

B. Sc. Chemistry

PROGRAMME OUTCOMES (PO)

PO1: Provide platforms to learn Physics, Chemistry and Mathematics theories, concepts and practical skills with appropriate knowledge.

PO2: Assimilate the knowledge on understanding the nature and ability to link the facts to observe and discover scientific laws.

PO3: Create new skills and tools to obtain possible solutions in comprehension of the physical science problems incorporating mathematical modelling and theories.

PO4: Enhancement of critical thinking, problem solving skills, digitally efficient and making effective working professionals to suit for science, technical and research field.

PO5: Making best suitable personalities to serve for nation and society with ethical awareness and reasoning ability.

PROGRAMME SPECIFIC OUTCOMES (PSO)

After graduating, the students will be able to

PSO1: Possess theoretical and practical knowledge in various areas of Chemistry.

PSO2: Hold analytical thinking and problem solving capacity.

PSO3: Become academically and professionally skilled personalities to undergo higher studies and procure job in reputed Institutions and Industries respectively.

PSO4: Become worthy entrepreneurs.

PSO5: Develop the confidence and competitive skills and transform into a holistic citizen.

COURSE OUTCOMES

After learning the course, the students will be able to

CO1	Have a sound knowledge on the basic mathematical concepts.	K1
CO2	Name the compounds according to IUPAC system of nomenclature.	K1&K2
CO3	Know about the various polar effects on molecules.	K2
CO4	Gain awareness in safe handling of glassware & chemicals and laboratory hygiene.	K1
CO5	Apply the skills of qualitative and quantitative analysis.	K3

K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze

	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	M	S	S	L	M	S	L	L	L
CO2	L	L	L	M	S	S	L	M	L	S
CO3	M	S	S	M	S	S	S	S	M	S
CO4	S	L	L	L	M	S	L	S	S	M
CO5	S	S	M	S	M	S	S	S	S	M

S – Strong; M – Medium; L – Low

COURSE OUTCOMES

After learning the course, the students will be able to

CO1	Understand the basic concepts of atomic structure.	K2
CO2	Understand about the periodic table and periodic properties of elements.	K1&K2
CO3	Analyse the nature of bonding in inorganic compounds.	K4
CO4	Know the significances of hydrogen bonding.	K3
CO5	Apply the knowledge on chemistry of alkanes and cycloalkanes.	K3

K1 - Remember; K2 - Understand; K3 - Apply; K4 – Analyze

	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	M	S	L	L	S	M	L	L	M
CO2	S	M	S	L	L	S	M	M	L	M
CO3	S	S	S	M	L	S	S	M	L	M
CO4	S	S	S	M	L	S	M	S	L	M
CO5	M	S	M	S	L	S	S	S	L	M

S – Strong; M – Medium; L – Low

Course Outcomes (CO)

CO1	Knowing the relation between the coefficients and the roots of an algebraic equation.	K1 & K2
CO2	Understanding the characteristic equation for finding eigenvalues and eigenvectors.	K2
CO3	Knowing the expansion of trigonometric functions and hyperbolic functions.	K2
CO4	Applying finite difference methods for interpolation.	K3 & K4

K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze

	PO1	PO2	PO3	PO4	PO5		PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	M	S	M	M		M	S	S	M	S
CO2	M	S	S	S	M		M	S	M	M	S
CO3	S	S	S	S	M		M	S	M	L	M
CO4	S	M	S	M	M		M	M	M	M	S

S – Strong; M – Medium; L - Low

COURSE OUTCOMES

After learning the course, the students will be able to

CO1	Know about the nature of waves and filling of electrons in various orbitals.	K1 & K2
CO2	Perceive the properties and applications of s-block elements.	K1 & K2
CO3	Apply the knowledge on chemistry of alkadiene and alkyne compounds.	K3
CO4	Realize the properties and mechanisms of alkyl halides.	K3 & K4
CO5	Analyze the mechanisms of aromatic electrophilic substitution reactions.	K4

K1 - Remember; K2 - Understand; K3 - Apply; K4 – Analyze

	PO1	PO2	PO3	PO4	PO5		PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	M	M		S	M	L	L	M
CO2	S	M	M	M	L		S	M	M	L	M
CO3	S	S	M	S	L		S	S	M	L	M
CO4	S	S	S	M	L		S	M	M	L	M
CO5	S	S	M	S	L		S	S	S	L	M

