Semester-Wise Teaching Plan

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Class/Semester	Title & Code of The Paper Allotted (Credit)	Method of Teaching	Teaching Material	Unit	Topic	Period/ Hours Required	Details of the Contents	Remarks / Books
UG: Sem I (Odd)	**GENERAL CHEMISTRY-I (CHMMJ-011) (4 Cr.)**	Lecture, Discussion, Problem-solving	Textbook, Mechanism charts, Models	Unit IV	Chemistry of Aliphatic Hydrocarbons	4	Chemistry of alkanes: Formation (Wurtz, Wurtz-Fittig), Free radical substitutions (Halogenation - relative reactivity and selectivity).	CO: Introduce structural aspects of organic molecules. ELO: Understand organic compounds, reaction of aliphatic hydrocarbons.
UG: Sem I (Odd)	**HEALTH & WELLNESS (CHMVA-011) (2 Cr.)**	Lecture, Discussion, Video aids	Food charts, Textbooks	Unit II	Basics of Food and Nutrition: Definition of food, nutrition, nutrient, nutritional status, malnutrition, over and under nutrition.	4	Details: Concepts of food, nutrition, and various forms of malnutrition.	CO: Consciousness towards health. ELO: Basic concepts of health & wellness, nutrition. Roday S., Food

								Science and Nutrition.
UG: Sem I (Odd)	**BASIC SKILLS IN CHEMISTRY (CHMSK-011) (3 Cr.)**	Practical, Demonstration	Food samples, Chemicals, Lab equipment	All	Lab Safety & Basic Skills	3	Details: Introduction to chemistry laboratory hazards, proper handling of chemicals, basic glassware, common lab techniques.	ELO: Introduction to Chemistry laboratory. Patrick G.L., Jain, Foye.
UG: Sem I (Odd)	**Review & Internal Assessment**	Review, Practical Viva	-	All Units	Revision, Q&A, Internal Assessment (Quiz/Practical Exam)	-	-	All relevant COs & ELOs

UG: Semester III (Odd Semester)

Class/Semester	Title & Code of The Paper Allotted (Credit)	Method of Teaching	Teaching Material	Unit	Topic	Period/ Hours Required	Details of the Contents	Remarks / Books
UG: Sem III (Odd)	**ORGANIC CHEMISTRY-I (CHMMJ-032) (4 Cr.)**	Lecture, Discussion, Mechanism drawing	Textbook, Charts, Models	Unit I	Alcohols: preparation, properties and relative reactivity of 1°, 2°, 3° alcohols,	4	Details: Synthetic methods, physical/chemical properties, reactivity trends, named reactions.	CO: Basic knowledge on alcohols, phenols, ethers. ELO: Idea of alcohols, prediction of

					Bouvaelt-Blanc Reduction.			mechanism. Finar Vol. 1.
UG: Sem III (Odd)	**GENERAL CHEMISTRY-III (CHMMI-031) (3 Cr.)**	Lecture, Discussion	Charts, Molecular models	Unit III	Alcohols: preparation, properties and relative reactivity of 1°, 2°, 3° alcohols, Bouvaelt-Blanc Reduction.	3	Details: Synthetic methods, chemical properties, relative reactivity, named reduction.	CO: Gain insight into preparations and reactions of alcohols. ELO: Preparation and reactions of alcohols.
UG: Sem III (Odd)	**Review & Internal Assessment**	Review, Problem-solving	-	All Units	Revision, Q&A, Internal Assessment (Test/Quiz)	-	-	All relevant COs & ELOs

UG: Semester V (Odd Semester)

Class/Semester	Title & Code of The Paper Allotted (Credit)	Method of Teaching	Teaching Material	Unit	Topic	Period/ Hours Required	Details of the Contents	Remarks / Books
UG: Sem V (Odd)	**ORGANIC CHEMISTRY-III (CHMMJ-052) (4 Cr.)**	Lecture, PPT, Discussion	Textbook, Diagrams, Research Papers	Unit III	Enzymes: Introduction, classification and characteristics of enzymes. Salient features	4	Details: Definition, systematic classification (EC numbers), common characteristics of enzymes,	CO: Basic knowledge on biomolecules (enzymes). ELO: Classification of enzymes.

					of active site of enzymes.		active site components.	
UG: Sem V (Odd)	**PRACTICAL CHEMISTRY-III (CHMMJ-054) (4 Cr.)**	Practical, Demonstration	Chemicals, Glassware, Lab equipment, Manuals	Section B, Unit I	Organic Preparations: Preparation of urea formaldehyde.	6	Details: Lab synthesis of a simple polymer.	CO: Develop practical skills in organic chemistry. ELO: Proficiency in organic preparation.
UG: Sem V (Odd)	**Review & Internal Assessment**	Review, Practical Viva	-	All Units	Revision, Q&A, Internal Assessment (Practical Exam/Viva)	-	-	All relevant COs & ELOs

PG: Semester I (Odd Semester)

Class/Semester	Title & Code of The Paper Allotted (Credit)	Method of Teaching	Teaching Material	Unit	Topic	Period/ Hours Required	Details of the Contents	Remarks / Books
PG: Sem I (Odd)	**ORGANIC CHEMISTRY-I (PCHMC-102) (4 Cr.)**	Lecture, PPT, Discussion	Textbook, Mechanism charts, Models, Research Papers	Unit I	Aromaticity, antiaromaticity, homoaromaticity, metallocenes, tropolones, azulenes.	4	Details: Advanced concepts of aromaticity, non-classical aromatic systems.	CO: Fundamental knowledge on structure. ELO: Understand bonding, reactivity.
PG: Sem I (Odd)	**LABORATORY COURSE-I**	Practical Demonstration	Lab equipment,	Any relevant (as	Organic Lab: Organic	3-4	Details: Quantitative analysis	CO: Develop practical skills. ELO:

	(PCHMC-104) (6 Cr.)		Chemicals, Manuals	per 2 classes)	Estimation (e.g., Glucose)		procedures for organic compounds.	Proficiency in practical methods.
PG: Sem I (Odd)	**ANALYTICAL CHEMISTRY-I (PCHMC-105) (2 Cr.)**	Lecture, Discussion	PPT, Textbook	Any relevant (as per 1 class)	Instrumental Methods: Introduction to UV-Visible Spectroscopy	1	Details: Basic principles, Beer-Lambert Law, instrumentation overview.	CO: Impart knowledge on instrumentation. ELO: Understand instrumental principles.
PG: Sem I (Odd)	**Review & Internal Assessment**	Review, Q&A	-	All Units	Revision, Internal Assessment (Test/Quiz/Practical Viva)	-	-	All relevant COs & ELOs