# 17SH12P3 - ENGINEERING CHEMISTRY LABORATORY

(Common for ECE, EEE, CSE&IT Branches)

|  |  |  |  |
| --- | --- | --- | --- |
| **Course Category:** | Basic Sciences | **Credits:** | 2 |
| **Course Type:** | Practical | **Lecture - Tutorial - Practical:** | 0-0-3 |
| **Prerequisite:** | Fundamental concepts of Chemistry | **Sessional Evaluation:**  **Univ. Exam Evaluation:**  **Total Marks:** | 40  60  100 |
| **Objectives** | * The main objective is to provide students to learn about experimental techniques in chemistry with knowledge in theoretical aspects so that they can excel in that particular field. | | |

|  |  |
| --- | --- |
| **Course Outcomes** | 1. These experiments in the laboratory are helpful in understanding key concepts of chemistry through involvement in the experiments by applying theoretical knowledge. 2. It helps to recognize where the ideas of the student agree with those accepted by chemistry and where they do not. |
| **Course Content** | Minimum of 8 experiments to be completed out of the following:  LIST OF EXPERIMENTS   1. Determination of total hardness of water by EDTA method 2. Determination of Copper by EDTA method 3. Estimation of dissolved oxygen by Winkler’s method 4. Determination of Acidity of water 5. Determination of total alkalinity of water. 6. Estimation of chlorides using potassium chromate indicator 7. Conductometric titration of strong acid Vs strong base. 8. Determination of pH of unknown solution 9. Preparation of Bakelite 10. Determination of viscosity of oils with Redwood viscometer |
| **Text Books** | Text Books:   1. Vogel’s text books of quantitative chemical analysis, Mendham et all, person publications. 2. Chemistry lab manual – KN Jayaveera, Subbareddy & Chandrasekher. 3. Instrumental methods of chemical analysis – Chatwal & Anand Himalaya publications. |