S – Strong; M – Medium; L – Low

COURSE OUTCOMES

After learning the course, the students will be able to

CO1	Know about the crystal structures and arrangements of ionic compounds.	K1
CO2	Hold the applications of solutions and colloids.	K1 & K3
CO3	Solve problems on gas laws.	K3 & K4
CO4	Apply the chemistry of ethers and epoxides.	K3
CO5	Analyze the compounds formed by p-block elements.	K4

K1 - Remember; K2 - Understand; K3 - Apply; K4 – Analyze

	PO1	PO2	PO3	PO4	PO5		PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	M	L		S	S	M	L	L
CO2	S	S	S	M	L		S	S	S	M	M
CO3	S	S	S	S	M		S	S	S	L	M
CO4	S	S	S	S	M		S	S	S	M	M
CO5	S	S	M	S	L		S	S	S	M	M

S – Strong; M – Medium; L – Low

Course Title : Allied 1: Mathematics – II

Course Code : 20UCH2AL2

Course Outcomes (CO)

CO1	Remembering the formulas in differentiation and integration.	K1
CO2	Illustrating the Fourier co-efficient for periodic functions.	K1&K2
CO3	Knowing different integrals of partial differential equations.	K2
CO4	Analyzing the differential operator for finding gradient, divergence and curl	K3&K4

K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze

	PO1	PO2	PO3	PO4	PO5		PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	L	S	S	S		S	M	M	L	S
CO2	S	M	S	S	M		M	M	M	M	M
CO3	S	M	S	S	M		S	S	S	M	M
CO4	S	M	S	S	M		M	M	L	M	M

S – Strong; M – Medium; L - Low

**Course Title : Core Practical-1
Inorganic Qualitative Analysis**

Course Code : 20UCH2CP1

COURSE OUTCOMES

After learning the course, the students will be able to

CO1	Identify the anions and cations in a mixture.	K1,K2,K3&K4
CO2	Diagnose and eliminate the interfering anions.	K1,K2,K3&K4
CO3	Synthesise inorganic complexes.	K1,K2,K3&K4

K1 - Remember; K2 - Understand; K3 - Apply; K4 – Analyze

	PO1	PO2	PO3	PO4	PO5		PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S		S	S	S	S	S
CO2	S	S	S	S	S		S	S	S	S	S
CO3	S	S	S	S	S		S	S	S	S	S

S – Strong; M – Medium; L – Low

COURSE OUTCOMES

After learning the course, the students will be able to

CO1	Analyse the given solution quantitatively by volumetric analysis.	K1&K4
CO2	Know the chemistry of p-block elements.	K1&K2
CO3	Fetch employability in the field of metallurgy.	K3&K4
CO4	Perceive knowledge on the trends in properties and reactivity of d-block elements and chemistry of its compounds.	K2
CO5	Apply the chemistry of alcohols and thiols in various fields.	K3

K1 - Remember; K2 - Understand; K3 - Apply; K4 – Analyze

	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	M	L	S	S	S	L	M
CO3	S	S	S	S	S	S	S	S	M	M
CO4	S	S	S	S	M	S	S	S	M	M
CO5	S	S	S	S	M	S	S	S	M	M

S – Strong; M – Medium; L Low

Course Title Allied Physics – I

Course Code 20UCH3AL3

COURSE OUTCOMES (CO)

By the end of the course, the students will be able to

CO1	acquire knowledge on gravitation, thermodynamics, relativity, optics and electricity and magnetism	K1
CO2	understand various laws of thermodynamics, working of thermal devices, liquefaction of gases and superconductivity	K2
CO3	know the importance of special and general theory of relativity	K1,K2
CO4	calculate the wavelength of light, specific rotation and angular width	K3, K4
CO5	handle the sensitive galvanometers and magnetometers	K3

K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze;

	PSO1	PSO2	PSO3	PSO4	PSO5	PO1	PO2	PO3	PO4	PO5
CO1	S	S	M	S	M	S	S	M	M	M
CO2	M	S	S	M	M	M	S	M	M	M
CO3	S	S	M	S	L	S	S	S	S	M
CO4	M	M	S	S	M	S	M	S	S	S
CO5	M	M	M	S	M	M	S	S	M	S

COURSE OUTCOMES (CO)

