

**FOUR YEAR UNDERGRADUATE
PROGRAM (2024 - 28)**

**Department of
INDUSTRIAL CHEMISTRY**

Course Curriculum

FOUR YEAR UNDERGRADUATE PROGRAM (NEP-2020)

Program: Bachelor in Science DISCIPLINE-INDUSTRIAL CHEMISTRY

Session-2024-28

DSC-01to08		DSE-01to12		DGE-01to06	
Code	Title	Code	Title	Code	Title
ICSC-01T	Industrial Technology, Metallurgy and Surface Chemistry	ICSE-01T	Food Chemistry	ICGE-01T	Industrial Technology, Metallurgy and Surface Chemistry
ICSC-01P	Industrial Chemistry Lab. Course-I	ICSE-01P	Food Chemistry Lab. Course	ICGE-01P	Industrial Chemistry Lab. Course-I
ICSC-02T	Industrial Operations, Fuels and Aspects of Physical Chemistry	ICSE-02T	Environmental Remediation	ICGE-02T	Industrial Operations of Physical Chemistry
ICSC-02P	Industrial Chemistry Lab. Course-II	ICSE-02P	Environmental Remediation Lab. Course	ICGE-02P	Industrial Chemistry Lab. Course-II
ICSC-03T	Polymeric Materials and Unit Processes in Organic Chemicals Manufacture	ICSE-03T	Data Analysis & Separation Techniques		
ICSC-03P	Industrial Chemistry Lab. Course-III	ICSE-03P	Data Analysis & Separation Techniques Lab. Course		
ICSC-04T	Unit Processes, Instrumentation and Industrial Safety	ICSE-04T	Inorganic Materials of Industrial Importance	SEC	
ICSC-04P	Industrial Chemistry Lab. Course-IV	ICSE-04P	Inorganic Materials of Industrial Importance Lab. Course	ICSEC-01T&P	Water Remediation & Conservation Studies
ICSC-05T	Industrial Economics & Instrumentation	ICSE-05T	Modern Analytical Techniques-I		
ICSC-05P	Industrial Chemistry Lab. Course-V	ICSE-05P	Modern Analytical Techniques-I Lab. Course		
ICSC-06T	Pharmaceuticals	ICSE-06T	Organic Synthesis	VAC	
ICSC-06P	Industrial Chemistry Lab. Course-VI	ICSE-06P	Organic Synthesis Lab. Course	ICVAC-01T	Corrosion in Industry
ICSC-07T	Environmental Pollution Analysis	ICSE-07T	Energy Sources		
ICSC-07P	Industrial Chemistry Lab. Course-VII	ICSE-07P	Energy Sources Lab. Course		
ICSC-08T	Petrochemicals And Polymers	ICSE-08T	Manufacturing and Utilization Of Iron, Cement and Coal		
ICSC-08P	Industrial Chemistry Lab. Course-VIII	ICSE-08P	Manufacturing and Utilization Of Iron, Cement and Coal Lab. Course		
		ICSE-09T	Technology of Selected Finished Product – Dyes		
		ICSE-09P	Technology of Selected Finished Product – Dyes Lab. Course		
		ICSE-10T	Industrial Safety		
		ICSE-10P	Industrial Safety Lab. Course		
		ICSE-11T	Modern Analytical Techniques-II		
		ICSE-11P	Modern Analytical Techniques-II Lab. Course		
		ICSE-12T	Technology of Selected Finished Product – Drugs		
		ICSE-12P	Technology of Selected Finished Product – Drugs Lab. Course		

FOUR YEAR UNDERGRADUATE PROGRAM (NEP-2020)

Program: Bachelor in Science

DISCIPLINE-INDUSTRIAL CHEMISTRY

Session-2024-28

Program: B.Sc. Industrial Chemistry (2024-2028)

Program Outcome(PO)

PO-1: Students will acquire and apply a comprehensive understanding of scientific concepts of chemistry to effectively address challenges within the field.

PO-2: Students will demonstrate proficiency in designing, executing, and analyzing experiments, enabling them to investigate intricate problems in applied chemistry and related disciplines.

PO-3: Students will possess the skills necessary to develop innovative and sustainable solutions to significant environmental issues, utilizing appropriate tools and methodologies within the realm of applied chemistry.

PO-4: Students will demonstrate effective written and verbal communication skills, effectively conveying their ideas and findings in a clear and concise manner.

Program Specific Outcome(PSO)

PSO-1: In depth knowledge of basic and applied area of Industrial Chemistry.

PSO-2: Capability to demonstrate knowledge and understanding of major chemistry concepts, theoretical principles and experimental findings and ability to use modern instrumentation techniques with chemical analysis and separation.

PSO-3: Develop scientific logics and approaches towards problems with critical reasoning and able to enhance the ability to assimilate, discuss scholarly articles and research papers showcasing interdisciplinary areas of industrial chemistry and capability for asking questions relating to issues and problems in the field of industrial chemistry.

PSO-4: Will develop ability to scale up chemical products and techniques developed at laboratory to the industrial level. The course will take students beyond chemistry knowledge into the world of industrial professionals.

Indira *R. S. R.* *A. K. S.* *Aditya* *Sayantika* *...*