



# P. N. DAS COLLEGE

Santinagar, Palta, P.O.: Bengal Enamel, North 24 Parganas, Pin - 743122 (W.B.)  
Phone : (033) 2592 1327, Fax : (033) 2592 1327, e-mail : pndc.principal11@gmail.com  
Website : www.pndascollege.in

NAAC ACCREDITED - 2016

Ref.: .....

Date .....

## DEPARTMENT OF CHEMISTRY

### The PSO Of UG Course B.Sc. In Chemistry

After completion of degree, students gained the theoretical as well as practical knowledge of handling chemicals. Also they expand the knowledge available opportunities related to chemistry in the government services through PSC particularly in the field of food safety, health inspector, pharmacists etc. Achieve the skill required to succeed in graduate school. Professional school and chemical industry like cement industries, agro product, petrochemical industries etc.

### **Semester-1 (Fundamental Of Chemistry; Code-CEMGC001T):**

(This course covers the fundamental principles and laws of chemistry. Topics include quantum number, electronic configuration, chemical bonding etc.)

Course Outcome: Upon successful completion students should be able to apply the fundamental principles of measurement, matter, atomic theory, periodicity to the subsequent course in science.

### **Semester-2 (Inorganic Chemistry; Code- CEMGCOR02T):**

(This course aims to familiarize students with the principle of analytical chemistry and basic analytical technique)

Course Outcome: Upon successful completion students should be able to facilitate the learner to make solution of various molar concentration. Describe bonding models that be applied to a consideration of the properties of transition metal compounds.

*[Handwritten Signature]*  
21/12/21

Principal

P. N. DAS COLLEGE  
Santinagar, Palta, 24 Pgs. (N)

**Semester-3 (Physical and Organic Chemistry; Code- CEMGCOR03T):**

(This course covers the basic physical principles that are foundation of essentially all materials and biological chemistry.)

Course Outcome: Upon successful completion students should be able to state and apply the laws of thermodynamics; perform calculation with ideal and real gases, design practical engine by using thermodynamic cycles, predict chemical equilibrium and spontaneity of reaction and are expected to apply their knowledge to deduce structure, synthesize simple organic molecules using studied reactions. Relationship between organic chemistry and other discipline.

**Semester-4 (Analytical and Environmental Chemistry; Code- CEMGCOR04T):**

(This prepares students for career as leader in understanding and addressing complex environmental issues from a problem oriented, interdisciplinary perspective.)

Course Outcome: By the end of this course, students should be able to handle organic chemicals in a safe and competent manner. How to use the scientific method to create, test and evaluate a hypothesis. How to perform common laboratory technique including reflux, distillation, recrystallization etc.

**Semester-5 (Polymer Chemistry; Code- CEMGDSE01T):**

(Knowledge of polymer chemistry helps the students to describe the role of rubber toughening in improving the mechanical properties of polymer; differential between natural and manmade polymer isolate the key design feature of a product.)

Course Outcome: After studying this course students should be able to indicate how properties of polymeric materials can be exploited by a product designer, describe the role of rubber-toughening in improving the mechanical properties of polymer.

**Semester-6 (Industrial Chemistry; Code CEMGDSE03T):**

The course is designed to teach the students the essential skills and knowledge involved in industrial chemistry. A key skill emphasized is problem solving both quantitative and qualitative. The course trains the students to be result oriented in the chemical, petrochemical, biochemical and allied technological field.

  
21/12/21  
Principal

## DEPARTMENT OF CHEMISTRY

### The Outcomes of UG Course, B.Sc. In Chemistry

Chemistry is one of those classes we either love or dread. At high school level chemistry is usually not required course- it is an elective. However, most reputable colleges require all undergraduate students to take at least one course of chemistry as a prerequisite to graduation, if we plan on pursuing a career in medicine, engineering or a field of natural science. Chemistry is a challenging subject for most people, but it does not have to be.

Technology is accepted to be an integral part of chemistry education, with the use of videos, simulations and student response system well reputed. The innovative products of chemistry lead to cutting edge advancement- applied technology in aerospace, medical devices, cars, fuels and more.

Chemists already participate in wide range of communication activities including giving public lecture, writing books, blogs and other web based materials, participating in hand-on-learning activities in museum and using online engagement platform to improve public access to understand chemistry.

Research in chemical science should benefit mankind and improve quality of life, while protecting the environment and preserving it for future generation. Researchers should conduct their work with highest integrity and transparency, avoid conflict of interest and practice collegiality in best way.

Environmental chemistry focuses on presence and impact of chemicals in soil, surface water and ground water. Environmental Chemistry study how the chemicals usually contaminate-move through the environment. Environmental chemistry also deals with synthetic chemicals that have been manufactured by humans and dispersed into the environment.

Productivity experts suggest that team with good chemistry is more productive because they understand what each member brings to the team and work to maximize strength and minimize weakness of other team member.

Personality development encompasses the dynamic construction and reconstruction of integrative characteristic that distinguish an individual in term of interpersonal behavioral trait. Chemists seem to have been fascinated by the challenges of complexity. Good chemists should have particular personality trait in common; these include being analytical, task oriented and experimental.

After completion of degree, students gained the theoretical as well as practical knowledge of handling chemicals. They expand the knowledge available opportunities related to chemistry in the government services through public service commission in the field of food safety, health

  
Principal  
P. N. DAS COLLEGE  
Santinagar, Palta, 24 Pgs. (3)

inspector, pharmacists etc. They can achieve the skills required to work in chemical industries like cement industries, agro product, paint industries, rubber industries, petrochemical industries, food processing industries, fertilizer industries, etc. Get exposures of a breadth of experimental techniques using modern instrumentation. Understand the concept of chemistry to inter relate and interact to the other subjects like mathematics, biological science, etc. Learn the laboratory skills and safely to transfer and interpret knowledge entirely in the working environment.



*Principal*  
**P. N. DAS COLLEGE**  
Santinagar, Palta, 24 Pgs. (N)