

# Course Structure for P.G. Programme in Chemistry as per CBCS w.e.f. 2017

## SEMESTER-I

### 1. Core Courses (CR):

Course No.	Title	Contact hours/Week	No. of Credits
CH17101CR	Inorganic Chemistry	(03L + 01T)	04
CH17102CR	Organic Chemistry	(03L + 01T)	04
CH17103CR	Physical Chemistry	(03L + 01T)	04

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

Course No.	Title	Contact hours/Week	No. of Credits
CH17104DCE	Laboratory Course in Inorganic Chemistry	04 Lab Sessions of 03 hours each	04
CH17105DCE	Symmetry & Group Theory	(01L + 01T)	02
CH17106DCE	IR, Raman & Electronic Spectroscopy	(01L + 01T)	02

### 3. Generic Electives (GE):

Course No.	Title	Contact hours/Week	No. of Credits
CH17107GE	Chemistry of the Environment	(01L + 01T)	02
CH17108GE	Surfactants and their Applications	(01L + 01T)	02

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

Course No.	Title	Contact hours/Week	No. of Credits
CH17109OE	Chemistry in Everyday Life	(01L + 01T)	02

## SEMESTER-II

### 1. Core Courses (CR):

Course No.	Title	Contact hours/Week	No. of Credits
CH17201CR	Inorganic Chemistry	(03L + 01T)	04
CH17202CR	Organic Chemistry	(03L + 01T)	04
CH17203CR	Physical Chemistry	(03L + 01T)	04

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

Course No.	Title	Contact hours/Week	No. of Credits
CH17204DCE	Laboratory Course in Organic Chemistry	04 Lab Sessions of 03 hours each	04
CH17205DCE	NMR & ESR Spectroscopy	(01L + 01T)	02
CH17206DCE	Solid State Chemistry	(01L + 01T)	02

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

Course No.	Title	Contact hours/Week	No. of Credits
CH17207GE	Metal Ions in Living Systems	(01L + 01T)	02
CH17208GE	Bio-Physical Chemistry	(01L + 01T)	02

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

Course No.	Title	Contact hours/Week	No. of Credits
CH17209OE	Chemistry of Bio-molecules	(01L + 01T)	02

## SEMESTER-III

### 1. Core Courses (CR):

Course No.	Title	Contact hours/Week	No. of Credits
CH17301CR	Selected Topics in Inorganic Chemistry	(03L + 01T)	04
CH17302CR	Organic Chemistry (Spectroscopy & Photochemistry)	(03L + 01T )	04
CH17303CR	Physical Chemistry	(03L + 01T )	04

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

Course No.	Title	Contact hours/Week	No. of Credits
CH17304DCE	Laboratory Course in Physical Chemistry	04 Lab Sessions of 03 hours each	04
CH17305DCE	Chromatographic Techniques	(01L + 01T)	02
CH17306DCE	Non-Equilibrium Thermodynamics	(01L + 01T)	02

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

Course No.	Title	Contact hours/Week	No. of Credits
CH17307GE	Industrial Pollution & Green Chemistry	(01L + 01T)	02
CH17308GE	Bio-Organic Chemistry	(01L + 01T)	02

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

Course No.	Title	Contact hours/Week	No. of Credits
CH17309OE	Philosophy of Science	(01L + 01T)	02

## SEMESTER-IV

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

Course No.	Title	Contact hours/Week	No. of Credits
CH17401CR	Organo-Transition Metal Chemistry	(03L + 01T)	04
CH17402CR	Photo Inorganic Chemistry	(03L + 01T)	04
CH17403CR	Bio-Inorganic Chemistry	04 Lab Sessions of 03 hours each	04

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

Course No.	Title	Contact hours/Week	No. of Credits
CH17404CR	Heterocyclic Chemistry	(03L + 01T)	04
CH17405CR	Chemistry of Natural Products	(03L + 01T)	04
CH17406CR	Bio-Organic and Medicinal Chemistry	04 Lab Sessions of 03 hours each	04

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

Course No.	Title	Contact hours/Week	No. of Credits
CH17407CR	Advanced Quantum Chemistry	(03L + 01T)	04
CH17408CR	Advanced Electrochemistry and Statistical Mechanics	(03L + 01T)	04
CH17409CR	Chemistry of Materials	(03L + 01T)	04

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

Course No.	Title	Contact hours/Week	No. of Credits
CH17410DCE	Advanced Laboratory Course in Inorganic Chemistry	04 Lab Sessions of 03 hours each	04
CH17411DCE	Advanced Laboratory Course in Organic Chemistry	04 Lab Sessions of 03 hours each	04
CH17412DCE	Advanced Laboratory Course in Physical Chemistry	04 Lab Sessions of 03 hours each	04
CH17413DCE	Supramolecular Chemistry	(01L + 01T)	02
CH17414DCE	Designing Organic Synthesis	(01L + 01T)	02
CH17415DCE	Computational Chemistry	(01L + 01T)	02
CH17416DCE	Seminar	Presentation + Manuscript Submission	02

### 3. Generic Electives (GE):

Course No.	Title	Contact hours/Week	No. of Credits
CH17417GE	Synthetic Polymers and their Applications	(01L + 01T)	02
CH17418GE	Novel Materials	(01L + 01T)	02

### 4. Open Elective (OE):

Course No.	Title	Contact hours/Week	No. of Credits
CH17419OE	Food Chemistry	(01L + 01T)	02