

**MSC CHEMISTRY PROGRAMME**  
**SCHEME OF LEARNING AND EVALUATION**  
**(For the students admitted in the academic year 2025 – 2026 & onwards)**  
**Outcome Based Curriculum Framework with CBCS**

Course Code	Course Title	Course Category	Course Type	Part Type	Lecture Hours	Tutorial Hours	Practical Hours	Course Credits	Max CA Marks	Max CE Marks	Total Marks
<b>Semester - I</b>											
25CHP101	Organic Reaction Mechanism and Stereochemistry	Core	Theory	3	5	0	0	4	25	75	100
25CHP102	Transition Metal Chemistry	Core	Theory	3	5	0	0	4	25	75	100
25CHP103	Thermodynamics, Electrochemistry and Phase Equilibrium	Core	Theory	3	5	0	0	5	25	75	100
25CHP104	Electronics For Chemists	Core	Theory	3	4	0	0	4	25	75	100
<b>Semester - II</b>											
25CHP209	Practical - I Organic Preparation and Qualitative Analysis (Skill Based)	Core	Practical	3	0	0	3	0	0	0	0
25CHP210	Practical - II Inorganic Preparation, Qualitative Semi-Micro Analysis and Colorimetry (Skill Based)	Core	Practical	3	0	0	2	0	0	0	0
25CHP211	Practical - III Organic Preparation and Quantitative Analysis (Skill Based)	Core	Practical	3	0	0	2	0	0	0	0
25CHP212	Practical - IV Volumetric and Gravimetric Analysis (Skill Based)	Core	Practical	3	0	0	2	0	0	0	0
25CHP205	Organic Reaction Mechanism and Retro-Synthesis	Core	Theory	3	5	0	0	5	25	75	100
25CHP206	Organometallic Chemistry	Core	Theory	3	5	0	0	5	25	75	100
25CHP207	Quantum Mechanics and Group Theory	Core	Theory	3	5	0	0	5	25	75	100
25CHP208A	Major Elective Course - I Advanced Nano-Materials and Green Chemistry	Elective	Theory	3	4	0	0	5	100	0	100
25CHP208B	Major Elective Course - I Advanced Polymer Chemistry	Elective	Theory	3	4	0	0	5	100	0	100
25CHP209	Practical - I Organic Preparation and Qualitative Analysis (Skill Based)	Core	Practical	3	0	0	3	3	40	60	100
25CHP210	Practical - II Inorganic Preparation, Qualitative Semi-Micro Analysis and Colorimetry (Skill Based)	Core	Practical	3	0	0	2	3	40	60	100

25CHP211	Practical - III Organic Preparation and Quantitative Analysis (Skill Based)	Core	Practical	3	0	0	2	3	40	60	100
25CHP212	Practical - IV Volumetric and Gravimetric Analysis (Skill Based)	Core	Practical	3	0	0	2	3	40	60	100
25SECP201	Skill Enhancement Course - Cyber Security	Core	Theory	3	2	0	0	2	100	0	100
<b>Semester - III</b>											
25CHP313	Photochemistry, Pericyclic reactions and Natural Products	Core	Theory	3	5	0	0	4	25	75	100
25CHP314	Solid state and Nuclear Chemistry	Core	Theory	3	5	0	0	4	25	75	100
25CHP315	Kinetics and Statistical Thermodynamics	Core	Theory	3	5	0	0	4	25	75	100
25CHP316A	Major Elective Course II: Molecular spectroscopic Methods and its applications	Elective	Theory	3	5	0	0	5	25	75	100
25CHP316B	Major Elective Course II: Selected Topics in Chemistry	Elective	Theory	3	5	0	0	5	25	75	100
25CHP317	Practical-V: Adsorption Kinetics and Conductometry (Skill Based)	Core	Practical	3	0	0	5	3	100	0	100
25IDCCHP	Inter Disciplinary Course- Drugs & Chemotherapy (Theory)	Elective	Theory	3	3	0	0	2	25	75	100
25IDCCHP	Inter Disciplinary Course - Preparation, Extraction & Estimation Of Drugs (Practical)	Elective	Practical	3	0	0	2	2	40	60	100
<b>Semester - IV</b>											
25CHP420	Advanced Analytical Chemistry	Core	Theory	3	4	1	0	4	25	75	100
25CHP421	Environmental Chemistry	Core	Theory	3	4	1	0	4	25	75	100
25CHP422	Practical -VI: Potentiometry, Kinetics and Phase equilibria (Skill Based)	Core	Practical	3	0	0	5	3	40	60	100
25CHP423	Project/Startup/Innovation Internship	Core	Project	3	0	0	0	6	80	120	200