

| Course No. | Course Name | L-T-P-Credits | Year of Introduction |
|---|---------------------------|---------------|----------------------|
| CY 110 | ENGINEERING CHEMISTRY LAB | 0-0-2-1 | 2016 |
| List of Exercises / Experiments (Minimum of 8 mandatory) | | | |
| <ol style="list-style-type: none"> 1. Estimation of Total Hardness – EDTA method. 2. Estimation of Iron in Iron ore. 3. Estimation of Copper in Brass. 4. Estimation of dissolved oxygen by Winklers method. 5. Estimation of chloride in water. 6. Preparation of Urea formaldehyde and Phenol-formaldehyde resin. 7. Determination of Flash point and Fire point of oil by Pensky Martin Apparatus. 8. Determination of wavelength of absorption maximum and colorimetric estimation of Fe^{3+} in solution. 9. Determination of molar absorptivity of a compound other than Fe^{3+}. 10. Analysis of IR spectra of any three organic compounds. 11. Analysis of ^1H NMR spectra of any three organic compounds. 12. Calibration of pH meter and determination of pH of a solution. 13. Verification of Nernst equation for electrochemical cell. 14. Potentiometric titrations: acid – base and redox titrations 15. Conductivity measurements of salt solutions. 16. Flame photometric estimation of Na^+ to find out the salinity in sand. | | | |
| Expected outcome | | | |
| The student will be able to apply and demonstrate the theoretical concepts of Engineering Chemistry. | | | |
| References: | | | |
| <ul style="list-style-type: none"> • Practical Engineering Chemistry Lab Manual, Owl book publishers | | | |