



# গড়গাঁও মহাবিদ্যালয়

## GARGAON COLLEGE



Course Distribution  
Department of Chemistry  
2023-24

## Course distribution of odd semester, 2023-24


### Departmental meeting for distributing course

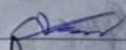
Date: 16-06-23

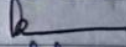
A meeting was held amongst the faculty members to discuss regarding commencement of class for odd session and for distribution of course. The following decisions have been taken:

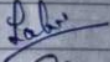
- ① The course will be distributed as sections for 3<sup>rd</sup> and 5<sup>th</sup> semesters.
- ② For the new NEP syllabus, the course will be divided amongst the faculty members as per their choice and specialisation.
- ③ Courses will be allotted equally to all the faculty members.
- ④ Classes for new NEP session will commence from 17-08-23.


### Signatures


1. Dr. Anu Gogoi. 

2. Arundhan Nandan 

3. Ritun Ter. 

4. Rakha Begum 

5. Sahar Shabaz Begum 

6. Dr. Pooja Jyoti Sarma 

### C1 Inorganic Chemistry

Faculty name	Semester		Paper Code	Unit wise division
Dr. Pakiza Begum	I	MJ	CHMC1	Unit I: Bonding and structure (from Hydrogen bonding till end of Unit I)
		MN	MINCHMC1	Unit I: Atomic Structure (except time independent Schrodinger equation and significance of $\Psi$ and $\Psi^2$ ) Unit IV: Experimental work- Inorganic Qualitative Analysis
		SEC	SEC123	Unit II: Analysis of water
	III	H	C-301	Unit I: General Principles of Metallurgy Unit II: Acids and Bases Unit IV: Noble Gases A. Iodo/Iodimetric Titrations B. Inorganic preparations
			C-301-LAB	
		GE	N/A	N/A
	V (H)		DSE-501	Unit I: Qualitative and quantitative aspects of analysis Unit II: UV-Visible and IR Spectrometry Determination of dissolved oxygen in Water; Chromatographic separations
			DSE-501-Lab	
			DSE-502	Unit I: Introduction to Green Chemistry Unit II: Principles of Green Chemistry and Designing a) Chemical synthesis (points (i) and (ii))
Dr. Plaban Jyoti Sarma	I	H	C-101	Unit II: Periodicity of Elements (A) Titrimetric Analysis (B) Acid-Base Titrations (C) Oxidation-Reduction Titrimetry
			C-101-LAB	
		GE	GE-101 GE-101 Lab	Unit I: Atomic Structure Section A: Inorganic Volumetric Analysis
	III	H	C-301	Unit III: Chemistry of s and p block elements A. Iodo/Iodimetric Titrations B. Inorganic preparations
			C-301-LAB	
		GE	N/A	N/A
V (H)		DSE-501	Unit III: Thermal methods of analysis Unit IV: Electro-analytical methods Unit V: Separation techniques Determination of dissolved oxygen in Water; Chromatographic separations	
		DSE-501-Lab		

