

Department of Chemistry, Gargaon College

Programme Specified outcome of Chemistry (Major):

After graduation the students will be able-

PSO 1: To understand Inorganic, Organic and Physical Chemistry in their advanced treatment

PSO 2: To provide the students importance of chemical thermodynamics, non-transition metals, metals along with different types of organic reaction.

PSO 3: To understand Coordination Chemistry, mechanism and the importance of d-and f block elements.

PSO 4: Importance of Halogenated Hydrocarbons, Chemistry of Carbonyls along-with sulphur containing compound are discussed in this course.

PSO 5: Electrochemistry is one of the topics that really revolutionized the world nowadays. This paper deals with this particular aspect.

PSO 6: Electrochemistry is one of the topics that really revolutionized the world nowadays. This paper deals with this particular aspect.

PSO 7: This course is designed to impart the ideas of kinetics, solution equilibrium and surface phenomena amongst the students.

PSO 8: The objective of the paper is to give knowledge on organometallic compounds, clusters and organic reagents in inorganic analysis.

PSO 9: To acquire knowledge in different types of organic reaction and to understand biochemistry.

PSO 10: The objective of the paper is to have knowledge on quantum mechanics with special reference to classical mechanics, symmetry and bonding.

PSO 11: To understand different topics like photochemistry, macromolecules, catalysis and statistical thermodynamics.

PSO 12: This paper highlights the concept of disconnection approach in organic chemistry as well as different analytical tools like UV, IR, NMR in organic chemistry. Importance of dyes, lipids, polymers are also dealt with.

PSO 13: This paper deals with the interaction of electromagnetic radiation with matter in various forms.

Course Outcome of Chemistry

Course Code : CHEM 101:

CO1: Gas

CO2: Liquid

CO 3: Solids

CO4: Periodic properties

CO5: Bonding and structure

CO6: Basics of Organic Chemistry

CO7: Stereochemistry

Course Code : CHEM 201:

CO1: Chemical Thermodynamics –I

CO2: Ionic equilibrium

CO3: Non Transition elements

CO 4: Metals

CO5: Carbon- Carbon sigma bonds and Carbon-Carbon pi bonds

CO6: Cycloalkanes and conformational analysis

CO7: Aromatic Hydrocarbons

Course Code : CHEM 301:

CO1: Coordination compounds

CO2: Inorganic reaction mechanism

CO3: Chemistry of d- and f- block elements

Course Code : CHEM 302

CO1 Inorganic Qualitative analysis

Course Code : CHEM 303:

CO1: Chemistry of Halogenated Hydrocarbons

CO2: Chemistry of C-O Bond

CO3: Carbonyl Compounds: Aldehydes and ketones (aliphatic and aromatic)

CO4: Carboxylic acid and their derivatives

CO5: Sulphur containing compounds:

Course Code : CHEM 304:

CO1: Organic Qualitative analysis

CO2: Organic preparation

Course Code : CHEM 401:

CO1: Chemical Thermodynamics II

CO2: Conductance

CO3: Electrochemical cell

Course Code : CHEM 402:

CO1: Physical Chemistry experiment

Course Code: CHEM 403:

CO1: Active Methylene Compounds

CO2: Nitrogen containing functional groups: Aliphatic and aromatic Amines:

CO3: Amino acids and proteins.

CO4: Polynuclear Aromatic Hydrocarbons

CO5: Heterocyclic Compounds

CO6: Alkaloids

Course Code: CHEM 404:

CO1: Chromatographic separation of the following mixtures and calculation of R_f value of the compounds

Course Code: CHEM 501:

CO1: Chemical Kinetics

CO2: Solution and Colligative Properties

CO3: System of Variable Composition and Chemical Equilibrium

CO4: Surface Chemistry

CO5: Colloidal state

Course Code : CHEM 502:

CO1: Physical Experiments

Course Code : CHEM 503:

CO1: Organometallic compound

CO2: Transition metal clusters

CO3: Error in quantitative analysis

CO4: Organic reagents in inorganic analysis

Course Code: CHEM 504:

CO1: Volumetric titrations

CO2: Estimation of Total hardness of water samples

Course Code: CHEM 505:

CO1: Pericyclic reactions

CO2: Bio-molecules

CO3: Nucleic acids & Enzymes

CO4: Pharmaceutical compounds: Structure and Importance

CO5: Terpenes

Course Code : CHEM 506:

CO1: Organic Quantitative analysis

CO2: Food Analysis

Course Code: CHEM 507:

CO1: Symmetry and Group theory

CO2: Quantum Chemistry and Chemical Bonding

CO3: Chemical Bonding

Course Code: CHEM 508:

CO1: Quantitative analysis inorganic compounds

Course Code: CHEM 601:

CO1: Photochemistry

CO2: Macromolecules

CO3: Catalysis

CO4: Phase Equilibria

CO5: Statistical Thermodynamic

Course Code: CHEM 602:

CO1: Physical Chemistry Experiment

Course Code: CHEM 603:

CO1: Bio inorganic Chemistry

CO2: Introduction to material chemistry

CO3: Chromatographic Methods

CO4: Industrial chemistry:

Course Code: CHEM 604:

CO1: Inorganic preparation & Crystallization

Course Code : CHEM 605:

CO1: Disconnection approach in organic synthesis

CO2: UV-visible Spectroscopy, IR Spectroscopy, NMR Spectroscopy

CO3: Lipids

CO4: Dyes

CO5: Polymers

CO6: Green Chemistry

Course Code: CHEM 606:

CO1: Two step organic preparations (monitoring by TLC)

Course Code: CHEM 607:

CO1: General Principles

CO2: Microwave Spectroscopy

CO3: Infrared and Raman spectroscopy

CO4: Electronic spectroscopy

CO5: Spin resonance spectroscopy

Course Code: CHEM 608:

CO1: Project work

Course Code: CHEG 101:

CO1: Atomic Structure

CO2: Chemical Bonding and Molecular Structure

CO3: Kinetic Theory of gases

CO4: Liquid state:

CO5: Solids

CO6: Introduction to Organic Chemistry

CO7: Stereochemistry

CO8: Aliphatic Hydrocarbons

Course Code: CHEG 201:

CO1: Coordination Chemistry

CO 2: Chemistry of non-metals

CO3: Inorganic Material Chemistry

CO4: General principles of metallurgy

Course Code: CHEG 201: