UNIVERSITY OF MADRAS

B.Sc. DEGREE PROGRAMME IN ADVANCED ZOOLOGY AND BIOTECHNOLOGY

SYLLABUS WITH EFFECT FROM 2023-2024

<table>
<tr><td>Title of the Course</td><td colspan="7">CHEMISTRY PRACTICAL
FOR PHYSICAL AND BIOLOGICAL SCIENCES-II</td></tr>
<tr><td>Paper No.</td><td colspan="7">Generic Elective</td></tr>
<tr><td rowspan="2">Category</td><td rowspan="2">Generic Elective</td><td>Year</td><td>I/ II</td><td rowspan="2">Credits</td><td rowspan="2">1</td><td rowspan="2">Course Code</td><td rowspan="2">221E41</td></tr>
<tr><td>Semester</td><td>II/IV</td></tr>
<tr><td rowspan="2">Instructional hours per week</td><td>Lecture</td><td>Tutorial</td><td colspan="2">Lab Practice</td><td colspan="3">Total</td></tr>
<tr><td>-</td><td>-</td><td colspan="2">2</td><td colspan="3">2</td></tr>
<tr><td>Prerequisites</td><td colspan="7"></td></tr>
<tr><td>Objectives of the course</td><td colspan="7">This course aims to provide knowledge on identification of organic functional groups different types of organic compounds with respect to their properties. determination of elements in organic compounds.</td></tr>
<tr><td></td><td colspan="7">SYSTEMATIC ANALYSIS OF ORGANIC COMPOUNDS
The analysis must be carried out as follows:
(a) Functional group tests [phenol, acids (mono & di) aromatic primary amine, amides (mono & di), aldehyde and glucose].
(b) Detection of elements (N, S, Halogens).
(c) To distinguish between aliphatic and aromatic compounds.
(d) To distinguish – Saturated and unsaturated compounds.</td></tr>
<tr><td>Reference Books</td><td colspan="7">V.Venkateswaran, R.Veerasamy, A.R.Kulandaivelu, Basic Principles of Practical Chemistry; Sultan Chand & sons, Second edition, 1997.</td></tr>
<tr><td colspan="8">Course Learning Outcomes (for Mapping with POs and PSOs) On completion of the course the students should be able to
CO 1: gain an understanding of the use of test tubes, boiling tubes, fusion tubes.
CO 2: design, carry out, record and interpret the results of organic analysis.
CO 3: apply their skill in the analysis of functional group present in organic compounds.
CO4: analyze the chemical constituents in allied chemical products</td></tr>
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CO-PO Mapping (Course Articulation Matrix)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	S	S	S	S	S	S	S	M	S	M
CO2	M	S	S	S	M	S	S	M	M	M
CO3	S	S	S	M	S	S	S	M	S	M
CO4	S	S	S	S	S	S	S	M	M	M

Level of Correlation between PO's and CO's

CO /PO	PO1	PO2	PO3	PO4	PO5
CO1	3	3	3	3	3
CO2	3	3	3	3	3
CO3	3	3	3	3	3
CO4	3	3	3	3	3
Weightage	12	12	12	12	12
Weighted percentage of Course Contribution to POs	3.0	3.0	3.0	3.0	3.0