

Curriculum Plan (Odd Semester 2024-25)

Teacher Name: **Dr. Meenakshi Verma**

Course: **B.Sc. (P) Life Science, NEP-UGCF, Semester III/ II year**

Paper Name: **Chemical Energetics and Equilibria (1 period per week, shared with Dr. Upasana Issar)**

UPC: **2172512302**

S. No.	Contents	Allocation of Lectures	Monthwise schedule to be followed	Assignments/ Presentations etc.
1.	Ionic equilibrium Strong, moderate and weak electrolytes, degree of ionization, factors affecting degree of ionization, Ostwald's dilution law, ionization constant and ionic product of water, ionization of weak acids and bases, Degree of ionization, pH scale, common ion effect, Buffer solutions, Henderson-Hasselbach equation. Solubility and solubility product of sparingly soluble salts – applications of solubility product principle	10	First week August – Second week October	Syllabus overview Reference books suggestions Numerical Solving Doubt Session Class Test
2.	Chemical Equilibrium Criteria of thermodynamic equilibrium. Free energy change in a chemical reaction and equilibrium constant, exergenic and endergenic reactions with examples such conversion of ATP to ADP or vice versa,, Le Chatelier's principle, relationship between K_p , K_c and K_x for reactions involving ideal gases.	4	Third week October – Second week November	Numerical Solving Doubt Session University Papers Discussion

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