

Raniganj Girls' College

Department of Chemistry

Program Outcome

An undergraduate curriculum in Chemistry imparts clear and comprehensive knowledge with the ability of application in various fields of Chemistry

Program Specific Outcome

The learner acquires a basic and fundamental knowledge in the subject, in particular and science, in general so that the student is able to continue higher studies, to appear in various competitive examinations, to serve industries. The students also become familiar with the modern fields of research and application necessary to pursue a career in research.

Course outcomes for BSc Honours in Chemistry

1st Semester:

Organic chemistry – Students learn the basic concepts of organic chemistry which include stereochemistry, bonding and reaction mechanism.

Inorganic Chemistry – Students become familiar with the quantum mechanical approach to atomic structure, the latest periodic table, modern theories of covalent compounds to get a comprehensive idea on these fundamental topics.

2nd Semester:

Physical Chemistry – Students get basic ideas on the most important topics of physical chemistry viz. thermodynamics, kinetic theory of gas. They perform surface tension and viscosity experiment in this course.

Organic Chemistry-Students are exposed to newer and modern approaches to stereochemistry and reaction mechanism. They detect qualitatively organic compounds in their practical classes.

3rd Semester:

Students get an idea of s and p block elements. Students become familiar with modern concept of acids and Bases and Ionic equilibria. In practical classes, they detect acid radicals and basic radicals from Inorganic sample. They estimate quantitatively glucose by Fehling solution in organic chemistry practical classes. They get an idea about third law of thermodynamics and properties of solid.

4th Semester:

Students get information about d block and a block element. They also get idea about coordination chemistry, In Inorganic chemistry they learn about carbohydrate chemistry, alkaloids and terpenoides. In practical classes, they test different organic compounds. They get idea about chemical kinetics and electrochemistry in their Physical chemistry classes. In practical classes they learn about conduct metric and potentiometric titration.

5th Semester:

The students learn about pericyclic reactions and spectroscopy. In spectroscopy they get idea about NMR spectra. In organic chemistry practical classes, they prepare different organic compounds. In inorganic chemistry classes, they learn about bioinorganic chemistry and organometallic chemistry. In practical classes, they estimated volumetrically different metal mixture. Here they also get idea about green chemistry and environmental chemistry and solid state chemistry.

6th Semester:

Students learn about crystal field stabilization energy and get information about analytical chemistry. In practical classes they estimate complex and metrically different metal mixture. In physical chemistry classes they read about Quantum chemistry, Group Theory and Photochemistry. They also get idea about Nanomaterials, alicyclic system and atomic spectra.

Course outcomes for BSc Programme in Chemistry

Semester I:

Students learn about atomic structure and radioactivity. They also get idea about modern periodic table and organic reaction mechanism.

Semester II:

Students get idea about thermodynamics and stereochemistry. In practical classes, they qualitatively analyzes organic sample.

Semester III:

Students learn about chemical kinetics and electrochemistry. In practical classes, they qualitatively analyzes inorganic sample.

Semester IV:

Students learn about oxidation -reduction and buffer solution. In practical classes, they estimate metal titrimetrically.

Semester V:

Students get idea about analytical chemistry, green chemistry and colloidal state. They also learn about quantum chemistry & photochemistry.

Semester VI:

Students get idea about carbohydrate chemistry, Heterocyclic compound and coordination chemistry. They also read about chemotherapy.