**C. Course Description**

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| **1 Topics to be Covered** |  | |  |
| **List of Topics** | **No of**  **Weeks** | **Contact hours** | **Assignment** |
| **Introduction to surface chemistry. Thermodynamics of Ions. Born Theory, Frank Wen model** | **2** | **4** |  |
| **Debye-Huckel Theory** | **2** | **4** |  |
| **Interface between solid and liquid .** | 1 | 2 |  |
| **Electrochemical potential, Nernst equation , Mass transport** | 3 | 6 |  |
| **Rate of electrode reaction and over-potential(Butler-Volmer and Tafel equations) Types of electrochemical potential** | 2.5 | 5 |  |
| **Electocatalysis.Electrode reaction mechanism and hydrogen evolution, Cyclic voltammetry** | 2.5 | 5 |  |
| Total | 13 | 26 |  |