

**Vitthalbhai Patel & Rajratna P. T. Patel Science College**  
(Autonomous)

(Reaccredited with 'A' Grade by NAAC (CGPA 3.13))

Affiliated to SARDAR PATEL UNIVERSITY

Vallabh Vidyanagar, Gujarat

Syllabus effective from the Academic Year 2024-2025



Course Code (Skill Enhancement Courses)	<b>US01SECHE01</b>	Title of the Course	<b>ENVIRONMENTAL CHEMISTRY - I</b>
Total Credits of the Course	2	Hours per Week	2

Course Objectives:	To make students familiar with: 1. Chemistry as a subject. 2. To understand environmental chemistry and its effect on surrounding.
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Course Content		
Unit	Description	Weightage* (%)
1.	<b>Introduction to Environmental Studies:</b> Definition, Scope & Significance of Environmental Studies, Multidisciplinary Nature, Components of Environment, Atmosphere, Hydrosphere (Hydrological Cycle), Lithosphere (Structure of Earth), Biosphere. Green House Gases. Bio-Geochemical Cycles: Nitrogen & Carbon.	<b>50</b>
2.	<b>Natural Resources:</b> Classification, Renewable Sources & Types, Non-Renewable Sources & Types. Conservation of Natural Resources, Forest Resource: Forest Wealth of Gujarat (Forest Cover, Types, Species Composition) Causes of Deforestation, Conservation Strategies Significance, Water Resources : Use & Over exploitation & Surface & Ground Water. Conservation Methods, Dams-Benefits & Problems Case Studies. Land Resources Use, Over exploration & Conservation of Soil.	<b>50</b>

Teaching-Learning Methodology	Conventional method (classroom blackboard teaching), ICT. Courses for B. Sc. Chemistry programme are delivered through classroom, laboratory work in a challenging, engaging, and inclusive manner that
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	accommodates a variety of learning styles and tools (PowerPoint presentations, audio visual resources, e-resources, seminars, workshops, models).
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage (%)
1.	Continuous and compression evaluation : Class test/Internal written test 10 Marks (40%), Quiz 05 Marks (20%), Home Assignments 05 Marks (20%), Attendance 05 Marks (20%), (As per SPU Letter No. E-3/2748 dated 02/02/2024) [Total 25 Marks (100%)].	50
2.	Semester End Examination [Total 25 Marks (100%)].	50

Course Outcomes: Having completed this course, the learner will be able to	
1.	Gain the knowledge of Environmental Chemistry and Natural Resources.

Suggested References:	
Sr. No.	References
1.	Environmental Science by Dr Y K Singh.
2.	Environmental Science by S C Santra.
3	Environmental Studies by R Rajagopalan.
4	A Text Book of Environmental Studies by D K Asthana & M Asthana.

On-line resources to be used if available as reference material
On-line Resources : Google books, INFLIBNET, Google Web

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