

## Govt. College Bhanpuri Dist-Bastar (C.G.)

Programme Outcome : Arts

After Completing Bachelor Programme in Arts, an Student will be able to develop:

1. Critical Thinking: Ability to identify, construct and evaluate arguments, ability to engage in reflective and independent thinking, integrates diverse sources of knowledge in solving problems.
2. Communication Skills: Develop oral and written skill for effective communication, active participation in group activities will improve active learning skills and expressive skills and self confidence.
3. Social adoptability skill: ability to communicate and share our thoughts & feeling with others, develop social interactions and become socially responsible individual (human being).
4. Ideal citizen: respect the value, Principle ethics and contribute to society and community engage in civic responsibility and participate in civic life through volunteering.
5. Ethical value : Inculcate ethical, moral and human values.
6. Environmental Awareness: Border Understands of the local, national and global environment issues.
7. Employability : Preparing students for job prospect in organized sector.



*Shanil*  
Principal  
Govt. College Bhanpuri  
Dist. Bastar (C.G.)



**Govt. College Bhanpuri Dist-Bastar (C.G.)**  
**Programme name – B.A. Programme Code - UGBA**

**Corse Outcome Sub – Hindi**

Department	Course	Corse Outcome
Hindi	FC BA 1 <sup>st</sup> year	Co- 1. पल्लवन (संदर्भ विस्तार) पत्रलेखन, अनुवाद, शब्द शुद्धियां, पर्यायवाची, देवनागरी लिपि की वैज्ञानिकता, कम्प्यूटर की भाषा और संक्षिप्तिकरण Co- 2. कार्यालयीन भाषा, मीडिया की भाषा, संज्ञा, सर्वनाम, विशेषण एवं क्रिया विशेषण, संधि एवं समास Co- 3. विकासशील देशों की समस्याएं, प्रौद्योगिकी, नगरीकरण, पर्यावरण प्रदूषण, कार्यालयीन पत्र Co- 4. भारत में जनसंख्या, गरीबी तथा बेरोजगारी
	FC BA 2 <sup>nd</sup> year	Co- 1. हिन्दी साहित्य के पांच महत्वपूर्ण लेखकों के निबंध Co- 2. हिन्दी भाषा के विविध रूपों की प्रकृति Co- 3. कार्यालयीन भाषा और मीडिया की भाषा Co- 4. मशीनी भाषा Co- 5. संज्ञा, सर्वनाम, विशेषण, क्रिया विशेषण संधि, समास एवं शब्द संक्षिप्तियां
	FC BA 3 <sup>rd</sup> year	Co- 1. कविता, एकांकी और संस्कृति के साथ राष्ट्रीय एकीकरण का अध्ययन Co- 2. भाषा संप्रेषण कला Co- 3. हिन्दी भाषा और सामान्य ज्ञान Co- 4. विकासशील देशों समस्याओं का अध्ययन Co- 5. प्रौद्योगिकी और नगरीकरण Co- 6. आधुनिक तकनीकी सभ्यता Co- 7. पर्यावरण प्रदूषण तथा कार्यालयीन पत्र लेखन Co- 8. अनुवाद एवं प्रतिवेदन
	Literature BA 1 <sup>st</sup> year	Co- 1. प्राचीन हिन्दी काव्य Co- 2. कबीर, जायसी, सूरदास, तुलसीदास, घनानन्द Co- 3. विद्यापति, रहीम, रसखान
	Literature BA 2 <sup>nd</sup> year	Co- 1. कहानी और उपन्यास Co- 2. व्याख्या और विश्लेषण
	Literature BA 3 <sup>rd</sup> year	Co- 1. छत्तीसगढ़ी भाषा का इतिहास Co- 2. छत्तीसगढ़ी साहित्य का इतिहास Co- 1. छत्तीसगढ़ी रचनाकारों का परिचय



*(Signature)*  
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**Programme Name- B.A. Programme Code- UG**  
**Course Outcome Sub- ENGLISH**

**B.A.-I, B.Sc.-I, B.Com.-I (English)**

- \* The Student will get familiar with the main events conflicts inventions and rich history of end ancient India
- \* Simple- compound and complex sentences, sentences types. Subject- verb, noun, pronoun, antonyms, synonyms, tense, voice, narration.
- \* Comprehension of an unseen passage.
- \* Composition: Paragraph writing.
- \* Letter writing (The Formal and Informal)

**B.A.-II, B.Sc.-II, B.Com.-II (English)**

- \* They will be familiarized with the development of science in ancient India through the text provided in the syllabus.
- \* Reading comprehension of in unseen passage.
- \* Report writing.
- \* Expansion of an Idea.
- \* Grammar and Vocabulary based on the prescribed text-book.  
Preposition, tense, models, voice, narration, sentences, verb.