By the end of the course, the students will be able to

CO1	Understand the basic theories of advanced research instrumentation techniques.	K2
CO2	Identify Raman and NMR Spectra.	K1
CO3	distinguish Fluorescence and Phosphorescence	K2
CO4	Classify various types of spectrophotometers	K3
CO5	Gain the knowledge of spectrophotometers	K2

K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze;

	PSO1	PSO2	PSO3	PSO4	PSO5		PO1	PO2	PO3	PO4	PO5
CO1	S	S	S	S	S		S	S	S	S	S
CO2	S	S	S	S	M		S	S	S	M	M
CO3	S	S	S	S	M		S	M	M	S	M
CO4	S	S	S	S	M		S	S	S	S	M
CO5	S	S	S	S	S		S	S	S	S	S

S - Strong; M - Medium; L - Low

Course Title : **Core-6: Physical, Organic and Analytical Chemistry**

Course Code : **20UCH4C06**

COURSE OUTCOMES

After learning the course, the students will be able to

CO1	Earn employability in industries using the principles and applications of gravimetric analysis.	K3&K4
CO2	Solve problems in the field of thermodynamics.	K3&K4
CO3	Equip with the significance of thermochemistry.	K2
CO4	Know the concepts of chemical equilibrium.	K1
CO5	Analyse the chemistry of phenols.	K4

K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze

	PO1	PO2	PO3	PO4	PO5		PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S		S	S	S	S	S
CO2	S	S	S	S	L		S	S	S	M	S
CO3	S	S	S	S	S		S	S	S	M	M
CO4	S	S	S	M	M		S	S	S	L	M
CO5	S	S	S	S	M		S	S	S	M	M

S - Strong; M - Medium; L - Low

Course Title Allied Physics - II

Course Code

20UCH4AL4

COURSE OUTCOMES (CO)

By the end of the course, the students will be able to

CO1	acquaint with different atomic models	K1
CO2	elucidate various theories, models, energy, expression associated with nucleus and nuclear forces	K2
CO3	explain the principle of quantum physics and behavior of matter waves	K2,K3
CO4	comprehend the working of various modes of transistors and simple circuits	K1, k2
CO5	Work with the basic digital circuits using logic gates and design logic circuits by employing Boolean algebra and Karnaugh maps	K3, k4

K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze;

	PSO1	PSO2	PSO3	PSO4	PSO5		PO1	PO2	PO3	PO4	PO5
CO1	S	M	S	S	S		S	S	M	S	M
CO2	S	M	M	S	M		S	S	M	M	M
CO3	S	M	S	S	M		S	M	M	M	M
CO4	S	S	M	S	M		S	M	M	S	M
CO5	S	S	S	S	S		S	M	S	S	M

S - Strong; M - Medium; L - Low

Course Title Allied Physics Practical

Course Code 20UCH4AP1

COURSE OUTCOMES (CO)

At the end of the course, the students will be able to

CO1	calibrate the voltmeter and ammeter to know the sensitivity of the device.	K3
CO2	obtain the refractive Index of different transparent materials.	K3
CO3	verify the output characteristics of certain analog electronic devices and check some of its applications.	K3,K4
CO4	construct the circuit and verifying the truth tables of basic logic gates.	K3,K4
CO5	handle instruments independently and measure precisely.	K2,K3

K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze;

MAPPING

	PSO1	PSO2	PSO3	PSO4	PSO5		PO1	PO2	PO3	PO4	PO5
CO1	S	S	M	S	M		S	M	S	S	S
CO2	M	S	S	S	M		M	M	S	S	S
CO3	M	S	M	S	S		S	M	S	S	S
CO4	S	S	M	S	S		M	S	S	S	S
CO5	S	S	M	S	S		M	S	S	S	S

S - Strong; M - Medium; L - Low

Course Title : Core Practical -2: Volumetric and Organic Qualitative Analysis

Course Code : 20UCH4CP2

COURSE OUTCOMES

After learning the course, the students will be able to

CO1	Enhance their skills in volumetric analysis.	K1,K2,K3&K4
CO2	Perform organic qualitative analysis.	K1,K2,K3&K4
CO3	Prepare and produce fine crystals of organic compounds.	K1,K2,K3&K4

