Title of the Course: M.Sc. I (Chemistry)

Semester-I			
S. N.	**Paper No**	**Subject**	**Credits**
1	**CCTP-1** CHP-110	Physical Chemistry-I (Fundamentals of Physical Chemistry)	4 credit (48 L + 12T)
2	**CCTP-2** CHI-130	Inorganic Chemistry-I (Molecular Symmetry and Chemistry of Main Group Elements)	4 credit (48 L + 12T)
3	**CCTP-3** CHO-150	Organic Chemistry-I (Basic Organic Chemistry)	4 credit (48 L + 12T)
4	**CBOP-1** CHG-190	**Section-I: General Chemistry-I, Theory Course (Any one option)** **Elective Option-A**: Introduction to Solid State of Matter **Elective Option-B**: Mathematics for Chemists **Elective Option-C**: Introduction to Chemical Biology-I	2 credit (24 L + 6T)
		Section-II: General Chemistry Practical (Any one) **Elective Option-A** :Inorganic Chemistry-Material Analysis, Synthesis and Applications **Elective Option-B** : Chemical Biology Practical-I	2 credit (48 L + 12T)
5	**CCPP-1** CHP-107	Basic Practical Chemistry-I	4 credit (96 L + 24T)
Semester- II			
6	**CCTP-4** CHP-210	Physical Chemistry - II (Molecular Spectroscopy and Nuclear Chemistry)	4 credit (48 L + 12T)
7	**CCTP-5** CHI-230	Inorganic Chemistry -II (Coordination and Bioinorganic Chemistry)	4 credit (48 L + 12T)
8	**CCTP-6** CHO-250	Organic Chemistry-II (Photochemistry, Pericyclic and Organic spectroscopy)	4 credit (48 L + 12T)
9	**CBOP-2** CHG-290	**Section-I: General Chemistry-II, Theory (Any one option)** **Elective Option-A** : Material Characterization Technique **Elective Option-B** : Organometallic and Inorganic Reaction Mechanism **Elective Option-C**: Introduction to Chemical Biology-II	2 credit (24 L + 6T)
		Section-II: General Chemistry, Practical (Any one option) **Elective Option-A**: Electroanalytical Techniques of Analysis **Elective Option-B**: Chemical Biology Practical-II	2 credit (48 L + 12T)
10	**CCPP-2** CHP-227	Basic Practical Chemistry-II	4 credit (96 L + 24T)
Total Credits for First Year			**40**

M.Sc. (II) Organic Chemistry

Sr. No.	Paper No. & Course Code	Course Nam e	Credits
Semester - III			
1	**CCTP-7** CHO-350	Organic Reaction Mechanism and Biogenesis	4
2	**CCTP-8** CHO-351	Structure Determination of Organic Compounds by Spectroscopic Methods	4
3	**CCTP-9** CHO-352	Stereochemistry and Asymmetric Synthesis of Organic Compounds.	4
4	**CBOP-3** CHO-353 Theory	CHO-353-A) Protection - De-protection, Chiron approach and Carbohydrate Chemistry	4
		Or	
		CHO-353B**)** Designing Organic Syntheses and Heterocyclic Chemistry	4
5	**CCPP-3** CHO-354	**Practical I**: Solvent Free Organic Synthesis	4
Semester – IV			
6	**CCTP-10** CHO-450	Chemistry of Natural Products	4
7	**CCTP-11** CHO-451	Organometallic Reagents in Organic Synthesis	4
8	**CBOP-4** CHO-452 **Theory**	CHO-452 A) Medicinal Chemistry CHO-452 B) Applied Organic Chemistry	4 4
9	**CBOP-5** CHO-453 Practical	**Practical III: Select any two Sections**	4
		Section-I: Ternary Mixture Separation	2
		Section-I: Carbohydrates Synthesis and Isolation of Natural Products	2
		Section-I: Project / Industrial Training/ Internships/ Summer Project	2
10	**CCPP-4** CHO-454	**Practical II**: Convergent and Divergent Organic Syntheses.	4