



DEPARTMENT OF CHEMISTRY (UG & PG), JHARGRAM RAJ COLLEGE
LESSON PLAN (SESSION: 2023-2024)

TEACHER: DR. DILIP ROUT (ORGANIC CHEMISTRY)

UG SEMESTER-I

PAPER: MJ1T (MAJOR, UNDER CCFUP PROGRAM]: ORGANIC CHEMISTRY: REACTION MECHANISM

PERIOD	TOPIC(S) TO BE COVERED
October 2023	Mechanistic Classification: Reaction Type
November 2023	Description of reaction mechanism in terms of curly arrows
December 2023	Reactive Intermediate
January 2023	Class test

PAPER: MJ1P (MINOR, UNDER CCFUP PROGRAM] ORGANIC CHEMISTRY LAB-I

PERIOD	TOPIC(S) TO BE COVERED
November 2023	Separation of a Binary Solid Mixture
December 2023	Determination of boiling point of Organic Liquid Compounds
January 2023	Identification of a pure Organic Compounds: Solid and Liquid compounds

UG SEMESTER-II

PAPER: DSC-1BT (CC-2) [FOR THE GENERAL COURSE]

PERIOD	TOPIC(S) TO BE COVERED
October 2023	Reaction Kinetics
November 2023	Elimination Reactions
December 2023	Class test
January 2023	Reaction Kinetics

PAPER: DSC-1BP (CC-2 LAB) [FOR THE GENERAL COURSE]

PERIOD	TOPIC(S) TO BE COVERED
October 2023	Alkyl Halides
November 2023	Aryl Halides
December 2023	Alcohols and Phenols
January 2023	Class test

PAPER: DSC-1BP (CC-2 LAB) [FOR THE GENERAL COURSE]

PERIOD	TOPIC(S) TO BE COVERED
October 2023	Alkyl Halides
November 2023	Aryl Halides
December 2023	Alcohols and Phenols
January 2023	Class test

PAPER: DSC-1BP (CC-2 LAB) [FOR THE GENERAL COURSE]

PERIOD	TOPIC(S) TO BE COVERED
October 2023	Purification of Organic Compounds by Crystallisation
November 2023	Melting and Boiling Point Determination
December 2023	Preparation: Benzoylation of amines/phenols
January 2023	Practice sessions

UG SEMESTER-III

PAPER: CC-7T (ORGANIC CHEMISTRY-III), Carbonyl and Related Compounds

PERIOD	TOPIC(S) TO BE COVERED
August 2023	Different Types of Nucleophilic Addition to C=O Group with Mechanism
September 2023	Reaction of Carbonyl Compound involving Enol and Enolates.
October 2023	Preparation and Synthetic Applications of DEM and EAA.
November 2023	Class test



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PAPER: CC-7P (CHEMISTRY LAB-III)

PERIOD	TOPIC(S) TO BE COVERED
August 2023	Qualitative Analysis of Solid Organic Compounds: Special Element Detection, Solubility Classification and Melting Point Determination.
October 2023	Determination of Functional Group and Preparation of Derivatives.
January 2023	Analysis of Unknown Solid Organic Compounds.

UG SEMESTER-IV

PAPER: CC-10T (ORGANIC CHEMISTRY-IV), ORGANIC SPECTROSCOPY

PERIOD	TOPIC(S) TO BE COVERED
February 2023	UV spectroscopy
March 2023	IR Spectroscopy
April 2023	NMR spectroscopy
May 2023	Application of combined spectroscopic techniques

UG SEMESTER-V

PAPER: CC12T (ORGANIC CHEMISTRY V): CARBOHYDRATES and PERICYCLIC REACTIONS

PERIOD	TOPIC(S) TO BE COVERED
July 2023	Monosaccharides and Disaccharides
August 2023	Polysaccharides and Electrocyclic Reactions
September 2023	Cycloaddition and Sigmatropic reactions
October 2023	Class tests

PG SEMESTER-I

PAPER: CEM 102 (ORGANIC CHEMISTRY-I):

PERIOD	TOPIC(S) TO BE COVERED
October 2023	Unit-3: Natural Products: Terpenoids
November 2023	Unit-4: Natural Products: Alkaloids
December 2023	Discussion of different exam related problems

PAPER: CEM 104 (FOOD PROCESSING AND PRESERVATION-I):

PERIOD	TOPIC(S) TO BE COVERED
December 2023	Unit II: Introduction Food Microbiology

PAPER: CEM 196 (FOOD PROCESSING AND PRESERVATION & PACKAGING LAB): [Jointly with Prsanta Patra]

PERIOD	TOPIC(S) TO BE COVERED
November 2023	Preparation of Jam and Jelly
December 2023	Preparation of fruit juice

PG SEMESTER-II

PAPER: CEM 202 (ORGANIC CHEMISTRY PRACTICAL):

PERIOD	TOPIC(S) TO BE COVERED
February 2024	Unit-4: Stereochemistry I
March 2024	Unit-4: Stereochemistry I

PAPER: CEM 295 (ORGANIC CHEMISTRY-II): [Jointly with Prsanta Patra]

PERIOD	TOPIC(S) TO BE COVERED
February 2024	Analysis of Liquid Samples by TLC, boiling point and chemical tests.
March 2024	Extraction of natural products

PG SEMESTER-III

PAPER: CEM 303 (ORGANIC CHEMISTRY SPECIALIZATION):

PERIOD	TOPIC(S) TO BE COVERED
September 2023	Unit-5: Green Chemistry
October 2023	Unit-5: Green Chemistry
November 2023	Unit-5: Green Chemistry



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PAPER: C-CEM 304 (CBCS): PHARMACEUTICAL CHEMISTRY

PERIOD	TOPIC(S) TO BE COVERED
September 2023	Antimalarial drug
October 2023	Antimalarial drug
November 2023	Antimalarial drug

PAPER: CEM 395 (ORGANIC CHEMISTRY SPECIALIZATION):

PERIOD	TOPIC(S) TO BE COVERED
September 2023 – December 2023 (16 weeks)	Review work in an area of contemporary interest; research work to be performed; seminar Lecture has to be delivered on the total work carried out.

PG SEMESTER-IV

PAPER: CEM 401 (ORGANIC, INORGANIC and PHYSICAL CHEMISTRY SPECIALIZATION): ADVANCED SPECTROSCOPY II

PERIOD	TOPIC(S) TO BE COVERED
February 2024	Unit-1 & 2 : Detailed study of ^1H NMR
March 2024	Unit-3: Mass spectroscopy
April 2024	Unit-4: Combined application of spectroscopic techniques

PAPER: CEM 402 (ORGANIC CHEMISTRY SPECIALIZATION):

PERIOD	TOPIC(S) TO BE COVERED
February 2024	Unit-1: Organic Photochemistry-I
March 2024	Unit-2: Organic Photochemistry-II

PAPER: CEM 495 (ORGANIC CHEMISTRY SPECIALIZATION):

PERIOD	TOPIC(S) TO BE COVERED
February 2024 – May 2024 (16 weeks)	Review work in an area of contemporary interest; research work to be performed; seminar Lecture has to be delivered on the total work carried out.