Department of Chemistry, Karimganj College

Course Objectives and Learning outcomes

Paper	Objective	Learning Outcomes
CHMHCC-101	To have an in depth knowledge on the funadamentals of inorganic chemistry.	This course enables students to understand the structure of atom based on the concepts of quantum mechanics, the different types and modern approaches of chemical bonding, the concepts of periodicity in properties of elements and redox reactions and the basic principles of volumetric analysis and metallurgy.
CHMHCC-102	To introduce the students to know the behaviour of real & ideal gases and systems, crystal structure, band theory.	These enable the students to understand the various phenomena and properties of solid, liquid and gaseous substances.
CHMHCC-201	To impart knowledge on basic organic chemistry.	This introduces students to various aspects of fundamental organic chemistry and various phenomena associated with them. These concepts may be used for further studies of organic chemistry, particularly for problem solving and reaction designing.
CHMHCC-202	This paper provides insight on chemical thermodynamics, chemical equilibrium and colligative properties and their mathematical expressions.	This paper allows the student to gather knowledge on the equilibrium and thermodynamic properties of chemical reactions and also the various colligative properties of the solutions.
CHMHCC-301	To familiarize students with the chemistry of s- and p- block elements, acid-bases, noble gases and metallurgy	This paper allows students to understand the structure and properties of different compounds of s-& p- block, explain the chemistry of noble gases, acid-base and inorganic polymers. It also helps students gain knowledge of the fundamental principles of metallurgy.
CHMHCC-302	This paper aims to impart knowledge of organic compound synthesis through functional group conversion. This paper also designed to provide knowledge of the mechanism i.e. the path followed by the reaction.	The study of this paper will enable the students to design the path of organic synthesis of high yield and retro organic synthesis.
CHMHCC-303	This paper provides a detail idea about the phase equilibria, chemical kinetics, catalysis and surface chemistry.	Students can understand in detail about phase diagram, existence of stable state of substances in equilibrium. Kinetic study of reactions is the great outcome of the study of this paper. The study of surface chemistry will lead to get an idea about the industrial work.
CHMHCC-401	To provide insights into the concepts	This paper also helps students to have an

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	of Co-ordination chemistry and its applications, extended to biological systems and the chemistry of d- and f-block elements.	in depth knowledge of the chemistry of co-ordination compounds and their applications, the properties of d- and f-block elements and the importance of metal ions in biological systems.
CHMHCC-402	To provide knowledge on the preparation & properties of heterocyclic compounds of both natural and synthetic origin.	This enables students to learn the importance of heterocycles and to use them to prepare various important compounds for our daily use, particularly in the field of medicine, health, nutrition, industries etc.
CHMHCC-403	It aims to provide knowledge on laws of electrolysis, electrochemical cells, and galvanic cell, conductometric and potentiometric titrations.	Students will be able to know the various electrochemical processes.
CHMHCC-501	To provide knowledge on the selected types of naturally occurring organic compounds.	This enables students to learn various methods of synthesis, physiological importance and pharmaceutical applications of naturally occurring organic compounds.
CHMHCC-502	To provide knowledge on quantum chemistry, molecular spectroscopy and photochemistry.	Students can understand the properties of micro particles and can also calculate the observables on known wave functions. They will be equipped with the idea of spectroscopic methods and their application in applied field. Students will get an idea about the photochemical processes, laws of photochemistry and photosensitised reactions etc.
CHMHCC-601	To provide knowledge on the basic concepts of Organometallic chemistry and the principles involved in Qualitative analysis.	This paper enables students to understand the chemistry of organometallic compounds, their applications in catalysis and inorganic reaction mechanisms and the basic principles involved in the qualitative analysis of cations and anions.
CHMHCC-602	To impart knowledge on biomolecules like carbohydrate, dyes & polymers and spectroscopic applications.	This enables students to understand how energy is produced in living system; and with the use of instruments how different molecules and their structures may be identified and can be used for health, nutrition and industrial purposes.

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