

**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

B.Sc., CHEMISTRY (2017- 2018)

Semester	Category	Paper Code	Title of the Paper	Outcome
I	Part -I	17U1CHT1/H1	Tamil - I / Hindi - I	<ul style="list-style-type: none"> To know and get the awareness of recent tamil literature
	Part - II	17U1CHE1	English - I	<ul style="list-style-type: none"> To initiate the Students to understand English through Prose, Poetry and Basic Communicative Grammar.
	Core	17U1CHC1	General Chemistry - I	<ul style="list-style-type: none"> Students should able to understand the standardized names and symbols to represent atoms, molecules, ions and apply on chemical reactions. Students should able to explain the behavior and interactions between matter and energy at both the atomic and molecular levels. Students should able to understand the chemistry of alkanes. Students should become familiar with safe-handling of chemical and simple first aid procedures for accidents involving acids.
				17U1CHCP1
	Allied	17U1CHMAA1/ 17U1CHZOA1	Allied Mathematics -I Allied Zoology-I	<ul style="list-style-type: none"> To introduce the basic concepts of summation of series, theory of equations, special types of matrices, trigonometry and calculus. <p>(or)</p> <ul style="list-style-type: none"> To acquire a basic knowledge of animal diversity and organization. To study the general aspects of Invertebrates and Parasites. To study the general aspects of Chordata animals and their anatomy To learn the general principles.

		17U2CHMAA2/ 17U2CHZOAPL	Allied Mathematics -II (NS) Allied Zoology Practical (NS)	<ul style="list-style-type: none"> To introduce concepts of Hyperbolic function and correlation. To introduce the concepts of numerical solution of ordinary differential equation and 3 dimensional analytical geometry. (or) <ul style="list-style-type: none"> To know the Digestive system, Nervous system of Earthworm and Cockroach. To dissect and study the circulatory of Calotes.
	ES	17U1CHES	Environmental Studies	<ul style="list-style-type: none"> To get better awareness of Environmental Condition
	Part - I	17U2CHT2/H2	Tamil - II / Hindi - II	<ul style="list-style-type: none"> To know and get the knowledge of Literature of the middle ages.
	Part - II	17U2CHE2	English - II	<ul style="list-style-type: none"> To impart language and communicative skills through short stories, one act plays and communicative grammar
	Core	17U2CHC2	General Chemistry - II	<ul style="list-style-type: none"> Students should able to learn about properties of ionic compounds lattice energy, Born-Haber cycle and its applications. Students should able to understand the synthetic methodology and chemical modifications of alkenes, dienes and alkynes. Students should understand the possible chemical modification of Aromatic compounds. Students should able to learn accepted models to describe the reactions between gaseous systems and become aware of their physical properties.
		17U2CHCP2	Organic qualitative analysis and physical constants	<ul style="list-style-type: none"> Students learn the techniques of organic qualitative analysis. Students learn the determination of physical constants of organic compounds.

II	Allied	17U2CHMAA2/ 17U2CHZOAP	Allied Mathematics - II (NS) Allied Zoology-Practical (NS)	<ul style="list-style-type: none"> • To introduce concepts of Hyperbolic function and correlation. • To introduce the concepts of numerical solution of ordinary differential equation and 3 dimensional analytical geometry.
		17U2CHMAA3 17U2CHZOA2	Allied Mathematics - III Allied Zoology - II	<ul style="list-style-type: none"> • To study vector differentiation and vector integration with application. • To study ordinary Differential equation and partial differential equation • To study Fourier series and Laplace transforms. <p>(or)</p> <ul style="list-style-type: none"> • To acquire basic knowledge about the beneficial role of animals. • To study the various types cultures.
	VBE	17U2CHVE	Value Based Education	<ul style="list-style-type: none"> • To enhance the understanding of Human physical and mental health and the ability to maintain it well to the life and beyond.
	SBE	17U2CHS1	Skill Based Education I Textile Processing	<ul style="list-style-type: none"> • Students should able to learn about the main purpose of dyeing. • Students should able to understand about how fabrics are dyed in industry. • Students should able to know about the dyeing is the application of dyes or pigments on textile materials. • Students should able to know about dyes may require a mordant to improve the fastness of the dye on the fiber.
	Part -I	17U3CHT3/H3	Tamil - III / Hindi - III	<ul style="list-style-type: none"> • To understand the differences and importance of Epics ,Essays, History of Tamil literature
	Part - II	17U3CHE3	English - III	<ul style="list-style-type: none"> • To introduce the language of the world renowned dramatist and novelist to enhance the vocabulary and communicative skills of the learners.

