**CURRICULUM PLAN (EVEN SEMESTER 2024-25)**

**Teacher Name: Dr. Anjali Sehrawat**

**Course: BSc. (H) Chemistry , II year (Semester IV)**

**Paper Name: Electrochemical Cells, Chemical Kinetics and Catalysis (NEP) (1 period per week)**

**UPC: 2172012403**

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| **Contents** | **Allocation of lectures** | **Month wise schedule to be followed** | **Tutorial/Assignments/**  **Presentations etc.** |
| **UNIT 2: Chemical Kinetics**  General introduction of Kinetics, order and molecularity of a reaction, Rate laws in terms of advancement of a reaction, Zero and first order differential and integrated rate expression. | **4** | **2nd week of January- 1st week of February** | * **Syllabus Overview** * **References Books** * **Lectures\** * **Numericals** |
| Second order differential and integrated rate expression, Experimental methods to determine rate laws, Opposing reactions, Parallel reactions (Differential rate laws). | **4** | **2nd week of February – 1st week of March** | * **Lectures** * **Class discussion** * **Assignment** * **Problem solving** |
| Consecutive reactions and their differential rate laws, steady state, approximation, chain reactions, Lindemann mechanism, Arrhenius equation, activation energy, collision theory and activated complex theory | **6** | **3rd week of March- 2nd week of April** | * **Lectures** * **Problem solving** * **Class discussion** |
| Electrode kinetics  **Unit 3: Catalysis**  Types of catalysts, specificity , selectivity, mechanism of catalyzed reactions at solid surfaces, Michelis-Menten mechanism, acid-base catalysis. | **6** | **3rd week of April -**  **4th week of April** | * **Lectures** * **Problem solving** |

Dr. Anjali Sehrawat

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