



SARDAR PATEL UNIVERSITY
Vallabh Vidyanagar, Gujarat
(Reaccredited with 'A' Grade by NAAC (CGPA 3.25))
Syllabus with effect from the Academic Year 2021-2022

(Bachelor of Science) (Undergraduate)
B. Sc. (UG) Semester - II

Course Code	US02CCHE52	Title of the Course	PRACTICAL IN CHEMISTRY- II
Total Credits of the Course	2	Hours per Week	4
Course Objectives:	To make students familiar with: 1. Chemistry as a subject. 2. Practical aspects of chemistry. 3. Basic concepts related to volumetric analysis and qualitative analysis of organic substances. 4. Hands on training on laboratory practices.		

Course Content	
Unit	Description
1.	Volumetric analysis of redox reaction (i) $\text{KMnO}_4 \rightarrow \text{FeSO}_4(\text{NH}_4)_2\text{SO}_4$ (ii) $\text{K}_2\text{Cr}_2\text{O}_7 \rightarrow \text{FeSO}_4$ (iii) Oxalic acid Vs KMnO_4
2.	Identification of Organic substance [14 substances]. Like organic spotting, detection of elements, Type of compound like aliphatic/aromatic, Nature (acidic/basic/neutral), Functional group(s) analysis, and m.pt. /b.pt. Benzoic acid, Salicylic acid, β -Naphthol, p-nitroaniline/m-nitroaniline, Acetanilide, Urea, Naphthalene, p-dichlorobenzene, m-dinitrobenzene, Acetone, Benzaldehyde, Methanol, Methyl acetate, Aniline, Dextrose.

Teaching-Learning Methodology	Hands on training of Practical's. Courses for B. Sc. Chemistry programme are delivered through classroom, 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.	Internal Written / Practical Examination (As per CBCS R.6.8.3)	--
2.	Internal Continuous Assessment in the form of Practical, Viva-voce, Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	--
3.	University Examination	100%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Learn about hands on training of Volumetric analysis and Analysis of organic substances.
2.	Improve practical skills of students.

Suggested References:	
Sr. No.	References
1.	Mendham, J., Denney, R. C., Barnes, J. D., Thomas, M. J. K., <i>Vogel's textbook of quantitative chemical analysis</i> , 6 th Edition.
2.	Pandey, O. P., Bajpai, D. N., Giri, S., <i>Practical Chemistry</i> .
3.	Ghoshal, Mahapatra, Nad , <i>An Advanced course in Practical Chemistry</i> .

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

