

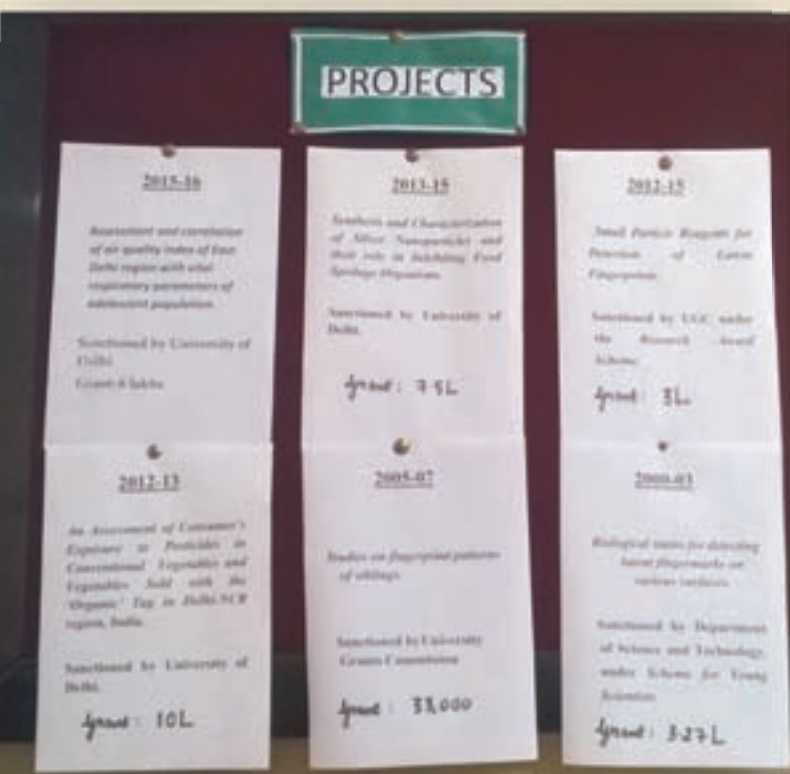
Core Departments

Department of Chemistry



The Department of Chemistry conducts B.Sc. (Hons.) Chemistry, a three-year programme consisting of six semesters. The department is located on the ground floor and has three well-equipped laboratories including a research laboratory. The laboratories cater to three broad branches of chemistry viz. inorganic, organic and physical chemistry. The laboratories also cater to the chemistry papers of other departments. Several research projects including Innovation projects have been carried out in the research laboratory.

The labs are well equipped with various instruments like uv-vis spectrophotometer, electronic balances, centrifuge- microprocessor based, 16,000 rpm, magnetic stirrers with hot plate, vortex shaker, rotary vacuum pumps, digital pH meter, digital and electric melting point apparatus, distillation units, fume hood etc.



