

Course code	Course Name	L-T-P-Credits	Year of introduction
CH231	CHEMISTRY LAB FOR PROCESS ENGINEERING- I	0-0-3-1	2016
<b>Prerequisite: CH207 Chemistry for process engineering - I</b>			
<b>Course Objectives</b>			
<ol style="list-style-type: none"> <li>To provide knowledge of analysis, estimation and preparation of selected organic chemicals.</li> <li>To accustom the students with the handling and analyzing chemicals.</li> </ol>			
<b>List of Exercises / Experiments</b>			
<ol style="list-style-type: none"> <li><b>Analysis of simple organic compounds</b> (minimum 8 numbers)</li> <li><b>Preparations of organic compounds</b> (minimum 5 numbers) <ol style="list-style-type: none"> <li>Preparation of benzanilide from aniline.</li> <li>Preparation of m-dinitrobenzene from nitrobenzene.</li> <li>Preparation of benzoic acid from ethyl benzoate.</li> <li>Preparation of glucosazone from glucose.</li> <li>Preparation of salicylic acid methyl salicylate.</li> <li>Preparation of aspirin from salicylic acid.</li> </ol> </li> <li><b>Volumetric estimation of organic compounds.</b> <ol style="list-style-type: none"> <li>Aromatic primary amine.</li> <li>Phenol.</li> <li>Glucose</li> </ol> </li> <li><b>Colorimetric estimation of organic compounds.</b> <ol style="list-style-type: none"> <li>Ascorbic acid</li> <li>Streptomycin</li> </ol> </li> <li><b>Chromatography</b> - Identification of amino acids using paper chromatography</li> </ol>			
<b>Expected outcome</b>			
<p>At the end of the course, students will be able to</p> <ol style="list-style-type: none"> <li>Prepare, analyse and estimate selected organic chemicals experimentally.</li> <li>Plan and perform experiments for the analysis</li> <li>Demonstrate capacity to work in teams and exhibit knowledge of safety, health and environment by practicing laboratory ethics.</li> </ol>			
<b>References:</b>			
<ul style="list-style-type: none"> <li>Srivastava T.N. &amp; Kamboj P.C., Systematic Analytical Chemistry.</li> <li>F G Mann &amp; B C Saunders, Practical Organic Chemistry, Dorling Kinderly PVT. Ltd.</li> <li>Beebet, Pharmacuetical Analysis.</li> <li>Vogel's Textbook of Practical Organic Chemistry, ELBS/Longman, 1989</li> </ul>			