K1 - Remember; K2 - Understand; K3 - Apply; K4 – Analyze

	PO1	PO2	PO3	PO4	PO5		PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S		S	S	S	S	S
CO2	S	S	S	S	S		S	S	S	S	S
CO3	S	S	S	S	S		S	S	S	S	S

S – Strong; M – Medium; L – Low

Course Title : Core-7: Coordination Chemistry

Course Code : 20UCH5C07

COURSE OUTCOMES

After learning the course, the students will be able to

CO1	Gain the basics of coordination compounds.	K1
CO2	Solve problems in theories of coordination chemistry.	K2&K3
CO3	Know the applications of coordination complexes.	K3
CO4	Popularize with the fundamentals of organometallic chemistry and chemistry of metal-carbonyls.	K1
CO5	Acquaint the importance and role of metal ions in biological systems.	K3

K1 - Remember; K2 - Understand; K3 - Apply; K4 – Analyze

	PO1	PO2	PO3	PO4	PO5		PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	M	L		S	S	S	L	M
CO2	S	S	S	S	L		S	S	S	L	M
CO3	S	S	S	L	L		S	S	S	L	M
CO4	S	S	S	L	L		S	S	S	L	M
CO5	S	S	S	S	M		S	S	S	M	M

S – Strong; M – Medium; L – Low

Course Title : Core-8: Organic Chemistry
Year : III
Hours/Week : 5

Course Code : 20UCH5C08
Semester : V
Credit : 5

COURSE OUTCOMES

After learning the course, the students will be able to

CO1	Know the chemistry of phenols and aromatic acid derivatives.	K1
CO2	Analyse the mechanisms of organic reactions.	K3&K4
CO3	Compare the reactivity and basicity of aliphatic and aromatic amines.	K4
CO4	Realise the significance of heterocyclic compounds and natural products.	K2
CO5	To enhance the knowledge on the applications of molecular rearrangement reactions.	K2

K1 - Remember; K2 - Understand; K3 - Apply; K4 – Analyze

	PO1	PO2	PO3	PO4	PO5		PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	M	L		S	S	S	L	M
CO2	S	S	S	S	L		S	S	S	L	M
CO3	S	S	S	M	L		S	S	S	M	M
CO4	S	S	S	S	S		S	S	S	S	S
CO5	S	S	S	S	M		S	S	S	M	M

S – Strong; M – Medium; L – Low

Course Title : Core-9: Electrochemistry
Year : III
Hours/Week : 5

Course Code : 20UCH5C09
Semester : V
Credit : 5

COURSE OUTCOMES

After learning the course, the students will be able to

CO1	Have knowledge on electrolytes.	K1
CO2	Understand the significance of pH and buffer solutions.	K2
CO3	Fetch ideas on EMF.	K1&K2
CO4	Acquire skills on potentiometry.	K2
CO5	Progress in the area of electrochemistry.	K2

K1 - Remember; K2 - Understand; K3 - Apply; K4 – Analyze

	PO1	PO2	PO3	PO4	PO5		PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	M	L		S	S	S	L	M
CO2	S	S	S	M	L		S	S	S	L	M
CO3	S	S	S	M	L		S	S	S	L	M
CO4	S	S	S	S	S		S	S	S	M	S
CO5	S	S	S	S	M		S	S	S	M	M

S – Strong; M – Medium; L – Low

Course Title : Core-10: Spectroscopy

Course Code : 20UCH5C10

COURSE OUTCOMES

After learning the course, the students will be able to

CO1	Know the fundamental concepts of electromagnetic spectrum.	K1
CO2	Analyse the compounds through IR spectroscopy.	K3&K4
CO3	Characterise the compounds using electronic spectroscopy.	K3&K4
CO4	Have knowledge on NMR spectroscopy.	K3&K4
CO5	Recognise the significance of Mass spectrometry.	K3&K4

K1 - Remember; K2 - Understand; K3 - Apply; K4 – Analyze

	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	M	L	S	S	S	L	M
CO2	S	S	S	M	L	S	S	S	L	M
CO3	S	S	S	M	L	S	S	S	L	M
CO4	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	M	S	S	S	M	M

S – Strong; M – Medium; L – Low

Course Title : Core-11: Conceptual Aspects of Chemistry

Course Code : 20UCH5C11

COURSE OUTCOMES

After learning the course, the students will be able to

CO1	Take competitive examinations easily	K1,K2,K3&K4
CO2	Have problem solving competency	K1,K2,K3&K4

