Semester-Wise Teaching Plan

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Academic Session: 2025-26 (Odd Semesters)

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, Diagrams, Models	Unit I	Atomic Structure:	10	Details: Derivations, significance, and limitations of early atomic models and quantum concepts.	**Textbooks:** Puri, Sharma, Pathania (Physical Chemistry); Atkins.
UG: Sem I (Odd)	GENERAL CHEMISTRY-I (CHMMI-011) (4 Cr.)	Lecture, Discussion, Problem-solving	Textbook, Diagrams, Models	Unit I	Atomic Structure	10	Details: Derivations, significance, and limitations of early atomic models and quantum concepts.	**Textbooks:** Puri, Sharma, Pathania (Physical Chemistry).
UG: Sem I (Odd)	HEALTH & WELLNESS (HLWVA-011) (2 Cr.)	Lecture, Discussion, Case studies	Food charts, Video aids, Handouts	Unit II	Basics of Food and Nutrition	9	Details: Exploring different types of malnutrition and the concept of RDA.	**Textbooks:** Roday S., Food Science and Nutrition; IGNOU (Food and Nutrition).
UG: Sem I (Odd)	HEALTH & WELLNESS (HLWVA-011) (2 Cr.)	Lecture, Discussion, Case studies	Food charts, Video aids, Handouts	Unit III	Factors influencing food expenditure	3	Details: Understanding the economic aspects of food.	**Textbooks:** Roday S., Food Science and Nutrition;

					and public distribution systems.			IGNOU (Food and Nutrition).

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)	INORGANIC CHEMISTRY-I (CHMMJ-031) (4 Cr.)	Lecture, Discussion, Problem-solving	Textbook, Charts, Examples	Unit I	Acid-Base Concepts	20	Details: Comparative study of various acid-base theories, understanding of solvated proton and its significance. HSAB theory redox chemistry	**Textbooks:** Lee, J.D. Concise Inorganic Chemistry; Puri, Sharma, Kalia (Inorganic Chemistry).
UG: Sem III (Odd)	GENERAL CHEMISTRY-III (CHMMI-031) (3 Cr.)	Lecture, Discussion, Problem-solving	Textbook, Charts, Examples	Unit I	Oxidation and Reduction Reactions	15	Details: Comparative study of various acid-base theories, understanding of solvated proton and its significance. HSAB theory redox chemistry	**Textbooks:** Lee, J.D. Concise Inorganic Chemistry; Puri, Sharma, Kalia (Inorganic Chemistry).

UG: Semester V (Odd Semester)

Class/Semester	Title & Code of The Paper	Method of Teaching	Teaching Material	Unit	Topic	Period/ Hours Required	Details of the Contents	Remarks / Books

	Allotted (Credit)							
UG: Sem V (Odd)	INORGANIC CHEMISTRY-III (CHMMJ-051) (4 Cr.)	Lecture, Discussion, Problem-solving	Textbook, Organometallic models, Research Papers	Unit I	Organometallic Chemistry:	20	Details: Introduction to organometallic compounds, various types of metal-carbon bonds.	**Textbooks:** Cotton and Wilkinson (Advanced Inorganic Chemistry); Elschenbroich and Salzer (Organometallics).
UG: Sem V (Odd)	PHYSICAL CHEMISTRY III (CHMMJ-053) (4 Cr.)	Lecture, Problem-solving	Textbook, Charts	Unit IV (A)	Group Theory: Symmetry elements, symmetry operations, point groups.	11	Details: Identification of symmetry elements	**Textbooks:** Atkins, P. W., Friedman, R. S., Molecular Quantum Mechanics
UG: Sem V (Odd)	GENERAL CHEMISTRY - V (CHMMI-051) (3 Cr.)	Lecture, Discussion	Textbook, Periodic Table, Diagrams	Unit I	Atomic Structure:	10	Details: quantum mechanical description of atomic structure.	**Textbooks:** Lee, J.D. Concise Inorganic Chemistry; Puri, Sharma, Kalia (Inorganic Chemistry).

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)	INORGANIC CHEMISTRY - I (PCHMC-101) (4 Cr.)	Lecture, Discussion, Advanced problems	Textbook, Research Papers	Unit I	Advanced concepts of atomic structure and periodicity: Quantum mechanical description of atoms Chemical bonding: Advanced theories	20	Details: In-depth analysis of atomic structure beyond basic models, including quantum mechanical treatments.	**Textbooks:** Shriver and Atkins (Inorganic Chemistry); Huheey, Keiter, Keiter (Inorganic Chemistry).
PG: Sem I (Odd)	PRACTICAL CHEMISTRY - I (PCHMC-104) (2 Cr.)	Practical Demonstration, Hands-on Lab Work	Lab equipment, Chemicals, Manuals	CHY LAB I (Inorganic Lab)	Inorganic Preparations: Preparation of Tetraamminecopper(II) sulphate, [Cu(NH3)4]SO4.H2O Inorganic Estimations: Estimation of Nickel by DMG.	6-8	Details: Step-by-step synthesis and basic characterization (e.g., yield, color) of a common coordination compound.	**Textbooks:** Vogel's Textbook of Quantitative Chemical Analysis; Inorganic Synthesis.