### C2 Organic Chemistry

Faculty name	Semester	Paper Code	Unit wise division
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Dr. Arandao Narzary	I	Maj or	CHMC1  CHMC1-Lab	<b>Stereochemistry</b> i. Optical Isomerism ii. Geometrical Isomerism <b>Experimental (B)</b> i. Purification of organic compound ii. Separation of a mixture of o-and p-nitrophenol or o and p-aminophenol by thin layer chromatography (TLC)
		Min or	MINCHM1	<b>Introduction to Organic Chemistry</b>
		SEC	SEC123 SEC123- lab	<b>Soil Analysis Experimental</b> i. Determination of dissolved oxygen in water. ii. Spectrophotometric determination of Iron in Vitamin / Dietary Tablets.
	III	H	C-302  C-302-LAB	Unit I: Chemistry of Halogenated Hydrocarbons, Unit III: Carbonyl Compounds Unit I, II, III: Functional group analysis
		GE	GE-101 GE-101-LAB	Unit-VII, VIII Unit-II
	V (H)		C-501	Unit I: Nucleic Acids Unit II: Amino Acids, Peptides and Proteins Unit IV: Lipids Unit V: Disconnection approach in Organic Synthesis
			C-501-Lab	Estimation of glycine, Study of the titration curve of glycine. Study of the action of salivary amylase on starch, Saponification value of oil or a fat.
Mr. Rituraj Tahu	I	Maj or	CHMC1 CHMC1-Lab	Basics of Organic Chemistry <b>Experimental (B)</b> i. Purification of organic compound ii. Separation of a mixture of o-and p-nitrophenol or o and p-aminophenol by thin layer chromatography (TLC)
		Min or	MINCHM1	<b>Introduction to Organic Chemistry</b>
		SEC	SEC123 SEC123- lab	<b>Introduction Experimental</b> i. Determination of dissolved oxygen in water. ii. Spectrophotometric determination of Iron in Vitamin / Dietary Tablets.
	III	H	C-302	Unit-II: Alcohols, Phenols, Ethers and Epoxides IV: Carboxylic Acids and their Derivatives IV: Sulphur containing compounds:

		C-302-lab	Unit –I, II, III Functional group analysis
	GE	GE-301	Unit-V: Carboxylic acid VI: Amine and diazonium salt
		GE-301-lab	Unit-II: Organic analysis
	V (H)	C-501	Unit-III: Enzymes
		C-501-Lab	VI: Pharmaceutical compounds: structure and importance Estimation of glycine, Study of the titration curve of glycine. Study of the action of salivary amylase on starch, Saponification value of oil or a fat.

### C3 Physical Chemistry

Faculty name	Semester	Paper Code	Unit wise division	
Dr. Anna Gogoi	I	MJ	CHMC1	
		MN	MINCHM1	
	III	H	C-303 C-303-lab	Unit II (Chemical Kinetics) Practical
		GE	GE-301 GE-301-lab	Unit-3 (Conductance) Practical
	V (H)		C-502	Unit-II (Molecular Spectroscopy)
			C-502-Lab	Practical
Dr. Saheen Shehnaz Begum	I	H	C-102	
		GE	N/A	
	III	H	C-303	Unit 1: Phase equilibria Unit 3: Catalysis Unit 4: Surface Chemistry
		GE	GE-303	Unit 1: Solutions Unit 2: Phase equilibria Unit 4: Electrochemistry
	V		C-502	Unit 1: Quantum Chemistry Unit 3: Photochemistry

### Class routine for the even semester, 2024

### Course distribution of even semester, 2024

#### C1 Inorganic Chemistry

Faculty name	Semester	Paper Code	Unit wise division
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Dr. Pakiza Begum	II	MJ	CHMC2	Unit I: Non Transition Elements (One part only) (a) Noble Gas: Compounds of Xenon only Metals: Full chapter Unit IV: Experimental Work (A): Oxidation-Reduction Titrimetry
		MN	MINCHMC2	Unit I: Coordination Chemistry
		SEC	SEC223	Unit II: Petroleum and Petrochemical Industry Petrochemicals
		VA C	VAC3	Environmental Science
	IV	H	C-401  C-401-LAB	Unit II: Transition Elements Unit III: Lanthanoids and Actinoids Unit IV: Bioinorganic Chemistry A. Gravimetric Analysis B. Inorganic Preparation C. Chromatography of metal ions
		GE	GE-401 GE-401-LAB	Unit II: Coordination Chemistry Unit III: Crystal Field Theory Section A: Inorganic Chemistry
	VI	H	C-601  C-601-LAB	Unit III: Reaction Kinetics and Mechanism Unit IV: Catalysis by Organometallic Compounds A. Qualitative Inorganic Analysis
		DSE	DSE-601 DSE-601-LAB	Unit I: Silicate Industries A. Qualitative Inorganic Analysis
		DSE	DSE-603	Dissertation (Project Work)
	Dr. Plaban Jyoti Sarma	II	H	N/A
GE			N/A	N/A
IV		H	C-401  C-401-LAB	Unit II: Transition Elements Unit IV: Bioinorganic Chemistry A. Gravimetric Analysis B. Inorganic Preparation C. Chromatography of metal ions
		GE	GE-401 GE-401-LAB	Unit II: Coordination Chemistry Unit III: Crystal Field Theory Section A: Inorganic Chemistry
VI (H)		C-601  C-601-LAB DSE-601 DSE-601-LAB	Unit I: Theoretical Principles in Qualitative Analysis (H <sub>2</sub> S Scheme) Unit II: Organometallic compounds A. Qualitative Inorganic Analysis Unit II: Fertilizers A. Determination of free acidity B. Estimation of Calcium	



