

Ahmednagar Jilha Maratha Vidya Prasarak Samaj's
New Arts, Commerce, and Science College
Ahmednagar (Autonomous)
(Affiliated to Savitribai Phule Pune University, Pune)



National Education Policy (NEP)
Choice Based Credit System (CBCS)

Syllabus of
Value Education Course (VEC-02(E))
Scientific Temper

Implemented from
Academic Year 2024-25

**Ahmednagar Jilha Maratha Vidya Prasarak Samaj's
New Arts, Commerce and Science College, Ahmednagar
(Autonomous)
Value Education Courses (VEC)**

Course Introduction

Scientific temper refers to an attitude of logical, rational and scientific thinking. An individual is considered to have a scientific temper if he employs a scientific method of decision-making in everyday life. This involves repeatedly observing and verifying a fact before forming a hypothesis.

Scientific temperament is important for:

- Bringing forth a progressive society that is free of superstitions and irrational practices
- Developing the nation in all spheres (political, economic and social)
- Promoting tolerance among people for differing thoughts and ideas

Title of the Course: Scientific Temper								
Year: I				Semester: I				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
VEC	VEC-02(E)	02	00	02	30	15	35	50

Learning Objectives:

1. To develop analytical thinking skills.
2. To grow scientific thinking ways.
3. To enhance spirit of inquiry.
4. To understand new advancement of scientific temper

Course Outcomes (Cos)

1. Students will understand aims and objective of science teaching and learning and describe the characteristic feature of scientific attitude and scientific temper.
2. Students will be able to explain developmental stages of science education.
3. Students will inculcate scientific values among themselves.
4. Students will able to adopt the new advancement in scientific temper.

Detailed Syllabus:**Unit 1: Introduction to Scientific Temper (10)**

Historical developments of science education in India from ancient to modern period, Multicultural origin of science, Myths about nature of science, Domains and scope of science, Correlation of science with other subjects and disciplines, Aims and objectives of teaching and learning science, Basic process skills in science and its methods, Science religion, curiosity and its ethics, scientific realism.

Unit II: Scientific Temper Terms (10)

Scientific Temper and Indian citizenship-Power of Reasoning-Rote Learning Vs Conceptual Learning, science as a tool to understand the past, present and future making science as way of thinking and doing theory and experimentation, Science as a process of enquiry, describing reality, logic and belief, Science in society, Value development through science, Developing a scientific attitude, and scientific temper, Interdependence of different aspects of nature of science, Success and limitations of science and its impact on self.

Unit III: Recent Advancement in Scientific Temper (10)

Concept of scientific learning, Information and Communication Technology (ICT) need, types, advantages, Activity Based Learning (ABL) meaning, history, advantages; Advanced Learning Methodology (ALM) need, importance, Continuous Comprehensive Evaluation (CCE) meaning, advantages, disadvantages: Science Technology Engineering And Math (STEM) education.

Suggested Readings/Material:

1. Collected Works Of Justice R.A. Jahagirdar (Retd) (1927-2011) Scientific Temper Rationalist Foundation.
2. Dr. Rajib Mukhopadhyay Scientific Attitude Some Psychometric Considerations Iosr Journal Of Humanities And Social Science (Iosr-Jhss) Volume 19, Issue 1, Ver. Vii (Jan. 2014), Pp 98-100 E-Issn: 2279-0837, P-Issn: 2279-0845.
3. Hasan Jawaid Khan, Gauhar Raza & Surjit Singh Quest For Scientific Temper National Institute Of Science Communication And Information Resources (Nisclair) Council Of Scientific & Industrial Research (Csir) Dr K.S. Krishnan Marg, New Delhi-110012 & 14 Satsang Vihar Marg, New Delhi-110067 r Editors.
4. Pedagogy Of Science Indira Gandhi National Open University School Of Education.
5. What Is Science, Sundar Sarukkai, National Book Trust India, ISBN 978-81-237-6366-8.
6. Arpita Sharma Science And Scientific Temper Isbn: 978-81-941567-9-6 January 3-6, 2020 International Conference To Review Research In Science, Technology And Mathematics Education January 3-6, 2020.
7. Sagar Vidya J Scientific Attitude And Higher Education, Anmol Publications Pvt Ltd Isbn: 9788126115600, 9788126115600. Teaching of Science 9061.pdf (Web search materials).
8. Trends in science education Unesco Taylor & Francis, No. 164, p. 289-390, illus., ISSN: 0019-2872

9. New Trends in Science Education within the 21st Century Skills Perspective, Sahin Idin, Pages: 150-159, 2020,
10. New Trends in Science Education within the 21st Century Skills Perspective, Sahin Idin, Pages: 150-159, 2020.
11. <https://egyankosh.ac.in/bitstream/123456789/84670/1/Unit-3.pdf>
12. <file:///C:/Users/hp/Downloads/Crafting-arguments-FULL-PAPER.pdf>
13. <https://www.smcm.edu/writingcenter/wp-content/uploads/sites/48/2014/11/argue.pdf>
14. <https://slider.gatech.edu/sites/default/files/images/tutorial-te-annotated-fall2014.pdf>