

Curriculum Plan (Odd Semester 2026-27)

Teacher Name: **Dr. Geeta Devi Yadav**

Course: **B.Sc. (LS) Chemistry, NEP-UGCF, Semester VII year**

Paper Name: **Advanced Stereochemistry (DSE-15) (2 periods per week)**

UPC:

S. No.	Contents	Allocation of Lectures	Monthwise schedule to be followed	Assignments/ Presentations etc
1.	UNIT -1: Stereoisomerism: Chiral (stereogenic) centre, principle of axial and planar chirality; Stereochemistry and configurations of biphenyls (atropisomerism).	08	First week of August –first week of September	Syllabus overview Reference books suggestions Question-Solving Doubt Session
2.	Bridged biphenyls, ansa compounds and cyclophanes, allenes, spiranes, alkylidene cycloalkanes, adamantanes, catenanes and helicity.	07	Second week of September – third week of September	Question-Solving Doubt Session, University Papers Discussion Class Test

3.	Topicity and prostereoisomerism: Topicity of ligands and faces and their nomenclature; Stereogenicity, chirogenicity, and pseudoasymmetry, stereogenic and prochiral centres. UNIT-3: Asymmetric induction: Cram's, Prelog's, and Felkin-Ahn model.	08	Fourth week of September – Second week of October	Question-Solving Doubt Session University Papers Discussion Assignment Distribution
4.	Cyclostereoisomerism: Configurations, conformations and stability of cyclohexanes (di-, and tri-substituted), cyclohexenes, cyclohexanones, decalin. Applications of ORD and CD to Stereochemical Problems	07	Fourth week of October – third week of November	Question-Solving Doubt Session University Papers Discussion

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