

**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 (Multidisciplinary )	<b>US01MDCHE01</b>	Title of the Course	<b>ENVIRONMENTAL POLLUTION- 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. Basic concepts related to pollution and its effect on environment.
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Course Content		
Unit	Description	Weightage* (%)
1.	<b>Air Pollution</b> Introduction, Environmental Pollution disasters, Mediterranean: A dead sea, Classification of pollutants. Air pollution, Composition of air, Chemical reaction in air due to sun light, Reactions in Troposphere, Stratosphere and mesosphere. Smog formation in air. Major sources of air pollution, Other sources of air pollution, Units of measurement of air pollutant. Classification of air pollutants. Sulphur compounds as pollutants.	<b>50</b>
2.	<b>Water Pollutants And Their Properties</b> Introduction, Sources of water, Chemistry of water, Definition of water pollution, Types of water pollution including main point, Types of water pollution, Types of water pollution based on sources and storages. Ground water pollution, Factors affecting the ground water pollution, Effect of ground water pollution on man and soil, Surface water pollution, Factors affecting the surface water, Sources of surface water pollution, Lake water pollution, Sources of pollutants in lake water.	<b>50</b>

Teaching-Learning	Conventional method (classroom blackboard teaching), ICT. Courses for B. Sc. Chemistry programme are delivered through classroom,
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Methodology	laboratory work in a challenging, engaging, and inclusive manner that 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 pollution chemistry using various fundamental aspects of chemical sciences.
2.	Understand types of pollutions and its effect on surrounding environment.
3.	To have knowledge of basic aspects of pollution chemistry.

Suggested References:	
Sr. No.	References
1.	Environmental studies by S.V.S Rana Second reprint (F. Edi):2007.
2.	Environmental Chemistry by B. K. Sharma, H.KAUR, Third revised and enlarged edition -1996-97.

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

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