K1 - Remember; K2 - Understand; K3 - Apply; K4 – Analyze

	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S

S – Strong; M – Medium; L – Low

Course Title : **Elective Practical - 1:
Industrial Chemical Analysis**

Course Code : **20UCH5EP1**

COURSE OUTCOMES

After learning the course, the students will be able to

CO1	Have necessary skills required in water analysis.	K1,K2,K3&K4
CO2	Fetch employability.	K1,K2,K3&K4

K1 - Remember; K2 - Understand; K3 - Apply; K4 – Analyze

	PO1	PO2	PO3	PO4	PO5		PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S		S	S	S	S	S
CO2	S	S	S	S	S		S	S	S	S	S

S – Strong; M – Medium; L – Low

Course Title : **Core-12: Inorganic Chemistry**

Course Code : **20UCH6C12**

COURSE OUTCOMES

After learning the course, the students will be able to

CO1	Calculate the oxidation number of elements in various compounds.	K1&K2
CO2	Acquire knowledge on chemistry of noble gases and inter-halogen compounds.	K1&K2
CO3	Analyse the concepts of acid-base theory.	K3&K4
CO4	Have awareness on nuclear reactions.	K1&K2
CO5	Know the chemistry of f-block elements.	K1&K2

K1 - Remember; K2 - Understand; K3 - Apply; K4 – Analyze

	PO1	PO2	PO3	PO4	PO5		PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	M	L		S	S	S	L	M
CO2	S	S	S	M	L		S	S	S	L	M
CO3	S	S	S	M	L		S	S	S	L	M
CO4	S	S	S	S	S		S	S	S	S	S
CO5	S	S	S	M	L		S	S	S	M	M

S – Strong; M – Medium; L – Low

COURSE OUTCOMES

After learning the course, the students will be able to

CO1	Gain comprehensive knowledge on optical and geometrical isomerism.	K1&K2
CO2	Know about various conformations of organic molecules.	K2
CO3	Have awareness on free radicals and their reactions.	K1&K2
CO4	Familiarise with addition reactions of alkenes.	K1&K2
CO5	Understand the significance of biomolecules.	K3

K1 - Remember; K2 - Understand; K3 - Apply; K4 – Analyze

	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	M	L	S	S	S	L	M
CO2	S	S	S	M	L	S	S	S	L	M
CO3	S	S	S	M	L	S	S	S	L	M
CO4	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	S	S	S	S	S	S

S – Strong; M – Medium; L – Low

COURSE OUTCOMES

After learning the course, the students will be able to

CO1	Apply the phase rule to various systems.	K1,K2&K3
CO2	Solve problems on chemical kinetics.	K3
CO3	Apply the concept of catalysis in various industries.	K3&K4
CO4	Have knowledge on surface chemistry.	K1&K2
CO5	Acquire basic knowledge on photochemistry and group theory.	K1&K2

K1 - Remember; K2 - Understand; K3 - Apply; K4 – Analyze

	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	L	S	S	S	L	M
CO2	S	S	S	S	L	S	S	S	L	M
CO3	S	S	S	S	S	S	S	S	M	M
CO4	S	S	S	M	L	S	S	S	L	M
CO5	S	S	S	M	L	S	S	S	L	M

S – Strong; M – Medium; L – Low

Course Title : **Core - 15: Conceptual Aspects of Practical Chemistry**

Course Code : **20UCH6C15**

COURSE OUTCOMES

After learning the course, the students will be able to

CO1	Take competitive examinations easily	K1,K2,K3&K4
CO2	Have problem solving competency	K1,K2,K3&K4

K1 - Remember; K2 - Understand; K3 - Apply; K4 – Analyze

	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S

S – Strong; M – Medium; L – Low

Course Title : **Core Practical -3: Gravimetric and Physical Chemistry Experiments**

Course Code : **20UCH6CP3**

COURSE OUTCOMES

After learning the course, the students will be able to

CO1	Analyze the substance gravimetrically.	K1,K2,K3&K4
CO2	Work on physical chemistry experiments.	K1,K2,K3&K4
CO3	Determine polarity of organic compounds.	K1,K2,K3&K4

