



OFFICE, PRINCIPAL GOVERNMENT TULSI COLLEGE, ANUPPUR

Affiliated to Awadhesh Pratap Singh University Rewa (MP)

Registered Under Section 2 (F) & 12 (B) of UGC Act

E-mail: hegtdcano@mp.gov.in



9893076404

B.Sc. Chemistry Program Out - Come

DEPARTMENT OF CHEMISTRY:

The Outcomes of UG Course, B. Sc. in Chemistry

At the completion of B. Sc. in Chemistry the students are able to:

- Provide a broad foundation in chemistry that stresses scientific reasoning and Analytical problem solving with a molecular perspective .
- Achieve the skills required to succeed in graduate school, the chemical industry and professional school.
- Get exposures of a breadth of experimental techniques using modern instrumentation?
- Understand the importance of the Periodic Table of the Elements, how it came to be, and its role in organizing chemical information
- Understand the interdisciplinary nature of chemistry and to integrate knowledge of mathematics, physics and other disciplines to a wide variety of chemical problems
- Learn the laboratory skills edged to design, safely and interpret chemical research
- Acquire a foundation of chemistry of sufficient breadth and the depth to enable them to understand and critically interpret the primary chemical literature
- Develop the ability to communicate scientific information and research results in written and oral formats.
- Learn professionalism, including the ability to work in teams and apply basic ethical principles

DEPARTMENT OF CHEMISTRY:

The Outcomes aLPG Course, M. Sc. in Chemistry

At the completion of M. Sc. in Chemistry the students are able to:

- Demonstrate and apply the fundamental knowledge of the basic principles in various fields of Chemistry
- Create awareness and sense of responsibilities towards environment and apply knowledge to solve the issues related to Environmental pollution
- Apply various aspects of chemistry in natural products isolations, pharmaceuticals, dyes, textiles, polymers, petroleum products, forensic etc, and also to develop Interdisciplinary approach of the subject •
- Collaborate effectively on team-oriented projects in the field of Chemistry or other related fields.
- Communicate scientific information in a clear and concise manner both orally and Writing
- Inculcate logical thinking to address a problem and become result oriented with a positive attitude
- Explain environmental pollution issues and the remedies thereof
- Apply the knowledge to develop the sustainable and eco-friendly technology in Industrial Chemistry
- Have developed their critical reasoning, judgment and communication skills
- Augment the recent developments in the field of green and eco-friendly reactions. pharmaceutical, Bioinorganic Chemistry and relevant fields of research and development.
- Enhance the scientific temper among the students so as to develop a research culture and implementation of the policies to tackle the burning issues at global and local level.

Dr. Brijendra Singh
Deptt. Of Chemistry

Govt. Tulsi College, Anuppur

Principal
Govt Tulsi College,
Anuppur (M.P.)



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GOVT. TULSI COLLEGE ANUPPUR (M.P.)

Program/ Program Outcome

Program	Program Outcome
Under Graduate Program in B.Sc. chemistry	<ul style="list-style-type: none">- To understand ancient Indian chemical techniques- To understand the basic facts and concepts in Chemistry.- To understand the importance of Chemistry in daily life.- To skill-up-for basic analytical tools.- To skill-up for various Laboratory techniques.- To develop the basic concept of pharmaceutical Chemistry and their application in daily life.- To make efficient for various Spectrometric Analysis.

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Curriculum / Course outcome

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Course Code	Course Name	Course Outcome		
		Knowledge gained	Skill Gained	Competency developed
S-I-CHEM 1 Year -116 -085	B.Sc. Open Maths MINDS	<p>By the end of this course students will learn the following aspects of Chemistry</p> <ol style="list-style-type: none"> 1- Ancient Indian Chemical techniques 2- Various theories and principles applied to reveal atomic structure 3- Theories related to chemical bonding 4- Acid-base concept pH buffer solution. 5. Spectral technique of analysis. <p>• Appreciate use of buffer solution.</p>	<ol style="list-style-type: none"> 1. How were metals extracted in ancient Indian. 2. To know structure of atom. 3. How to form molecule 4. Learn about the role of buffer solution in chemical reactions in biological system. 5. To learn about the molecular structure by the spectroscopy. 	<p>• Development Knowledge of metallurgy.</p>

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
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Course (Semset ert/ year)	Subject	Unit/Topic	Course/syllabus			
			Environmental Sustainability	Social/Human Values	Professional Ethics	Moral Value
B.Sc. II nd YEAR CBCS C-116 C-085	CHEMISTRY Major Minor open.	1. Chemical Technique SA & DA Contribution of Indian scientist. 2. Atomic Structure - model. limitation light electromagnetic spectrum Hydrogen, Wave 3. Periodic Table - nuclear Effective charge Slater Rules, Radius van der Waals radius enthalpy 4. Acid-Base Concept Bronsted and Lowry concept Lewis concept Acid base 5. Fundamental of organic chemistry Hyper conjugation stereochemistry of organic compounds. 6. Chemical kinetics Rate of reaction, Rate law, constant and Rate of Reaction	Thermodynamics	Ancient Chemistry.		


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
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Course (Semset ert/ year)	Subject	Unit/Topic	Course/syllabus			
			Environmental Sustainability	Social/Human Values	Professional Ethics	Moral Value
B.Sc. III YEAR C-116 C-085	CHEMISTRY I- Paper-I Physical Chemistry	<ul style="list-style-type: none"> Elementary Quantum Chemistry Photochemistry effect. de-broglie hypothesis, Hamiltonian-operator, Schrodinger wave equation particle in dimensional box. Molecular orbital theory II. Spectroscopy Rotational spectrum Vibrational spectrum III. Raman spectrum Electrical Spectrum UV-spectroscopy IV. Photochemistry Jablonski diagram. V. Physical properties and molecular structure optical activity dipole moment magnetic properties. 		structure determination		


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
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			Environmental Sustainability	Social/Human Values	Professional Ethics	Moral Value
B.Sc III Year	Chemistry organic Chemistry	I. Spectroscopy Nuclear magnetic Resonance spectroscopy Proton magnetiz Resonance (¹ H NMR) spectroscopy. • organo-metallic Compounds, organomagnesium Compounds. Grignard Reagent, preparation structure and chemical reaction. • organo-sulphur Compounds • Carbohydrates Monosaccharides. Mechanism of osazone formation inter Conversion. • Amino Acids-pptide and Nucleic acids, synthesis, solid phase • Synthetic dyes- colour and Constitution. (electronic Concept) • Pericyclic Reaction Woodward Hoffmann Rules, electrocyclic reaction.	occurens in Environment	lab. work	Practical	


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Curriculum /Course outcome

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Course Code	Course Name	Course Outcome	
		Knowledge gained	Skill Gained
C-116 C-085 M/B	B.Sc.	<ul style="list-style-type: none"> Basic Concept of Thermodynamics To learn the thermodynamics term system surrounding. energy heat To know about the State function relation between C_p and C_v 	<ul style="list-style-type: none"> Able to understand the chemical system from thermodynamic point of view.
		<ul style="list-style-type: none"> To learn phase rule and its application. Theories of Conductance. Migration of ions Theory of Strong electrolytes. Electrolyte & Galvanic Cell. Adsorption and catalyst. Characteristics Proper 	<ul style="list-style-type: none"> Idea about the electrochemical cell How to catalyst work

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