III	Core	17U3CHC3	General Chemistry - III	<ul style="list-style-type: none"> • Students should be able to learn about basics and General characteristics of Group III -A, IV-A and V-A elements • Students should be able to learn about reducing and oxidizing properties of inorganic compounds • Students should learn about the formation of hydrides, halides and oxides, nitrogen, oxygen, halogen group family elements. • Students should be able to be aware of the fundamental aspects of Stereochemistry and its influence on chemical properties.
	Core	17U3CHC4	Agricultural Chemistry	<ul style="list-style-type: none"> • Students should be able to learn about basic introduction of soil and properties of soil. • Students should be able to understand about role of fertilizer in function of plants. • Students should learn about the manufacture of manure and handling the storage practice of compost methods. • Students should become aware of the fundamental aspects of insecticides, fungicides and herbicides.
	Allied	17U3CHPHA1	Allied Physics - I	<ul style="list-style-type: none"> • To understand the basic properties of materials. • To acquire the knowledge about acoustics.
	GS	17U1CHGS	Gender Studies	<ul style="list-style-type: none"> • To know the differences Understanding Gender to treat other genders with goodness
	Part -I	17U4CHT4/H4	Tamil - IV / Hindi - IV	<ul style="list-style-type: none"> • To know and get the knowledge of Classical, Sangam, Moral Literatures of Tamil language.
	Part - II	17U4CHE4	English - IV	<ul style="list-style-type: none"> • To prepare the learners for competitive examinations and to know the fundamentals of practical communication.

IV	Core	17U4CHC5	General Chemistry - IV	<ul style="list-style-type: none"> • Students should be able to learn about the chemical aspects of Metallurgy. • Students should be able to understand about the compounds of d block elements and f block elements. • Students should be able to understand about extraction of lanthanides and actinides. • Students should be able to know the chemical conversions and applications of alcohols and alkyl halides. • Students should be able to understand rate and mechanism of chemical reactions and theories of reaction rate and catalysis.
		17U4CHCP3	Inorganic Qualitative analysis practical (NS)	<ul style="list-style-type: none"> • Basic and advanced laboratory procedures used in inorganic synthesis including spectroscopic and analytical techniques.
	Allied	17U4CHPHA2	Allied Physics - II	<ul style="list-style-type: none"> • To introduce the concepts of Dynamics, Friction. • To introduce the knowledge about Relativity.
		17U4CHPHAPL	Allied Physics Practical (NS)	<ul style="list-style-type: none"> • Students acquire skills in doing experiments related to properties of matter and sound.
	SBE	17U4CHS2	Skill Based Education-II Practical on Textile Processing	<ul style="list-style-type: none"> • Students should be able to learn about the chemical aspects of Metallurgy. • Students should be able to understand about the compounds of d block elements and f block elements. • Students should be able to understand about extraction of lanthanides and actinides. • Students should be able to know the chemical conversions and applications of alcohols and alkyl halides. • Students should be able to understand rate and mechanism of chemical reactions and theories of reaction rate and catalysis.

V	Core	17U5CHC6	Organic Chemistry - I	<ul style="list-style-type: none"> • Student should able to learn about the comprehensive knowledge and understanding the reactions of carbonyl compounds and organic nitrogen compounds • Student should able to learn about the synthesis and reactions of Oxygen, Nitrogen and sulphur based heterocyclic compound. • Student should able to learn about the fundamentals of colours, dyes, polymers, soaps and detergents.
		17U5CHC7	Physical Chemistry - I	<ul style="list-style-type: none"> • Students should able to learn about chemical and physical states of various systems and their coexistence in equilibrium. • Students should able to understand the efficient way of converting work in to energy and vice versa from the thermodynamics perspective. • Students should identify the chemical aspects of metallic mixtures composition and properties through phase diagrams. • Students should able to learn about solutions, their types, colligative properties, effect of added salt and molecular weight determination.
		17U5CHC8	Inorganic Chemistry -I	<ul style="list-style-type: none"> • Students should able to learn about the concept of coordination compounds, their structural and theories of coordination compounds • Students should able to understand the bioactivity of proteins, enzymes, metals, vitamins, hemoglobin and myoglobin. • Students should able to learn about solids, their properties, close packing in crystals, and use of X-rays in crystal structure determination. • Students should able to understand about the organo metallic compounds, binary compounds, clathrates and structure of silicates.

		17U5CHCP4	Physical Chemistry Practical	<ul style="list-style-type: none"> • To understand and describe atoms and molecules.
	Major Elective-I	17U5CHEL1A 17U5CHEL1B	Pharmaceutical Chemistry Polymer Chemistry	<ul style="list-style-type: none"> • Student should able to learn about the terminology and important drugs and the mode of actions. • Student should understand about the application of disinfectants and antiseptics. • Student should identify the function of analgesic and antipyretics. • Student able to aware about the antibiotics. • Student get to know the estimation of sugar and hemoglobin. <p>(OR)</p> <ul style="list-style-type: none"> • Student should understand about the Polymers preparation, uses and their applications. • Student should learn about the Synthesis and Kinetics of polymerizations • Student should understand about the Characterization of polymers. • Student should identify about the Chemical Reaction Cyclization. • Student should understand about the Classification and molecular weight determination.