		DSE-603	C. Analysis of Cement D. Determination of composition of Dolomite E. Preparation of Pigment Dissertation (Project Work)
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### C2 Organic Chemistry

Faculty name	Semester	Paper Code	Unit wise division
Dr. Arandao Narzary	II	Maj or CHMC2 CHMC2- Lab	Carbon-Carbon pi bonds  Experimental (B) (i) Detection of elements (N, S and Halogens) (ii) Detection of functional groups.
		Min or MINCHM2	<b>Aliphatic Hydrocarbons-2</b> Alkenes
		SEC SEC-223	<b>Experimental</b> (i) To determine the Aniline point of a given lubricating oil. (ii) To determine the acid value of a given oil
	IV	H C-402  C-402-lab	Unit-II: Polynuclear Aromatic Hydrocarbons Unit III: Heterocyclic Compound-I Unit V: Terpenes EXP-1, 2 and 3 Detection of elements (N, S and Halogens, Functional group detection
		GE N/A	N/A
	VI (H)	C-602  C-602 LAB	Unit-I: Organic Spectroscopy II: Carbohydrates III: Dyes <u>Unit-I, II</u> Qualitative analysis of unknown organic compounds containing monofunctional groups, Extraction of caffeine from tea leaves. Project
	Mr. Rituraj Tahu	II	C-201  CHMC2-Lab
Min or MINCHM2			<b>Stereochemistry</b>
SEC SEC-223			<b>Experimental</b> (i) To determine the Aniline point of a given lubricating oil.