Department of Chemistry

B.Sc. (Hons.) Chemistry

SEMESTER 1	SEMESTER 2
AECC-I : English/MIL Communication or EVS Core Course-I : Inorganic Chemistry-I Core Course-II : Physical Chemistry-I Core Course-I Practical : Inorganic Chemistry-I Lab Core Course-II Practical : Physical Chemistry-I Lab Generic Elective-1 Generic Elective-1 Practical	AECC-II : EVS or English/MIL Communication Core Course-III : Organic Chemistry-I Core Course-IV : Physical Chemistry-II Core Course-III Practical : Organic Chemistry-I Lab Core Course-IV Practical : Physical Chemistry-II Lab Generic Elective-2 Generic Elective-2 Practical
SEMESTER 3	SEMESTER 4
Core Course-V : Inorganic Chemistry-II Core Course-VI : Organic Chemistry-II Core Course-VII : Physical Chemistry-III Core Course-V Practical : Inorganic Chemistry-II Lab Core Course-VI Practical : Organic Chemistry-II Lab Core Course-VII Practical : Physical Chemistry-III Lab Skill Enhancement Course-1 Generic Elective-3 Generic Elective-3 Practical	Core Course-VIII : Inorganic Chemistry-III Core Course-IX : Organic Chemistry-III Core Course-X : Physical Chemistry-IV Core Course-VIII Practical : Inorganic Chemistry-III Lab Core Course-IX Practical : Organic Chemistry-III Lab Core Course-X Practical : Physical Chemistry-IV Lab Skill Enhancement Course-2 Generic Elective-4 Generic Elective-4 Practical
SEMESTER 5	SEMESTER 6
Core Course-XI : Organic Chemistry-IV Core Course-XII : Physical Chemistry-V Discipline Specific Elective-1 Discipline Specific Elective-2 Core Course-XI Practical : Organic Chemistry-IV Lab Core Course-XII Practical : Physical Chemistry-V Lab Discipline Specific Elective-1 Practical Discipline Specific Elective-2 Practical	Core Course-XIII : Inorganic Chemistry-IV Core Course-XIV : Organic Chemistry-V Discipline Specific Elective-3 Discipline Specific Elective-4 Core Course-XIII Practical : Inorganic Chemistry-IV Lab Core Course-XIV Practical : Organic Chemistry-V Lab Discipline Specific Elective-3 Practical Discipline Specific Elective-4 Practical

Core Papers

- Inorganic Chemistry I : Atomic Structure & Chemical Bonding
- Physical Chemistry I : States of Matter & Ionic Equilibrium
- Organic Chemistry I : Basics and Hydrocarbons
- Physical Chemistry II : Chemical Thermodynamics and its Applications
- Inorganic Chemistry II : s- and p-Block Elements
- Organic Chemistry II : Oxygen Containing Functional Groups
- Physical Chemistry III : Phase Equilibria and Electrochemical Cells
- Inorganic Chemistry III : Coordination Chemistry
- Organic Chemistry III : Heterocyclic Chemistry
- Physical Chemistry IV : Conductance & Chemical Kinetics
- Organic Chemistry IV : Biomolecules
- Physical Chemistry V : Quantum Chemistry & Spectroscopy
- Inorganic Chemistry IV : Organometallic Chemistry
- Organic Chemistry V : Spectroscopy

Discipline Specific Elective Papers (Credit : 06 each) (4 papers to be selected)

DSE 1 : Any one of the following :

- Novel Inorganic Solids
- Inorganic Materials of Industrial Importance

DSE 2-4 : Choose any three of the following :

- Applications of Computers in Chemistry
- Analytical Methods in Chemistry
- Molecular Modelling & Drug Design
- Polymer Chemistry
- Research Methodology for Chemistry
- Green Chemistry
- Industrial Chemicals & Environment
- Instrumental Methods of Analysis
- Dissertation

Other Discipline : GE 1 to GE 4

- Mathematics
- Physics
- Computer Science

Skill Enhancement Courses

- IT Skills for Chemists
- Basic Analytical Chemistry
- Chemical Technology & Society
- Cheminformatics
- Business Skills for Chemists
- Intellectual Property Rights
- Analytical Clinical Biochemistry
- Green Methods in Chemistry
- Pharmaceutical Chemistry
- Chemistry of Cosmetics & Perfumes
- Pesticide Chemistry
- Fuel Chemistry

Generic Elective Papers (any four) for other Departments/Disciplines

- Atomic Structure, Bonding, General Organic Chemistry & Aliphatic Hydrocarbons
- Chemical Energetics, Equilibria & Functional Group Organic Chemistry-I
- Solutions, Phase Equilibrium, Conductance, Electrochemistry & Functional Group Organic Chemistry-II
- Chemistry of s- and p-block elements, States of matter and Chemical Kinetics
- Chemistry of d-block elements, Quantum Chemistry and Spectroscopy
- Organometallics, Bioinorganic chemistry, Polynuclear hydrocarbons and UV, IR, Spectroscopy
- Molecules of life

At least two mathematics papers are compulsory for admission for M.Sc. (Chemistry) in Delhi University.