

**Teaching Plan: Academic Session 2025-26 (Odd Semester)**  
**Department of Chemistry Jagannath Barooah College, Jorhat**  
**Name of the Teacher: Dr. Gitashree Darabdhara, Semester: ODD**

Semester	Title & Code of The Paper	Method of Teaching	Teaching Material	Unit	Topic	Hour	Details of the Contents	Remarks / Books
Sem I	General Chemistry-I (CHMMI-011) (4 Cr.)	Lecture & Discussion	Textbook, MOOCs	VI	Liquid State	5	<b>UNIT-VI:</b> Molecular forces and general properties of liquids. Surface Tension, Viscosity, Parachor	Atkins, P. W. & Paula, J. de Atkin's Physical Chemistry 10th Ed., Oxford University Press (2014)
Sem I	Health & Wellness (CHMVA-011 & CHMVA-021) (2 Cr.)	Lecture & Seminar	Food charts, Video aids	I & III	Introduction of Health and Wellness & Utilization of Food and Economics of Food	17	<b>UNIT-I:</b> Concepts of health and fitness, importance of health and wellness education and related.	Roday S., Food Science and Nutrition, 3rd Ed, Oxford; IGNOU (Food and Nutrition)
Sem I	Chemistry in Everyday Life (CHMMU-011) (3 Cr.)	Lecture & Class Interaction	Household samples, charts, Video aids	IV & V	Food Additives & Adulterants; Petroleum Products, Fertilizers and Polymers	16	<b>UNIT-IV:</b> Definition of food additives, types and functions, examples of food additives etc. <b>UNIT-V:</b> Composition of Crude Petroleum; Fertilizers and Polymers	Singh K (Chemistry in Daily Life); B. K. Sharma: Introduction to Industrial Chemistry
Sem I	Basic Skills in Chemistry (CHMSK-011) (3 Cr.)	Practical, Demonstration	Experiment s, Video aids	All	Basic Skills in Chemistry (Practical)	45	Food tests, soap/drug prep, adulterants	Patrick, G. L. Introduction to Medicinal Chemistry;

								Jain, P.C. & Jain, M. Engineering Chemistry;
Sem III	Inorganic Chemistry-I (CHMMJ-031) (4 Cr.)	Lecture & Discussion	Textbooks, Diagrams	V & VII	Inorganic Polymers & Hydrides & Chemistry of Group 13 Elements	15	<b>UNIT-V:</b> Types of inorganic polymers, organic polymers, synthesis, structural aspects <b>UNIT-VII:</b> Definition and their classification ionic, covalent and interstitial. Chemistry of Group 13 Elements	Huheey, J. E.; Keiter, E.A. & Keiter, R.L. Inorganic Chemistry, Pearson, 2006; Lee, J. D. Concise Inorganic Chemistry, 5th Ed., Wiley India Pvt. Ltd., 2008
Sem III	General Chemistry-III (CHMMI-031) (3 Cr.)	Lecture & Discussion	Textbooks, Charts	I	Acid-Base Concepts	10	Arrhenius Definition, Lewis Definition, Bronsted-Lowry Definition, Lux Flood Definition etc.	Lee, J.D. Concise Inorganic Chemistry ELBS, 1991; Pathania, P. S.; Physical Chemistry. 48th Edition (2021)
Sem III	Chemistry in Everyday Life (CHMMU-031) (3 Cr.)	Lecture & Class Interaction	Household samples, charts	IV & V	Food Additives & Adulterants; Petroleum Products, Fertilizers and Polymers	16	<b>UNIT-IV:</b> Definition of food additives, types and functions, examples of food additives and related <b>UNIT-V:</b> Composition of Crude Petroleum, Fertilizers: and Polymers	Singh K (Chemistry in Daily Life); B. K. Sharma: Introduction to Industrial Chemistry
Sem V	Inorganic Chemistry-III	Lecture & Discussion	Textbooks, Diagrams	II & IV	Reactions of Organometallic Complexes and	17	<b>UNIT-II:</b> Oxidative addition, reductive elimination, and related	Lee, J. D. Concise Inorganic Chemistry, 5th Ed., Wiley India

	(CHMMJ-051) (4 Cr.)				Organometallic Catalysis & Noble Gases		<b>UNIT-IV:</b> Noble gases, Clathrates, MO treatment for XeF <sub>2</sub> , VSEPR theory.	Pvt. Ltd., 2008; Organometallic and Bioinorganic Chemistry, Ajai Kumar, Aaryush Educations, 2014
Sem V	General Chemistry-V (CHMMI-051) (3 Cr.)	Lecture & Discussion	Textbooks, Diagrams	IV	Chemical Kinetics	15	Order and molecularity of a reaction, rate laws, kinetics of complex reactions Arrhenius equation and related	Pathania, P. S.; Physical Chemistry. 48th Edition (2021); Kapoor K. L. A Textbook of Physical Chemistry Sixth Ed., Vol. 2, Macmillan, India
Sem V	Practical Chemistry-III (CHMMJ-054) (4 Cr.)	Practical, Demonstration	Chemicals, Lab equipment	PHY	Physical Chemistry Practical	30	UV/Visible spectroscopy, Study the pH-dependence of the UV-Vis spectrum, Colorimetry	Yadav, J. B. Advance Practical Physical Chemistry, (Goel Publishing House-Meerut, 2008)
PG Sem I	Physical Chemistry-I (PCHMC-103) (4 Cr.)	Lecture & Discussion	Textbooks, Diagrams	III	Spectroscopy	20	UV, IR, Microwave, ESR etc.	P.W. Atkins (Physical Chemistry); C.N. Banwell and E.M.
PG Sem I	Practical Chemistry-I (PCHMC-104) (2 Cr.)	Practical, Demonstration	Lab equipment, Chemicals	CHY LAB III	Physical Chemistry Practical	4	Kinetics experiments, viscosity experiments	Jadav, J. B. Advanced Practical Physical Chemistry, (Krishna Prakashan, 2015)