

Lesson Plan

**Mehr Chand Mahajan D.A.V. College for Women, Sector – 36A,
Chandigarh
Monthly Teaching Plans (Odd Semester)
Session –2022-2023**

Name of Teachers: Dr. Shefali and Dr. Qudrat

Department: Chemistry

Class: B. Sc. III

Subject: Organic Chemistry

S. No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	To		
1.	21-07-2023	04-08-2023	Unit 1: Electromagnetic spectra: Absorption spectra UV Absorption spectroscopy: Beer Lambert Law, molar absorptivity, presentation and analysis of UV spectra.	Lecture
2.	05-08-2023	18-08-2023	Unit 1: UV Absorption spectroscopy: types of electronic transitions, Effects of conjugation, chromophore, auxochromes, bathochromic, hypsochromic, hyperchromic shifts, UV spectra of conjugated enes and enones, Woodward fisher rules and application to conjugated alkenes and carbonyl compounds Unit 2: Electromagnetic spectra: Absorption spectra IR Absorption spectroscopy: Molecular vibrations, Hooke's law, selection rules, intensity and positions of IR bands,	Lecture, group discussion
3.	19-08-2023	27-08-2023	Unit 2: IR Absorption spectroscopy: measurement of IR spectrum, finger print region, IR absorption of various functional groups, and	Lecture, group discussion

			interpretation of IR spectra of simple organic compounds. Unit 3: Spectroscopy Nuclear Magnetic resonance spectroscopy (NMR): ^1H NMR, nuclear shielding and deshielding, chemical shift, spin-spin coupling, coupling constants.	
4.	28-08-2023	15-09-2023	Unit 3: Spectroscopy Nuclear Magnetic resonance spectroscopy (NMR): area of signals, interpretation of NMR spectra of simple organic molecules. .	Lecture, group discussion
5.	16-09-2023	26-09-2023	Unit 4: Carbohydrates Classification and structure, monosaccharides, osazone formation, interconversion of glucose to fructose, chain lengthening and chain shortening of aldoses, configurations of monosaccharides, erythro and threo diastereomers	Lecture, online resources
6	27-09-2023	05-10-2023	Unit 4: Carbohydrates Conversion of glucose to mannose, formation of glucosides, ethers and esters, determination of ring size of monosaccharides, cyclic structure of D-glucose, mechanism of mutarotation.	Lecture, online resources

7	06-10-2023	20-10-2023	Structure of ribose and deoxyribose.	Lecture, online resources
8	21-10-2023	Till exams	Introduction to disaccharides (maltose, sucrose, lactose) And polysaccharides (starch and cellulose)	Lecture, online resources

Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans

30 th August, 2023	The teachers have completed the scheduled chapters and topics as shown in the lesson plan
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Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans

29 th Sept, 2023	The teachers have completed the scheduled chapters and topics as shown in the lesson plan
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Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans

31 st Oct, 2023	The teachers have completed the scheduled chapters and topics as shown in the lesson plan
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Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans

22 nd Nov, 2023	The teachers have completed the scheduled chapters and topics as shown in the lesson plan
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***Any of these** – (i) Lecture Method; (ii) PPT; (iii) Online Sources; (iv) Group Discussion; (v) Case Studies etc. Other Methods adopted by the teacher – Please write the specific teaching method

Lesson Plan

**Mehr Chand Mahajan D.A.V. College for Women, Sector – 36A,
Chandigarh
Monthly Teaching Plans (Even Semester)
Session –2023-24**

Name of Teachers: Dr. Shefali and Dr. Qudrat

Department: Chemistry

Class: B. Sc-III

Subject: Organic Chemistry

S. No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	To		
1.	09 -01- 2024	31-01-2024	Unit 1: Amino acids, Peptides, Proteins and Nucleic acids Classification, structure, stereochemistry of amino acids, acid-base behavior, isoelectric point, electrophoresis, preparation and reactions of amino acids. Structure and nomenclature, classification of peptides, proteins. Peptide structure determination, end group analysis, selective hydrolysis of peptides.	Lecture
2.	01.02.2024	29.02.2024	Unit 1: Classical and solid-phase peptide synthesis, Levels of protein structure, protein denaturation/renaturation. Introduction to nucleic acids, ribonucleosides and ribonucleotides, double helical structure of DNA. Unit 2: Synthetic polymers Addition or chain growth polymerization, free radical and ionic vinyl polymerization, Ziegler-Nata Polymerization, vinyl polymers, Condensation Polymerization,	Lecture, group discussion

3.	01.03.2024	15.04.2024	Unit 2: Polyesters, polyamides, phenol formaldehyde resins, epoxy resins, urea formaldehyde resins, polyurethanes, Natural and synthetic rubbers. Unit 3: Organic synthesis via enolates Acidity of α -hydrogens, alkylation of diethyl malonate and ethyl acetoacetate. Synthesis of ethyl acetoacetate: Claisen condensation, Keto-enol Tautomerism of ethyl acetoacetate. Alkylation and acylation of enamines.	Lecture, group discussion
4.	16.04.2024	Till exam	Unit 4: Organometallic Compounds Organomagnesium compounds: Grignard reagents- Synthesis, structure and chemical reactions. Organozinc Compounds: Synthesis and chemical reactions. Organolithium Compounds: Synthesis and chemical reactions.	Lecture, group discussion and seminar
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans				
30-01-2024	The teachers have completed the scheduled chapters and topics as shown in the lesson plan			
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans				
24-02-2024	The teachers have completed the scheduled chapters and topics as shown in the lesson plan			
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans				
28-03-2024	The teachers have completed the scheduled chapters and topics as shown in the lesson plan			
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans				
19-04-2024	The teachers have completed the scheduled chapters and topics as shown in the lesson plan			

***Any of these** – (i) Lecture Method; (ii) PPT; (iii) Online Sources; (iv) Group Discussion; (v) Case Studies etc. Other Methods adopted by the teacher – Please write the specific teaching method