	Major Elective-II	17U5CHEL2A 17U5CHEL2B	Analytical Chemistry Bio Chemistry	<ul style="list-style-type: none"> • Students should be able to understand about the competence in collecting and interpreting data from their knowledge on analytical techniques. • Students should be able to learn about the techniques of gravimetric analysis. • Students should be able to understand about the thermo gravimetric analysis, differential thermal analysis and its applications. • Students should understand about chromatographic techniques such as TLC, GLC, HPLC and their applications in industries, research fields and in day to day life. <p>(OR)</p> <ul style="list-style-type: none"> • Student should be able to develop a sound knowledge of fundamental concepts in biochemistry. • Student should be able to enumerate the molecular motifs of a living cell, structural and functional hierarchy of biomolecules. • Student should be able to emphasize on the various aspects of metabolism and interrelationship of metabolic events.
	SSD	17U5CHSSD	Soft Skill Development	<ul style="list-style-type: none"> • Developing organizational behavior and employment skills to the employment organizations
	NME	17U5CHNME	Non - Major Elective Chemical aspects in Agriculture	<ul style="list-style-type: none"> • To get the basic knowledge and operational capacity for the understanding of the major functional and molecular processes in plants.

	Core	17U6CHC9	Organic Chemistry - II	<ul style="list-style-type: none"> • Students should be able to understand the knowledge of fundamental concepts of carbohydrates. • Students should be able to learn about the chemistry of amino acids, proteins, nucleic acids and vitamins. • Students should be able to get knowledge to elucidate the structure of alkaloids and terpenoids. • Students should be able to learn about the various molecular rearrangement reactions. • Students should be able to know the nucleic acids, enzymes and phenol.
	Core	17U6CHC10	Physical Chemistry -II	<ul style="list-style-type: none"> • Students should be able to learn about the basics of electrochemistry and practical use of electricity and their laws. • Students should be able to understand about the nature of electrolytes, their theories, concept of emf and its application. • Students should identify about the use of ultra violet spectroscopy and infrared spectroscopy. • Students should be able to know the steps in photo chemistry and the direct and indirect uses of photo chemistry.
	Core	17U6CHC11	Inorganic Chemistry - II	<ul style="list-style-type: none"> • Students should be able to learn about the fundamentals of nuclear chemistry. • Students should become aware of the chemistry of radioactive elements. • Students should be able to study about theories of acid and bases. • Students should be able to understand about glass and alloys preparation, uses and their applications. • Students should be able to identify about polymers, fibers, cements preparation, uses and their applications.

VI	Core Practical	17U6CHCP5	Gravimetric and Organic preparation practical	<ul style="list-style-type: none"> • 1. Students learn the techniques of gravimetric analysis. • 2. Students learn the methods of preparing organic compounds.
	Major Elective-III	17U6CHEL3A 17U6CHEL3B	Industrial Chemistry / Food Chemistry	<ul style="list-style-type: none"> • Students should able to identify side effects of cosmetics and perfumes. • Students should able to understand adverse effects of pesticides. • Students should able to learn about production of organic material from fermentation Industries. • Students should able to understand the process of pulp, paper industries and rubber industries. <p>(OR)</p> <ul style="list-style-type: none"> • Students should able to learn about the importance of food and nutrition. • Students should able to know about the chemical composition and importance of balanced diet. • Students should able to identify the food adulterants and identification of them.

	Major Elective-IV	17U6CHEL4A 17U6CHEL4B	Dye Chemistry / Clinical Chemistry	<ul style="list-style-type: none"> • Students should able to learn about the main purpose of dyeing and how fabrics are dyed in industry. • Students should able to understand the dyeing is the application of pigments on textile materials. • Students should able to know about dyes may require a mordant to improve the fastness of the dye on the fiber. • Students should able to learn that pretreatment is a heart of processing of textile. Ameplding the soil recalamation of Acid soil liming Agents. Recalamation of. <p>(OR)</p> <ul style="list-style-type: none"> • Students should able to learn about the application of disinfectants and antiseptics. • Students should able to know about the importance of drugs and the mode of actions. • Students should able to learn about Enzymes, Body fluids and Biotechnology.
	GK	17U6CHGK	General Knowledge	<ul style="list-style-type: none"> • To make awareness of GK in Competitive World.
	CN	17U6CHCN	Comprehensive Test	<ul style="list-style-type: none"> • To better for the preparations of Competitive Exams in advance.