

**A.V.V.M. SRI PUSHPAM COLLEGE (AUTONOMOUS),
POONDI-613 503, THANJAVUR**



1.1.1 Curricula developed and implemented have relevance to the local, national, regional and global developmental needs which is reflected in Programme outcomes (POs), Programme Specific outcomes (PSOs) and Course Outcomes (COs) of the Programmes offered by the Institution

COURSE OUTCOMES

M.Sc., CHEMISTRY (2017 – 2018)

Semester	Category	Paper Code	Title of the Paper	Outcome
I	Core	17P1CHC1	Physical Chemistry – I	<ul style="list-style-type: none"> Students should be able to learn about the basics of group theory, symmetry of molecules, constructing a character table and its applications. Students should be able to understand about the mathematics of quantum chemistry and the concepts of Schrodinger equation. Students should be able to learn about the theories of reaction rates. Students should be able to know about the concepts and applications of reaction kinetic chemistry. Students should be able to identify about the principle and chemical reactions involved in photo chemistry.
	Core	17P1CHC2	Inorganic Chemistry – I	<ul style="list-style-type: none"> Students should be able to learn about the various concepts of acids and bases. Students should be able to understand about the fundamentals and instrumentation of nuclear chemistry. Students should be able to learn about the structures and properties of inorganic chains, rings, cages and clusters. Students should be able to learn about the structural aspects of solids. Students should be able to learn about the chemistry of inner transition elements and their applications.

	Core	17P1CHC3	Analytical chemistry	<ul style="list-style-type: none"> • Student should able to learn about the nature of errors in analyses and their types. • Student should able to know about the statistical methods in error analysis. • Student should able to understand about the basics basics of computer • Student should able to understand the principles, theory and applications of AAS and FES. • Student should able to learn about the various chromatographic techniques and their theory, instrumentation and applications.
	Core	17P1CHCP1	Physical Chemistry Practical - I (non Electrical)	<ul style="list-style-type: none"> • Understand the concept of surface forces in various liquids and the effect of reaction conditions on it.
	Major Elective-I	17P1CHEL1A 17P1CHEL1B	Medicinal Chemistry/ Bio Chemistry	<ul style="list-style-type: none"> • Students should able to learn about terminology, drugs and their mode of action • Students should able to understand about the function of Anticonvulsants, Muscle relaxants and analgesics • Students should able to know about the Antihistamines, Non- Steriodal Anti inflammatory Drugs (NSAID) and Antiparkinson agents. • Students should able to learn about the functions and mechanism of Anesthetics • Students should able to learn the treatments of Cancer, Diabetics and AIDS.
	Core	17P2CHC4	Organic Chemistry - I	<ul style="list-style-type: none"> • Understood nomenclature of cyclic compounds, synthesis and reactivity of heterocyclic compounds having more than one hetero atom, reactive intermediate, methods of determining reaction mechanism and stereochemistry, mastered aromaticity and well experience in synthetic utility of organic reagents.

II	Core	17P2CHC5	Physical Chemistry – II	<ul style="list-style-type: none"> On successful completion of this course students should have: Knowledge on molecular thermodynamics, Understood the rigid rotator, hydrogen atom problem, variation theorem, and perturbation theory, knew about the concepts, structure and theories of electrical double layer and learnt the basics of surface phenomena and theories of adsorption isotherms.
	Core	17P2CHC6	Physical Methods in Chemistry – I	<ul style="list-style-type: none"> Students should be able to learn about the basics of group theory, symmetry of molecules, constructing a character table and its applications. Students should be able to understand about the mathematics of quantum chemistry and the concepts of Schrodinger equation.
	Core	17P2CHC7	Polymer Chemistry	<ul style="list-style-type: none"> Indicate how the properties of polymeric materials can be exploited as a product designer.
	Core	17P2CHCP2	Physical Chemistry Practical-II (Electrical)	<ul style="list-style-type: none"> Prepare the solution of the desired concentration and volume. Plot accurate graph of the desired scale for the calculations.
	Major Elective-II	17P2CHEL2A 17P2CHEL2B	Paint Chemistry / Cheminformatics	<ul style="list-style-type: none"> Explains the paint content and the processes of paint production.
III	Core	17P3CHC8	Organic Chemistry – II	<ul style="list-style-type: none"> Students should be able to know the mechanistic pathways of aromatic and aliphatic nucleophilic substitution reactions Students should be able to understand the different kinds of electrophilic mechanisms in both aromatic and aliphatic compounds Students learnt about the addition to carbon-carbon multiple bonds