K1 - Remember; K2 - Understand; K3 - Apply; K4 – Analyze

	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S
CO3	S	S	S	S	S	S	S	S	S	S

S – Strong;M – Medium;L – Low

Course Title : **Elective Practical - 2: Application Oriented Practical**

Course Code : **20UCH6EP2**

COURSE OUTCOMES

After learning the course, the students will be able to

CO1	Acquire necessary skills required in industrial chemical analysis.	K1,K2,K3&K4
CO2	Get employability in various industries and become entrepreneur.	K1,K2,K3&K4

K1 - Remember; K2 - Understand; K3 - Apply; K4 – Analyze

	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S

S – Strong; M – Medium; L – Low

Course Title : Modular Course: Chemistry for Entrepreneurship

Course Code : 20UCH6MC1

COURSE OUTCOME

After learning the course, the students will be able to

CO1	Become entrepreneur.	K1,K2,K3&K4
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K1 - Remember; K2 - Understand; K3 - Apply; K4 – Analyze

	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S

S – Strong; M – Medium; L – Low

LIST OF ELECTIVE COURSES – GROUP I

Course Title : Elective : Industrial Chemistry

Course Code : 20UCH5EA1

COURSE OUTCOMES

After learning the course, the students will be able to

CO1	Fetch employability in various chemicals industries.	K1,K2,K3&K4
CO2	Have awareness on the chemistry behind various industries.	K1,K2,K3&K4

K1 - Remember; K2 - Understand; K3 - Apply; K4 – Analyze

	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S

S – Strong;M – Medium;L – Low

Course Title : Elective : Environmental Chemistry

Course Code : 20UCH5EB1

COURSE OUTCOMES

After learning the course, the students will be able to

CO1	Have awareness on the environment pollution	K1,K2,K3&K4
CO2	Know the chemistry in environment	K1,K2,K3&K4

K1 - Remember; K2 - Understand; K3 - Apply; K4 – Analyze

	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S	S	S	S	S	S
CO2	S	S	S	S	S	S	S	S	S	S

S – Strong; M – Medium; L – Low

Course Title : Elective: Polymer Chemistry Course Code : 20UCH5EC1

COURSE OUTCOMES

After learning the course, the students will be able to

CO1	Know the mechanism of polymer formation.	K1,K2,K3&K4
CO2	Become entrepreneurs.	K1,K2,K3&K4

K1 - Remember; K2 - Understand; K3 - Apply; K4 – Analyze

	PO1	PO2	PO3	PO4	PO5		PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S		S	S	S	S	S
CO2	S	S	S	S	S		S	S	S	S	S

S – Strong; M – Medium; L – Low

Course Title : Elective: Dye Chemistry

Course Code : 20UCH6EA2

COURSE OUTCOMES

After learning the course, the students will be able to

CO1	Have knowledge on chemistry behind dyeing.	K1,K2,K3&K4
CO2	Get job in dyeing industries.	K1,K2,K3&K4

K1 - Remember; K2 - Understand; K3 - Apply; K4 – Analyze

	PO1	PO2	PO3	PO4	PO5		PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S		S	S	S	S	S
CO2	S	S	S	S	S		S	S	S	S	S

S – Strong; M – Medium; L – Low

Course Title : Elective: Biochemistry

Course Code : 20UCH6EB2

COURSE OUTCOMES

After learning the course, the students will be able to

CO1	Learn the basic concepts of biochemistry	K1,K2,K3&K4
CO2	Seek employability biochemical laboratories	K1,K2,K3&K4

K1 - Remember; K2 - Understand; K3 - Apply; K4 – Analyze

	PO1	PO2	PO3	PO4	PO5		PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S		S	S	S	S	S
CO2	S	S	S	S	S		S	S	S	S	S

S – Strong; M – Medium; L – Low

Course Title : Elective: Introduction to Nanochemistry & Applications

Course Code : 20UCH6EC2

COURSE OUTCOMES

After learning the course, the students will be able to

CO1	Have awareness on nanoscience.	K1,K2,K3&K4
CO2	Know the applications of Nanomaterials and develop new nanomaterials.	K1,K2,K3&K4

K1 - Remember; K2 - Understand; K3 - Apply; K4 – Analyze

	PO1	PO2	PO3	PO4	PO5		PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S	S	S	S	S		S	S	S	S	S
CO2	S	S	S	S	S		S	S	S	S	S

S – Strong; M – Medium; L – Low



[Signature]
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