**B.A.-III, B.Sc.-III, B.Com.-III (English)**

- \* They will be familiarized with the national heritage and the values of Indian life and social system.
- \* Essay writing, précis writing.
- \* Reading comprehension of in unseen passage.
- \* Grammar advanced exercises, tense, voice, narration, sentences, verb.



### **B.A. I Literature**

\*The course shall enable the student to effectually communicate in the both orally and verbally in English.

\*It shall develop in the student the ability interpret, analyses and evaluate both comedy and tragedy.

\*The course shall enable the student to be came familiar with the growth and trends of English poetry till eighteen centaury through a close reading of the select poems of the representative poets of the periods.

\*It shall develop in the student the ability interpret analyses in the perspective literary history and theory.

### **B.A. II Literature**

\*soThe course shall enable the student to come similar with the growth and trends of English prose in nineteenth and twentieth century through a cloth study of the select essays of the representative prose writers of the period.

\*It shall train the students in the close reading of poems in the contexts of literary convention and history.

\*The course shall acquaint the students with the most significant English poets of twentieth through a close study of their representative poems.

### **B.A. III Literature**

\*The students will get apprised with various Indian authors under Indian writing in English.

\*they will also exposure to the work as of American authors to the paper American literature.

\* It shall train the student in the close reading of poem in the contexts of literary convention and history.

\* It shall develop in the students the ability to interpret, analyseand evaluate works of drama and fiction in the perspective of literary history and theory.



**Programme Name- B.A. Programme Code- UG**  
**Course Outcome Sub- POLITICAL SCIENCE**

**B.A.-I (Political Science)**

- \* छात्रों को राज्य, लोकतंत्र को समझने का अवसर प्रदान करता है।
- \* विद्यार्थियों को समानता व स्वतंत्रता की संबंधों का ज्ञान कराना।

**B.A.-II (Political Science)**

- \* राजनीति संस्कृति व नारी की भूमिका के बारे में जानकारी प्रदान करना।
- \* विश्व के प्रमुख दार्शनिक—लॉक, हॉब्स, रूसो, जे.एस. मिल के विचारों से अवगत कराना।
- \* प्रमुख देशों की शासन प्रणालियों का तुलनात्मक अध्ययन कराना।

**B.A.-III (Political Science)**

- \* मानव अधिकार की विस्तृत जानकारी एवं कार्यप्रणाली की मूलभूत जानकारी प्रदान कराना।
- \* पर्यावरण व वैश्वीकरण का अंतराष्ट्रीय स्तर पर किये गए प्रयासों का अध्ययन कराना।



# **COURSE OUTCOME SUBJECT- SOCIOLOGY**

**Programme Name- B.A Programme Code- UG**

## **B.A 1<sup>st</sup> YEAR**

- CO.1 Social institutions: marriage, family and kinship.
- CO.2 Social change: meaning and patterns, types, factors, evolution and progress.
- CO.3 Classical view about Indian society: Varna, ashram, karma, dharma and Pursharth.
- CO.4 Family problem: dowry, domestic violence, diverse.

## **B.A 2<sup>nd</sup> YEAR**

- CO.1 Tribes: concepts, characteristics, tribes and schedule tribes.
- CO.2 Problems of tribal people: poverty Illiteracy, Indebtedness, Agrarian issues.
- CO.3 Concepts of crime: meaning characteristics and types.
- CO.4 Social evils and crime.

## **B.A 3<sup>rd</sup> YEAR**

- CO.1 Foundations of sociological thought.
- CO.2 Development of sociological thought in India.
- CO.3 Social research: characteristics and significations.
- CO.4 Research design: explanatory descriptive, explanatory.



## B. Com (Regular)

### **Program Outcome**

- The knowledge of different specializations in accounting, costing, statistics banking and finance with the practical exposure helps the students to stand in organization.
- After completing graduation, students can get skills regarding various aspects like Marketing Manager, Selling Manager, over all Administration abilities of the Company.
- Capability of the students to make decisions at personal & professional level will increase after completion of this course.
- This program could provide Industries, Banking Sectors, Insurance Companies, Financing companies, Transport Agencies, warehousing etc., well trained professionals to meet the requirements.
- Students can get thorough knowledge of finance and commerce.
- Students can independently start up their own business.

