

# Course Structure for P.G. Programme in Chemistry as per CBCS w.e.f. 2018

## SEMESTER-I

### 1. Core Courses (CR):

Course No.	Title	Contact hours/Week	No. of Credits
CH18101CR	Inorganic Chemistry	(03L + 01T)	04
CH18102CR	Organic Chemistry	(03L + 01T )	04
CH18103CR	Physical Chemistry	(03L + 01T )	04
CH18104CR	Environmental Chemistry & Analytical Monitoring.	(01L + 01T)	02

### 2. Discipline Centric Electives (DCE):

Course No.	Title	Contact hours/Week	No. of Credits
CH18105DCE	Laboratory Course in Inorganic Chemistry	04 Lab Sessions of 03 hours each	04
CH18106DCE	Symmetry & Group Theory	(01L + 01T)	02
CH18107DCE	IR, Raman & Electronic Spectroscopy	(01L + 01T)	02

### 3. Generic Electives (GE):

Course No.	Title	Contact hours/Week	No. of Credits
CH18001GE	Surfactants and their Applications	(01L + 01T)	02

### 4. Open Elective Courses (OE):

Course No.	Title	Contact hours/Week	No. of Credits
CH18001OE	Chemistry in Everyday Life	(01L + 01T)	02

## SEMESTER-II

### 1. Core Courses (CR):

Course No.	Title	Contact hours/Week	No. of Credits
CH18201CR	Inorganic Chemistry	(03L + 01T)	04
CH18202CR	Organic Chemistry	(03L + 01T )	04
CH18203CR	Physical Chemistry	(03L + 01T )	04
CH18204CR	Green Chemistry	(01L + 01T)	02

### 2. Discipline Centric Elective (DCE):

Course No.	Title	Contact hours/Week	No. of Credits
CH18205DCE	Laboratory Course in Organic Chemistry	04 Lab Sessions of 03 hours each	04
CH18206DCE	NMR & ESR Spectroscopy	(01L + 01T)	02
CH18207DCE	Solid State Chemistry	(01L + 01T)	02

### 3. Generic Elective Courses (GE):

Course No.	Title	Contact hours/Week	No. of Credits
CH18002GE	Metal Ions in Living Systems	(01L + 01T)	02

### 4. Open Elective Course (OE):

Course No.	Title	Contact hours/Week	No. of Credits
CH18002OE	Chemistry of Bio-molecules	(01L + 01T)	02

## SEMESTER-III

### 1. Core Courses (CR):

Course No.	Title	Contact hours/Week	No. of Credits
CH18301CR	Selected Topics in Inorganic Chemistry	(03L + 01T)	04
CH18302CR	Organic Chemistry (Spectroscopy & Photochemistry)	(03L + 01T )	04
CH18303CR	Physical Chemistry	(03L + 01T )	04
CH18304CR	Non-Equilibrium Thermodynamics	(01L + 01T)	02

### 2. Discipline Centric Elective (DCE):

Course No.	Title	Contact hours/Week	No. of Credits
CH18305DCE	Laboratory Course in Physical Chemistry	04 Lab Sessions of 03 hours each	04
CH18306DCE	Chromatographic Techniques	(01L + 01T)	02
CH18307DCE	Bio-Physical Chemistry	(01L + 01T)	02

### 3. Generic Elective (GE):-

Course No.	Title	Contact hours/Week	No. of Credits
CH18003GE	Bio-Organic Chemistry	(01L + 01T)	02

### 4. Open Elective Course (OE):

Course No.	Title	Contact hours/Week	No. of Credits
CH18003OE	Philosophy of Science	(01L + 01T)	02

## SEMESTER-IV

### 1. (i) Core Courses (CR): (INORGANIC SPECIALIZATION):

Course No.	Title	Contact hours/Week	No. of Credits
CH18401CR	Organo-Transition Metal Chemistry	(03L + 01T)	04
CH18402CR	Photo Inorganic Chemistry	(03L + 01T)	04
CH18403CR	Bio-Inorganic Chemistry	(03L + 01T)	04
CH18404CR	Seminar in Inorganic Chemistry	Presentation + Manuscript Submission	02

### (ii) Core Courses (CR): (ORGANIC SPECIALIZATION):

Course No.	Title	Contact hours/Week	No. of Credits
CH18405CR	Heterocyclic Chemistry	(03L + 01T)	04
CH18406CR	Chemistry of Natural Products	(03L + 01T)	04
CH18407CR	Bio-Organic and Medicinal Chemistry	(03L + 01T)	04
CH18408CR	Seminar in Organic Chemistry	Presentation + Manuscript Submission	02

### (iii) Core Courses (CR): (PHYSICAL SPECIALIZATION):

Course No.	Title	Contact hours/Week	No. of Credits
CH18409CR	Computational & Advanced Quantum Chemistry	(03L + 01T)	04
CH18410CR	Advanced Electrochemistry and Statistical Mechanics	(03L + 01T)	04
CH18411CR	Soft Matter	(03L + 01T)	04
CH18412CR	Seminar in Physical Chemistry	Presentation + Manuscript Submission	02

### 2. Discipline Centric Electives (DCE):

Course No.	Title	Contact hours/Week	No. of Credits
CH18413DCE	Advanced Laboratory Course in Inorganic Chemistry	04 Lab Sessions of 03 hours each	04
CH18414DCE	Advanced Laboratory Course in Organic Chemistry	04 Lab Sessions of 03 hours each	04
CH18415DCE	Advanced Laboratory Course in Physical Chemistry	04 Lab Sessions of 03 hours each	04
CH18416DCE	Supramolecular Chemistry	(01L + 01T)	02
CH18417DCE	Designing Organic Synthesis	(01L + 01T)	02
CH18418DCE	Applied Electrochemistry	(01L + 01T)	02

### 3. Generic Electives (GE):

Course No.	Title	Contact hours/Week	No. of Credits
CH18004GE	Synthetic Polymers and their Applications	(01L + 01T)	02
CH18005GE	Novel Materials	(01L + 01T)	02

### 4. Open Elective (OE):

Course No.	Title	Contact hours/Week	No. of Credits
CH18004OE	Food Chemistry	(01L + 01T)	02