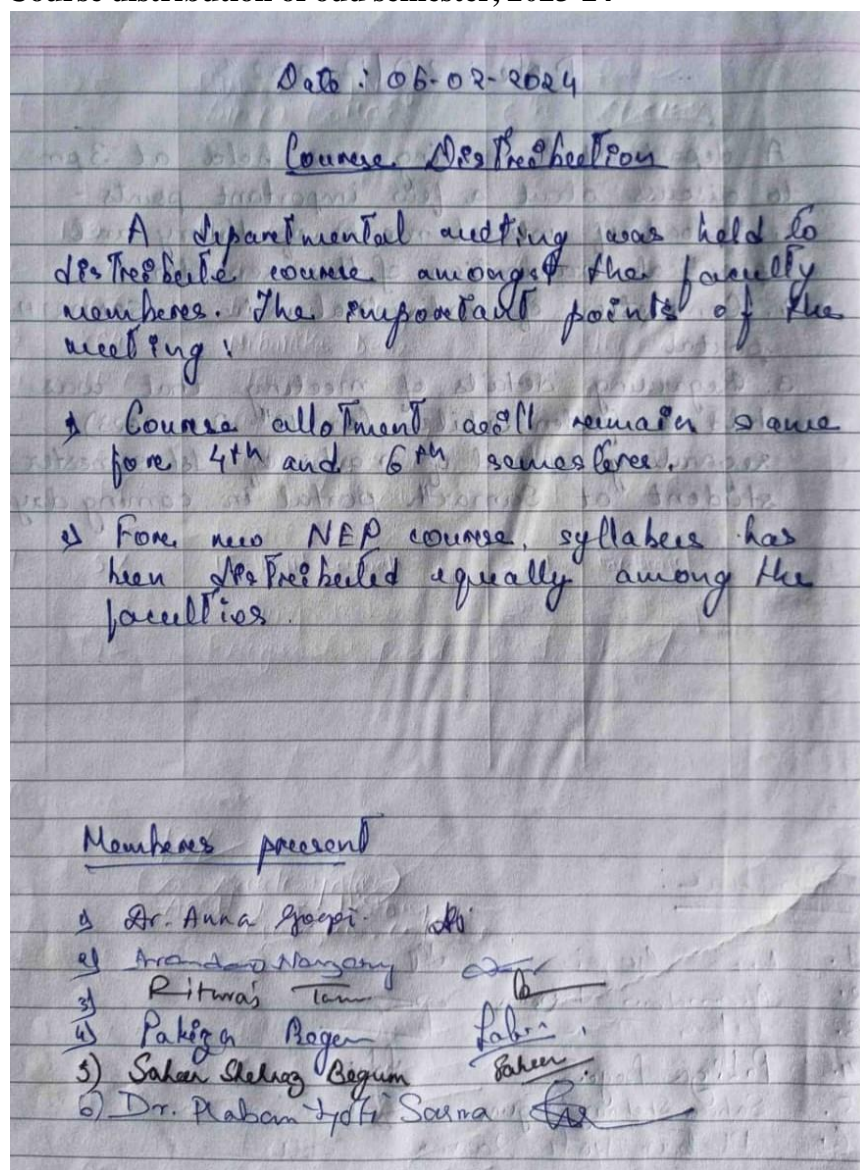
			(ii) To determine the acid value of a given oil
	IV	C-402	Unit-I: Nitrogen Containing Functional Group
		C-402-lab	IV: Alkaloids EXP-1,2 and 3 Detection of elements (N, S and Halogens, Functional group detection
		N/A	N/A
	VI (H)	C-602	Unit-I: Organic Spectroscopy
		C-602 LAB	IV: Polymers Unit-I, II Qualitative analysis of unknown organic compounds containing monofunctional groups, Extraction of caffeine from tea leaves. Unit-III: Surface Coatings Project
		DSE 601 DSE-603	

### C3 Physical Chemistry

Faculty name	Semester	Paper Code	Unit wise division
Dr. Anna Gogoi	II	MJ	CHMC2
		MN	MINCHM2
	IV	H	C-403 C-403 Lab
		GE	GE-401 GE-401 Lab
	VI (H)		DSE-603
Dr. Saheen Shehnaz Begum	II	H	C-202
		GE	
	IV	H	C-403
		GE	
	VI (H)		DSE-601 DSE-603



## Course distribution of odd semester, 2023-24



### C1 Inorganic Chemistry

Faculty name	Semester		Paper Code	Unit wise division
Dr. Pakiza Begum	I	H	C-101  C-101-LAB	Unit I: Atomic Structure Unit II: Periodicity of Elements Unit IV: Oxidation-Reduction (A) Titrimetric Analysis (B) Acid-Base Titrations (C) Oxidation-Reduction Titrimetry
		GE	GE-101 GE-101 Lab	Unit I: Atomic Structure Section A: Inorganic Volumetric Analysis

