A.T.V.V. Mandal's

B. D. Kale Mahavidyalaya, Ghodegaon

DEPARTMENT OF CHEMISTRY

Course Outcomes

F.Y.B.Sc.(Chemistry)

Sr.No.	Class	Course	Course Outcome
	F.Y. Semester I	CH-101 : Physical Chemistry	CO1: Students will be able to apply thermodynamic principles to physical and chemical process CO2: Calculations of enthalpy , Bond energy, Bond dissociation energy , resonance energy CO3: Variation of enthalpy with temperature – Kirchoff's equation CO4: Third law of thermodynamic and its applications CO5: Relation between Free energy and equilibrium and factors affecting on equilibrium constant. CO6: Exergonic and endergonic reaction CO7: Gas equilibrium , equilibrium constant and molecular interpretation of equilibrium constant CO8: Van't Haff equation and its application CO9: Concept to ionization process occurred in acids, bases and pH scale CO10: Related concepts such as Common ion effect hydrolysis constant, ionic product, solubility product CO11:Degree of hydrolysis and pH for different salts , buffer solutions
		CH-102:Organic chemistry	CO1: The students are expected to understand the fundamentals, principles, and recent developments in the subject area. CO2: It is expected to inspire and boost interest of the students towards chemistry as the main subject. CO3: To familiarize with current and recent developments in Chemistry. CO4: To create foundation for research and development in Chemistry.

		CH-103 : Chemistry Practical –I	CO1: Importance of chemical safety and Lab safety while performing experiments in laboratory CO2: Determination of thermochemical parameters and related concepts CO3: Techniques of pH measurements CO4: Preparation of buffer solutions CO5: Elemental analysis of organic compounds (non instrumental) CO6: Chromatographic Techniques for separation of constituents of mixtures
	F. Y. Semester II	CH-201: Inorganic Chemistry	CO1:. Various theories and principles applied to revel atomic structure CO2: Origin of quantum mechanics and its need to understand structure of hydrogen atom CO3:Schrodinger equation for hydrogen atom CO4: Radial and angular part of hydrogenic wave functions CO5: Shapes of orbitals CO6: Explain rules for filling electrons in various orbitals- Aufbau's principle, Pauli exclusion principle, Hund's rule of maximum multiplicity CO7: Discuss electronic configuration of an atom and anomalous electronic configurations. CO8: Describe stability of half-filled and completely filled orbitals. . CO9: Define various types of chemical bonds- Ionic, covalent, coordinate and metallic bond CO10: Summarize Born-Lande equation and Born-Haber cycle, CO11: Define Fajan's rule, bond moment, dipole moment and percent ionic character. CO12: Calculations of mole, molar concentrations and various units of concentrations which will be helpful for preparation of solution CO13: SI units, distinction between mass and weight
		CH-202: Organic Chemistry	CO1: The students are expected to understand the fundamentals, principles, and recent developments in the subject area. CO2: It is expected to inspire and boost interest of

			the students towards chemistry as the main subject. CO3: To familiarize with current and recent developments in Chemistry. CO4: To create foundation for research and development in Chemistry.
		CH- 203: Chemistry Practical –II	CO1:The practical course is in relevance to the theory courses to improve the Understanding of the concepts. CO2: It would help in development of practical skills of the students. CO3: Use of microscale techniques wherever required