### B.COM-I Course Outcomes

#### **Financial Accounting:**

- To enable the students to learn principles and concepts of Accountancy.
- Students are enabled with the Knowledge in the practical applications of accounting.
- To enable the students to learn the basic concepts of Partnership Accounting, and allied aspects of accounting.
- The student will get thorough knowledge on the accounting practice prevailing in partnership firms and other allied aspects.
- To find out the technical expertise in maintaining the books of accounts.
- To encourage the students about maintaining the books of accounts for further reference.



### **Business Mathematics**

- To use and understand useful functions in business.
- To learn the applications of matrices in business.

### **Business Environment**

- To make the students aware about the Business and Business Environment.

### **Compulsory English**

- To offer relevant and practically helpful pieces of prose and poetry to students so that they not only get to know the beauty and communicative power of English but also its practical application.
- To expose students to a variety of topics that dominates the contemporary socio-economic and cultural life.
- To develop oral and written communication skills of the students so that their employability enhances.
- To develop overall linguistic competence and communicative skills of students

### **Business Economics**

- To provide students knowledge of Micro and Macro Economic concepts and analytical approach to the subject matter.
- To develop the interest by showing the relevance and use of various economic theories.
- To apply economic reasoning to solve business problems.

### **Business Communication**

- To make the students aware about the business communication.
- To develop awareness regarding new trends in business communication, various media of communication and communication devices.
- To extend business communication skills through the application and exercises



## **Business Regulatory Framework**

- The student will well verse in basic provisions regarding legal frame work governing the business world.
- To know the students with the basic concepts, terms & provisions of Mercantile and Business Laws.
- To develop the awareness among the students regarding these laws affecting trade business, and commerce.

## **B.COM-II Course Outcomes**

### **Group-I Corporate Accounting**

- This course aims to enlighten the students on the accounting procedures followed by the Companies.
- Student's skills about accounting standards will be developed.
- To make aware the students about the valuation of shares.
- To impart knowledge about holding company accounts, amalgamation, absorption and reconstruction of company.

### **Group-I Company law**

- To impart students with the knowledge of fundamentals of Company Law and provisions of the Companies Act of 2013.
- To apprise the students of new concepts involving in company law regime.
- To acquaint the students with the duties and responsibilities of Key Managerial Personnel.

### **Group-II Cost accounting**

- To understand Basic Cost concepts, Elements of cost and cost sheet.
- Providing knowledge about difference between financial accounting and cost accounting.
- Ascertainment of Material and Labor Cost.
- Student's Capability to apply theoretical knowledge in practical situation will be increased.



### **Group-II Business management**

- To understand the concept & functions and importance of management and its application.
- To make the student understand principles, functions and different management theories.

### **Group-III Business Statistics**

- To understand the different concept of population and sample and to make students familiar with Calculation of various types of averages and variation.
- To use regression analysis to estimate the relationship between two variables and to use frequency distribution to make decision.
- To understand the techniques and concept of different types of index number

### **Group-III Business Entrepreneurship**

- To develop entrepreneurial awareness among students.
- To motivate students to make their mind set for thinking entrepreneurship as career.

## **B.COM-III Course Outcomes**

### **Group-I Taxation and Auditing**

- Students can understand Income Tax system properly, and can get the knowledge of different tax provisions.
- Students will be versed in the fundamental concepts of Auditing and different aspects of tax.
- To give knowledge about preparation of Audit report, Submission of Income Tax Return, Advance Tax, and Tax deducted at Source, Tax Collection Authorities under the Income Tax Act, 1961

### **Group-II Indirect tax**

- To enable students to explain the basic concepts, definitions and terms related to Goods and Service tax (GST).
- To enable students to distinguish the difference in concept of forward charge mechanism, reverse charge mechanism, composite supply, mixed supply and various exemptions under the new Goods and Service tax regime.
- To enable the students discuss the compliance related to documentation under the new indirect tax regime. Students would discuss the contents and format for various documents like tax invoice, bill of supply, debit note, credit note etc.
- To enable the students to compute the Goods and Service Tax (GST) payable by a supplier after considering the eligible input tax credit.



## **Group -II Cost and Management Accounting**

- Apply management accounting and its objectives in facilitating decision making.
- Apply and analyse different types of activity-based management tools through the preparation of estimates.
- Analyse cost-volume-profit techniques to determine optimal managerial decisions.
- Perform cost variance analysis and demonstrate the use of standard costs in flexible budgeting.
- Prepare analyses of various special decisions, using relevant management techniques.

## **Group -III Financial Management**

- To understand various concepts related to financial management.
- To study in detail, various tools and techniques in the area of finance.
- To develop the analytical skills this would facilitate the decision making in Business situations.

