Dantuluri Narayana Raju College (Autonomous) Bhimavaram,
(A College with Potential for Excellence)

DEPARTMENT OF CHEMISTRY

Course Outcome

S.No.	Semester	Course Code	Course	Course Outcome
1	I	2116-1A	In Organic & Organic Chemistry – 1A	To Describe the trends in the physical and chemical properties of group 13 to group 17 elements. Know the Chemistry of some important compounds of Boron, Carbon, and Silicone etc. To Identify and judge the structure, type of reaction, mechanism and chemical behavior of an organic compound during its transformation from reactants to products. To identify the reason for the aromaticity of various organic compounds that is used in the manufacturing of many products. To understand the importance of Structural theory in the organic chemistry which provides a strong basic knowledge for the students that helps in their further studies.
2	II	2116-1B	General & Physical Chemistry-IB	To Understand the formation of bonds and interactions between the atoms, molecules, ions crystals and other stable substances that are used in attaining the best knowledge about future projects like quantum mechanics. Rationalize the existence of compounds and properties, structures and uses of various molecules. To understand the spatial arrangement of atoms that determine the structure of a compound which is fundamental study all the concepts of organic chemistry with the help of Stereochemistry To gain the knowledge about various synthetic techniques and synthesized products that helps a lot while working in manufacturing companies. Learn about various techniques for the conversion of different states of a substance (Liquefaction of gases, condensation, distillation etc.,) that are used in daily life To identify a type of reaction involving in the formation of a product .The practical knowledge is very essential for the identification of various.

3	III	2216-2A	In organic & Organic chemistry-IIA	To understand the ways in which mono, di and unsaturated carboxylic acids are easily prepared by at industrial level. knowing about the active methylene compounds Studying about oxidizing and reducing Reagents, reactions and their mechanisms are very useful for the establishment of small industries and also for their self employment To study d block elements which is useful in determination of colored complex formation in Dye industry and formation alloys which are essential for the manufacture of utensils and vessels that are used in daily life To Various theories studied by the students involved in bonding in metals is very useful in gaining knowledge about thermal and electrical conductance of metals.
4	IV	2216-2B	Physical & General Chemistry-IIB	To be able to generate an Electric Current in an Electro Chemical Cell. This is the basis of all batteries and Fuel Cells. To gain command on Dilute Solutions, Elevation of B.P. & depression of Freezing point, osmotic pressure, colligative properties To gain command on Phase rule, components and degrees of freedom, eutectic point, Pb-Ag system, NaCl system and freezing mixtures. To know about Spectroscopy, electromagnetic spectrum, Electronic, IR spectroscopes, selection rules applications and NMR s-spectroscopy, chemical shift,m spin-spin coupling.
5	V	2316-3A	Inorganic, Physical & Organic Chemistry-IIIA	To know how the Coordination compounds play many roles in the animals and plants. They are essential in the storage and transport of oxygen, as electron transfer agent, as catalysts, and in photosynthesis. Because of its central function as an oxygen carrier for metabolic processes, Hemoglobin is probably the most studied of all the proteins. The interaction of transition metal ions with biological molecules provides one of the most fascinating areas of coordination chemistry. To identify molecular geometries associated with various d-orbital splitting patterns, predict electron configurations of split d orbitals for selected transition metal atoms or ions. To know about the stability constant (formation constant, binding constant) which is an equilibrium

				constant for the formation of a complex in solution. It is a measure of the strength of the interaction between the reagents that come together to form the complex. To have knowledge on isomerization and racemization reactions, to the general field of redox reactions, and to the reactions of coordinated ligands. To know about the applications in other fields such as organic, bioinorganic and biological chemistry, providing a bridge to organic reaction mechanisms. The topic also contains a chapter on the kinetic background to the subject with many illustrative examples which should prove useful to those beginning research.
		2416-4A	Inorganic, Physical & Organic Chemistry-IVA	To gain knowledge of the laws of physical chemistry such as chemical equilibrium, law of thermochemistry , distribution law, etc. can be deduced from law of thermodynamics. Moreover, it can predict the feasibility of a process and extent of yield of the product obtain. To understand chemical kinetics which deals with the measurement of rates of reactions proceeding under given conditions, hence study of this topic help them to locate favorable conditions to speed up a reaction, there by getting the products in a short time. To understand the laws of photochemistry and to know about a number of applications of photochemical process which are useful in daily life such as fluorescence, phosphorescence, photosensitization etc. To gain knowledge on carbohydrates which constitutes one of the most important group of natural products By their study of classification, structural elucidation, properties, and their interconversions are useful to understand about important foodstuffs and other forms of carbohydrates. Amino acids are another important natural products as they are building units of other natural products like enzymes, peptides, proteins etc. their study is necessary to understand structure of various substances present in living organisms.
		2316-3B	Environmental Chemistry-IIIB	To analyze the sample materials by using spectrophotometer in research and development. Determine the impurities and conjugation in organic compound and biological macro molecules

				by U.V spectroscopy. To determine the functional groups in organic molecules by using I.R spectroscopy. N.M.R technique is useful in quality control and research for determining the contents and purity of a sample as well as its molecular structure. To learn about the renewable source which are used in daily life. The polymer chemistry known about the synthesis properties and application of polymers. To identify and analyse the adult rents in food materials. Learning about Qualitative analysis.
6	VI	2416-4B	Organic , Spectra scope Techniques	To analyze the sample materials by using spectrophotometer in research and development. Determine the impurities and conjugation in organic compound and biological macro molecules by U.V spectroscopy. To determine the functional groups in organic molecules by using I.R spectroscopy. N.M.R technique is useful in quality control and research for determining the contents and purity of a sample as well as its molecular structure. To learn about the renewable source which are used in daily life. The polymer chemistry known about the synthesis properties and application of polymers. To identify and analyse the adult rents in food materials. Learning about Qualitative analysis.
		2416-5B	Advanced Organic Reactions	Quantitative and qualitative analysis of organic compounds (molecules) useful in analysis of drugs (pharmacy industry). To acquire the knowledge of handling sophisticated instruments like spectrophotometer which are used to identify functional groups (I.R) To learn about atomic absorption, emission and fluorescence spectroscopes, electro analytical methods and radio chemical methods.
		2416-6B	Pharmaceutical & Medicinal Chemistry	To gain knowledge about various forms, formulation and therapeutic uses of drugs. Can identify different modes of administration of drugs which helps in creating awareness while using medians. To learn about the structures, preparation methods and analysis of various basic drugs which will be very helpful if they chose the field of pharmaceuticals in their career

				To identify various elements or substituent's present in the food material that are often consumed in daily diet and also useful in some manufacturing industries. To know about the major diagnostic methods which can be useful in creating awareness among themselves and also the people around them