	III	H	C-301  C-301-LAB	Unit I: General Principles of Metallurgy Unit II: Acids and Bases Unit IV: Noble Gases Unit V: Inorganic Polymers A. Iodo/Iodimetric Titrations B. Inorganic preparations
		GE	N/A	N/A
	V (H)		DSE-501  DSE-501-Lab	Unit I: Qualitative and quantitative aspects of analysis Unit II: UV-Visible and IR Spectrometry Determination of dissolved oxygen in Water; Chromatographic separations
			DSE-502	Unit I: Introduction to Green Chemistry Unit II: Principles of Green Chemistry and Designing a Chemical synthesis (points (i) and (ii))
	Dr. Plaban Jyoti Sarma	I	H	C-101 C-101-LAB
GE			GE-101 GE-101 Lab	Unit I: Atomic Structure Section A: Inorganic Volumetric Analysis
III		H	C-301 C-301-LAB	Unit III: Chemistry of s and p block elements A. Iodo/Iodimetric Titrations B. Inorganic preparations
		GE	N/A	N/A
V (H)			DSE-501  DSE-501-Lab	Unit III: Thermal methods of analysis Unit IV: Electro-analytical methods Unit V: Separation techniques Determination of dissolve oxygen in Water; Chromatographic separations

### C2 Organic Chemistry

Faculty name	Semester		Paper Code	Unit wise division
Dr.Arandao Narzary	I	H	N/A	N/A
		GE	GE-101  GE-101-LAB	Unit IV: Stereochemistry Unit V: Aliphatic Hydrocarbons Detection of characterized element (N, S, Cl, Br, I) in an organic compound, Separation of mixtures by Chromatography
	III	H	C-302  C-302-LAB	Unit I: Chemistry of Halogenated Hydrocarbons, Unit III: Carbonyl Compounds Unit I, II, III: Functional group analysis

		GE	GE-101 GE-101-LAB	Unit-VII, VIII Unit-II
	V (H)		C-501	Unit I: Nucleic Acids Unit II: Amino Acids, Peptides and Proteins Unit IV: Lipids Unit V: Disconnection approach in Organic Synthesis
			C-501-Lab	Estimation of glycine, Study of the titration curve of glycine. Study of the action of salivary amylase on starch, Saponification value of oil or a fat.
Mr. Rituraj Tahu	I	H	N/A	N/A
		GE	GE-101  GE-101 Lab	Unit-III: Fundamentals of Organic Chemistry V: Aliphatic Hydrocarbons Detection of characterized element (N, S, Cl, Br, I) in an organic compound, Separation of mixtures by Chromatography
	III	H	C-302  C-302-lab	Unit-II: Alcohols, Phenols, Ethers and Epoxides IV: Carboxylic Acids and their Derivatives IV: Sulphur containing compounds: Unit –I, II, III Functional group analysis
		GE	GE-301  GE-301-lab	Unit-V: Carboxylic acid VI: Amine and diazonium salt Unit-II: Organic analysis
	V (H)		C-501	Unit-III: Enzymes VI: Pharmaceutical compounds: structure and importance
			C-501-Lab	Estimation of glycine, Study of the titration curve of glycine. Study of the action of salivary amylase on starch, Saponification value of oil or a fat.

### C3 Physical Chemistry

Faculty name	Semester		Paper Code	Unit wise division
Dr. Anna Gogoi	I	H	C-102  C-102 Lab	Unit-II (Liquid State) Unit-IV (Ionic Equilibrium) Practical
		GE	N/A	N/A
	III	H	C-303 C-303-lab	Unit II (Chemical Kinetics) Practical
		GE	GE-301 GE-301-lab	Unit-3 (Conductance) Practical
	V (H)		C-502	Unit-II (Molecular Spectroscopy)
			C-502-Lab	Practical

Dr. Saheen Shehnaz Begum	I	H	C-102	Unit 1: Gaseous State Unit 3: Solid State
		GE	N/A	N/A
	III	H	C-303	Unit 1: Phase equilibria Unit 3: Catalysis Unit 4: Surface Chemistry
		GE	GE-303	Unit 1: Solutions Unit 2: Phase equilibria Unit 4: Electrochemistry
	V		C-502	Unit 1: Quantum Chemistry Unit 3: Photochemistry



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