



**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 - Home Science  
(B.Sc.- H.Sc.) (Home Science) Semester (II)

Course Code	UH02CBSC59	Title of the Course	Basic Science-II
Total Credits of the Course	02	Hours per Week	02

Course Objectives:	<ol style="list-style-type: none"><li>1. To provide basic knowledge related to organic chemistry including petroleum products.</li><li>2. Write structures of organic molecules in various ways classify the organic compounds name the compounds according to IUPAC system of nomenclature and also derive their structures from the given names.</li><li>3. To familiarize the students with genetic concept.</li></ol>
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Course Content		
Unit	Description	Weightage* (%)
1.	Introduction to organic chemistry: (a) Introduction, Sources, Importance. (b) Organic Compounds: Hydrocarbons, Functional Groups, IUPAC nomenclature, Examples of aliphatic and aromatic Compounds and Homologues series (c) Properties of alkane, alkene, and alkyne.	20
2.	Polymers: (a) Definition and explanation, Classification, General Properties, (b) Structures, properties and uses of following Polymers (1) Polythene, (2) Polyvinylchloride, (3) Teflon, (4) Nylon (5) Polyester. (c) Dyes: Definition and explanation, Classification with example	20
3.	Growth and development (a) Cell division, (b) Sex determination in human and multiple birth. (c) Vegetative propagation	20



4.	Microorganisms (a) Significance of microorganism, brief account of Viruses and Bacteria (b) Commercial importance of Microbes (Virus, Bacteria and Yeast) (c) Economic importance of plants and animals	20
5	Basic concepts related to electricity  Concept of Current, voltage and resistance-Ohm's Law, Conductors and insulators of electricity and their applications.	10

Teaching-Learning Methodology	Lectures, Interactive sessions, ICT enabled teaching and learning experiences in terms of video lessons, Discussion, Project Work, Demonstrations, Practical guidance.
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Understand organic compounds, Polymers and different dyes.
2.	Get knowledge of growth and development of cell.
3.	Learn basic concept of electricity.



Suggested References:

Sr. No.	References
1.	Chatwal,G.(1998). <i>Synthetic Organic Chemistry</i> . Bombay: Himalya Publishing House.
2.	Mortimer,C. (1971). <i>Chemistry a Conceptual Approach</i> . , Calcutta-: Published by Van Nostrand Renhold Company.
3	Dutta A.C. (1980). <i>A class book of Botany</i> .John Brown, oxford university press. Faraday House.
4	Sharma V.K. (1990). <i>Biology class XI</i> . New Delhi: Daryaganj. Publishers 23.
5	Maheshwari P.(1996). <i>Biology Part 1-7</i> . New Delhi.: NCERT.
6	Kenneth W. University of California, Irvins ( 1975). <i>Basic Physics</i> . New Delhi : Oxford and IBH Publishing Co.

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