseases – A brief study of allergy and cancer 2.4 Aids: causes, effects and preventive measures.	15

3	Science Technological Institutions in India	3.1 Bhaba Atomic Research Centre, Mumbai 3.2 Haffkin Institute, Mumbai 3.3 Indian Institution of Space Science and Technology, Thiruanantpuram. 3.4 Indian Agricultural Research Institute, New Delhi 3.5 National Institute of Oceanography, Panjim 3.6 Survey of India- Dehradun	15
4	A) Communication B)Pollution	A) 4.1 Means of Communication & their application: Telephone, Television, Computer, Internet, Mobile etc. 4.2 Importance of Remote Sensing satellites 4.3 Introduction to GIS and GPS. B) Pollution: Air Pollution, Water Pollution, Sound & Soil Pollution- causes, effects and measures.	15

References:

1. Wooldrige S.W. The Geographer as Scientist, Thomas Nelson and Sons Ltd. London, 1956.
2. Strahler A.N.: Environmental Geo- Science, Hamilton Pub., Santa Barbara, 1973.
3. Louise Simmers, Introduction to Health Science technology
4. च.म. साखळकर: अंतराळ झेप
5. यदुनाथ थत्ते: भारतीय अनुयुगाचे शिल्पकार
6. रॉस (अनुवादित): विज्ञानाचे विश्व
7. आ.वा. कोगेकर: विज्ञानाची वाटचाल
8. डेव्हिड वूडबरी(अनुवादित) : अवकाश यात्रा
9. अ.भी. शहा: शास्त्रीय विचार पद्धती
10. भालबा केळकर: अर्वाचीन भारतीय वैद्यनिक
11. सुधाकर भालेराव : कृत्रिम उपग्रह व अवकाश विज्ञान
12. इंद्रभूषण बडे : अलर्जीसमज गैरसमज
13. डॉ. ए.पी.जे. अब्दुल कलाम: अग्नीपंख