Department of Chemistry & Chemical Biology

Details of Institute Core (IC) Courses

Institute Core (IC) Courses				
S. No.	**Course Code**	**Course Name**	**L-T-P**	**Course Type**
1	CYI101	Chemistry	3-0-0	Theory
2	CYI102	Chemistry Lab	0-0-2	Practical

Details of Departmental Compulsary (DC) Courses

Departmental Compulsary (DC) Courses				
S. No.	**Course Code**	**Course Name**	**L-T-P**	**Course Type**
1	CYC501	Quantum Chemistry	3-0-0	Theory
2	CYC502	Organic Reactions and Stereochemistry	3-0-0	Theory
3	CYC503	Mathematics for Chemists	3-0-0	Theory
4	CYC504	Application of Spectroscopic Methods	3-0-0	Theory
5	CYC505	Coordination Chemistry	3-0-0	Theory
6	CYC506	Inorganic Chemistry Lab	0-0-3	Practical
7	CYC507	Organic Chemistry Lab – I	0-0-3	Practical
8	CYC508	Kinetics and Thermodynamics	3-0-0	Theory
9	CYC509	Methods in Organic Synthesis	3-0-0	Theory
10	CYC510	Organometallic Chemistry	3-0-0	Theory
11	CYC511	Group Theory & Electronic Spectroscopy	3-1-0	Theory
12	CYC512	Physical Chemistry Lab - I	0-0-3	Practical
13	CYC513	Organic Chemistry Lab - II	0-0-3	Practical
14	CYC514	Photochemistry & Pericyclic Reactions	3-0-0	Theory
15	CYC515	Molecular Spectroscopy	3-0-0	Theory
16	CYC516	Strategies in Organic Synthesis	3-0-0	Theory
17	CYC517	Physical Chemistry Lab - II	0-0-3	Practical
18	CYC518	Analytical Chemistry Lab	0-0-3	Practical
19	CYC522	Advanced Techniques in Materials Characterization	3-0-0	Theory
20	CYC523	Numerical Analysis and Methods in Chemistry	3-0-0	Theory
21	CYC524	Advanced Spectroscopic Methods	3-0-0	Theory
22	CYC525	Basic of Pharmacology & Drug Design	3-0-0	Theory
23	CYC526	Pharmaceutical Process Technology	3-0-0	Theory
24	CYC527	Formulation & Drug Delivery Technology	3-0-0	Theory
25	CYC528	Process Chemistry Lab	0-0-3	Practical
26	CYC529	Formulation/Manufacturing Lab	0-0-3	Practical
27	CYC540	Research Methodology and Statistics	3-0-0	Theory
28	CYC597	Thesis	0-0-0 (36)	Non-Contact
29	CYC598	Thesis	0-0-0 (18)	Non-Contact
30	CYC599	Thesis	0-0-0 (S/X)	Audit

Details of Departmental Elective (DE) Courses

Departmental Elective (DE) Courses				
S. No.	**Course Code**	**Course Name**	**L-T-P**	**Course Type**
1	CYD501	Medicinal Chemistry	3-0-0	Theory
2	CYD502	Polymer Chemistry	3-0-0	Theory
3	CYD503	Cluster Chemistry	3-0-0	Theory
4	CYD504	Symmetry in Bonding	3-0-0	Theory
5	CYD505	Asymmetric Synthesis	3-0-0	Theory
6	CYD506	Computational Chemistry	3-0-0	Theory
7	CYD507	Bio-inorganic Chemistry	3-0-0	Theory
8	CYD508	Chemistry of f–Block Elements	3-0-0	Theory
9	CYD509	Modern Terpyridine Chemistry	3-0-0	Theory
10	CYD510	Chemistry of Nanostructured Materials	3-0-0	Theory
11	CYD511	Advanced Methods in Organic Synthesis	3-0-0	Theory
12	CYD512	Modern Aspects of Catalysis and Surface Science	3-0-0	Theory
13	CYD513	Electroanalytical Methods	3-0-0	Theory
14	CYD514	Single Crystal X-ray Diffraction	3-0-0	Theory
15	CYD515	Advances in Nonconventional Energy Systems	3-0-0	Theory
16	CYD516	Advanced Heterocyclic Chemistry	3-0-0	Theory

17	CYD517	Oligosaccharide Synthesis	3-0-0	Theory
18	CYD518	Metalloenzymes-Special Topics	3-0-0	Theory
19	CYD519	Characterization Techniques for Inorganic Chemists	3-0-0	Theory
20	CYD520	Advanced Fluorescence Spectroscopy	3-0-0	Theory
21	CYD521	Nanomaterials for Advanced Applications	3-0-0	Theory
22	CYD522	Advanced Biocatalysis	3-0-0	Theory
23	CYD523	Supramolecular Chemistry & Molecular Recognition	3-0-0	Theory
24	CYD524	Basics of Chemical Biology	3-0-0	Theory
25	CYD525	Biopharmaceutics and Pharmacokinetics	3-0-0	Theory
26	CYD526	Quality Control & Pharmaceutical Analysis	3-0-0	Theory
27	CYD527	Pharmacognosy and Phytopharmaceuticals	3-0-0	Theory
28	CYD528	Modern Separation Techniques	3-0-0	Theory
29	CYD529	Computer Aided Drug Discovery	3-0-0	Theory
30	CYD530	Pharmacovigilance and Regulatory Affairs	3-0-0	Theory
31	CYD531	Biotechnology in Pharmaceutical Sciences	3-0-0	Theory
32	CYD532	Solid State Materials: Chemistry & Engineering	3-0-0	Theory
33	CYD533	Advanced Electrochemistry	3-0-0	Theory
34	CYD534	Heterocyclic Chemistry	3-0-0	Theory
35	CYD535	Main Group Chemistry	3-0-0	Theory
36	CYD536	Science of Corrosion & Corrosion Control	3-0-0	Theory

Details of Open Elective (OE) Courses

Open Elective (OE) Courses				
S. No.	**Course Code**	**Course Name**	**L-T-P**	**Course Type**
1	CYO501	Instrumental Techniques for Material Characterization	3-0-0	Theory
2	CYO502	Material Sciences and Technology	3-0-0	Theory
3	CYO503	Rechargeable Battery Science and Technology	3-0-0	Theory
4	CYO506	Electrochemical Strategies in Energy Systems	3-0-0	Theory
5	CYO507	Nuclear & Radiation Chemistry	3-0-0	Theory
6	CYO508	Surface Science & Catalysis	3-0-0	Theory