	Core	17P3CHC9	Physical Methods in Chemistry-II	<ul style="list-style-type: none"> • Knowledge on molecular thermodynamics, Understood the rigid rotator, hydrogen atom problem, variation theorem, and perturbation theory, knew about the concepts, structure and theories of electrical double layer and learnt the basics of surface phenomena and theories of adsorption isotherms
	Core	17P3CHC10	Industrial Chemistry	<ul style="list-style-type: none"> • Students should be able to learn about the industrial products like cement and glass, manufacturing processes and their uses in day to day life • Students could know about the techniques of studying battery and fuel cell and their uses • Students understood about the renewable and non-renewable energy. • Students should know the principles and process of refining petroleum. • Students have an exposure on the concept of dyes, pigments, paints, preparation and uses.
	Core	17P3CHCP3	Organic Practical – I	<ul style="list-style-type: none"> • Students shall understand the quantitative analysis in organic chemistry • Students shall know the estimation of organic compounds • Students shall learn the double stage organic preparations • Students shall know about the chromatographic techniques.
	Core	17P3CHCP4	Organic Practical – II	<ul style="list-style-type: none"> • Apply the organic synthetic strategies in multi step synthesis.
	EDC	17P3CHEDC	Chemistry in Every Day life	<ul style="list-style-type: none"> • Students should be able to learn about the cleaning agents and water chemistry. • Students should be able to understand about the food chemistry. • Students should be able to learn about the cosmetics. • Students should be able to know about the green chemistry.

				<ul style="list-style-type: none"> Students should be able to learn about the nano technology.
IV	Core	17P4CHC11	Inorganic Chemistry – III	<ul style="list-style-type: none"> Students should be able to know about the classifications, mechanisms and applications of various molecular rearrangements Students learnt about the structure elucidation of some natural products Students should be able to understand the theory and principles of IR, UV –Visible spectroscopy, ORD and its techniques. Students should be able to identify the structure of organic compounds using various spectroscopy
	Core	17P4CHCP5	Inorganic Practical – I	<ul style="list-style-type: none"> To know the qualitative analysis Colorimetric estimations
	Core	17P4CHCP6	Inorganic Practical – II	<ul style="list-style-type: none"> Estimations of mixture of solutions Preparations of inorganic complexes
	Major Elective-III	17P4CHEL3A/ 17P4CHEL3B	Recent Trends in Chemistry / Applied Chemistry	<ul style="list-style-type: none"> Students should be able to learn the fundamentals of Nano Chemistry. Students should be able to understand the applications of Nano Synthesis. Students should be able to know the basic concepts of Green Chemistry Students should be able to identify the applications of Green reagents Students should be able to learn about supra Molecular Chemistry theories and applications. <p>(OR)</p> <ul style="list-style-type: none"> Students should be able to learn about the concept of dyes, reactive dye and pretreatment . Students should be able to understand about the structure and uses of bio organic chemistry. Students should be able to know about the techniques of studying Sonochemistry and their uses. Students should be able to gain knowledge on drugs and

				their mode of action.
	CN	17P4HCN	Comprehensive Knowledge Test	<ul style="list-style-type: none"> • To better for the preparations of Competitive Exams in advance.
	Project	17P4CHPR	Project Industrial internship (Along with Industrial visit)	<ul style="list-style-type: none"> • Undertake problem identification, formulation and solution. • Demonstrate the knowledge, skills and attitudes.