

**DANTULURI NARAYA RAJU COLLEGE (AUTOMOUS):: BHIMAVARAM,
WG.Dist.A.P**

(A COLLEGE WITH POTENTIAL FOR EXCELLENCE)

P.G. DEPARTMENT OF CHEMISTRY

M.SC ORGANIC CHEMISTRY COURSE OUTCOMES

S. NO	SEMESTER	COURSE CODE	TITLE OF THE COURSE	COURSE OUTCOMES
1	I	13301	GENERAL CHEMISTRY-I	To learn about the Hermitian operator, wave mechanics of simple systems with variable potential energy, rotational spectra of diatomic molecules and rotational and vibrational raman spectra of molecules.
		13302	INORGANIC CHEMISTRY-I	To know the structure and bonding in molecules, crystal field theory to understand the magnetic properties of coordination compounds.
		13303	ORGANIC CHEMISTRY-I	To learn concept of stereo chemistry, aliphatic nucleophilic, electrophilic substitution reactions and aromaticity.
		13304	PHYSICAL CHEMISTRY-I	To learn concept of thermodynamics, polymers, chemical kinetics of different reactions and photochemical reactions.
		13305P	INORGANIC CHEMISTRY LAB-I	To know the qualitative analysis of cations and anions.
		13306P	ORGANIC CHEMISTRY LAB-I	To learn the how to prepare the organic compounds with single step analysis.
		13307P	PHYSICAL CHEMISTRY LAB-I	To know the principle and mechanism of conductometric and potentiometric titrations, CST.
2	II	23301	GENERAL CHEMISTRY-I	To learn about concept of hartee-fock self consistent field methods, valence bond approach in hydrogen molecules, basic concepts of symmetry and group theory and computer programming.
		23302	INORGANIC CHEMISTRY-I	To learn about the structure and bonding applications of VSEPR theory, structure of metallocarboranes, crystal field theory of coordination compounds, term symbols, electronic spectra of transition metal complexes.
		23303	ORGANIC CHEMISTRY-I	To know about the aliphatic, aromatic nucleophilic substitution reactions, elimination reactions, named reactions and rearrangements, spectroscopy, protecting groups.
		23304	PHYSICAL CHEMISTRY-I	To learn physical methods of molecular structural elucidation, thermodynamics, statistical thermodynamics, electro chemistry
		23305P	INORGANIC CHEMISTRY LAB-II	To know the quantitative analysis in volumetric and gravimetric analysis.
		23306P	ORGANIC CHEMISTRY LAB-II	To learn about the distinguish between two organic compounds.
		23307P	PHYSICAL CHEMISTRY LAB-	know the principle and mechanism of conductometric and potentiometric titrations, PH metry, colorimetry and

			II	equilibrium constant.
3	III	33301	ORGANIC REACTION MECHANISM-I AND PERICYCLIC REACTIONS	To learn concept of aliphatic nucleophilic and electrophilic substitution reactions, asymmetric synthesis and pericyclic reactions,
		33302	ORGANIC SPECTROSCOPY-I	To know about UV,IR, NMR, and MASS spectra of different organic compounds.
		33303	MODERN ORGANIC SYNTHESIS-I	to learn about formation of C-C and C=C, reactions of unactivated C-H bonds, organoboranes, protecting groups, applications of microwave and ultrasound assisted reactions
		33304	CHEMISTRY OF NATURAL PRODUCTS	To learn about synthesis, biosynthesis of alkaloids, terpenoids, steroids, flavonoids and isoflavonoids.
		33305P	MULTISTEP SYNTHESIS OF ORGANIC COMPOUNDS	To learn about how to prepare an organic compound with multi step in laboratory
		33306P	SPECTRAL IDENTIFICATION OF ORGANIC COMPOUNDS	To learn about the spectral information of organic compounds by using UV, IR, NMR and MASS.
4	IV	43301	ORGANIC REACTION MECHANISM-II AND ORGANIC PHOTO CHEMISTRY	To learn about free radical reactions, rearrangements, quantitative relationships between molecular structure and chemical reactivity, methodologies in asymmetric synthesis, organic photo chemistry.
		43302	ORGANIC SPECTROSCOPY-II	To learn ORD, CD, Cotton effects 2D NMR spectroscopy, combined problems, separation techniques.
		43303	MODERN ORGANIC SYNTHESIS-II	To learn about organosilanes, oxidation, reduction and retrosynthetic analysis.
		43304	BIO ORGANIC CHEMISTRY	To learn concept of synthesis of biopolymers and enzymes, anti-malarials and antibiotics, vitamins and prostaglandins, nucleic acids.
		43305P	CHROMATOGRAPHIC SEPARATION AND ISOLATION AND IDENTIFICATION OF NATURAL PRODUCTS	To learn about distinguish between two compounds by TLC and identification of natural products.
		43306P	ESTIMATIONS IN CHROMATOGRAPHY	To learn about how to estimate the organic compounds and column chromatography.
		43307P	PROJECT WORK	To know about designing new experiments and carry out the experiments. To know about various characterization techniques used to characterize the synthesized compounds.