## **Group -III Marketing Management**

- To introduce the concept of Marketing Mix as a framework for Marketing Decision making.
- To emphasize the need, importance and process of Marketing Planning and Control.
- To sensitize the students to the dynamic nature of Marketing Function.



## **Program Outcome of BSc Program offered by the College**

### **BSc-CBZ, PCM**

- Bachelor of Science offers theoretical as well as practical knowledge about different subject areas.
- This course forms the basis of science for coherent understanding of the academic field to pursue multi and inter-disciplinary science careers in future. These subject areas include Physics, Chemistry, Mathematics, and Botany and Zoology.
- Able to plan and execute experiments or investigations, analyze and interpret data information collected using appropriate methods
- It helps to develop scientific temper and thus can prove to be more beneficial for the society as the scientific developments can make a nation or society to grow at a rapid pace through research



Govt. College Bhanpuri  
COURSE OUTCOME SUBJECT

**B. Sc.I Physics**

- \* The basics of mechanics and create problem solving approach in mechanics
- \* The basics of properties of matter, how solid and liquid matter behaves and give characteristics in physical changes.
- \* To Learn the effect of electric field and magnetic field in instrumentation and get theoretical as well as experimental knowledge of it.
- \* The fundamental ideas of electrostatics and magnetostatics and to apply them to understand general phenomenon.
- \* To learn the behavior of electrical circuit with different elements and enhance the capability of analytical study in electrical devices

**B. Sc.-II Physics**

- \* To become familiar with various concept and phenomena in thermodynamics
- \* Understanding of advanced thermodynamic processes and develop problem solving approach.
- \* The basic concept of statistical mechanics and expand the knowledge to the optimum level so that they must understand the theoretical phenomenon in materials.
- \* To learn about waves and oscillations and apply them to understand the theory and application of it.
- \* To learn advance level in optics and understand the working of common optical instruments . Detailed knowledge of interference , diffraction and polarization with problem is provided .
- \* The concept of laser system and different type of laser with their applications.

**B. Sc.-III Physics**

- \* The origin of quantum mechanics and necessity to explain various effects.
- \* Fundamental concepts of quantum mechanics and approach to the complex problems that can be explained
- \* The phenomenon of Nuclear physics and know the working and theory of nuclear reactor. To know the basics of elementary particles.
- \* Basics of Solid state physics is to be learned to understand the electrical and magnetic properties of solid materials.
- \* The basics of solid state devices like diode and transistor and understand their working and applications.
- \* To learn C programming basics and apply it in general mathematical cases.



**Govt. College Bhanpuri Dist-Bastar (C.G.)**

**Mathematics**

**B.sc 1<sup>st</sup> year**

Paper 1

Differential calculus ,geometrical application of differential calculus ,asymptotes ,integral calculus and multiple integral .

Paper2

Transformation of random variable, testing of hypothesis, statically quality control.

Paper3

Solving ordinary differential calculus differential equation with constant and coefficient Laplace transformation.

**B.sc 2<sup>nd</sup> year**

Paper1

Real analysis ,sets and function ,real valued function ,real number, least upper bound learn to equivalence count ability

Paper2

Abstract algebra – group and commutative group definition of subgroup and example, definition of cyclic group permutation.

Paper3

Mechanism ,learn to common centenary impact ,virtual work.

**Bsc3<sup>rd</sup> year**

Paper1

Discrete mathematics ,learn to relation ,division algorithm, logic, and graph theory.

Paper2

Complex analysis, analytical function ,transformation, contour integral, evolution of integral.

Paper3

Learn to direct and iterative method, numerical differentiation and integration, polynomial approximation, numeric solution of ordinary differential equation.



**COURSE OUTCOME SUBJECT**  
**CHEMISTRY**

**B.Sc. first year**

- Students will be able to understand the concept of atomic structure.
- Student will study the chemical bonding concept.
- Student have a basic idea about basics of organic chemistry.
- Student will understand the concept of liquid states and colloids.
- Students are able to relate the concepts of chemical kinetics and catalysis.

**B.Sc. second year**

- Acid base concepts and non-aqueous solvents are explained in brief.
- Chemistry of lanthanide and actinide elements are explained in brief.
- Organic compounds of nitrogen: preparation of nitroalkanes and nitro arenes , reactivity structure and nomenclature of amines explained.
- Chemical and ionic equilibrium: buffer solutions, pH scale explained in brief.
- Thermodynamics: first law, second law, concept of entropy, gibbs and Helmholtz free energy, variation of  $V$  and  $A$  with pressure is explained with its importance.



### **B.Sc. third year**

- Metal ligand bonding in transition metal complexes, limitations of valence bond theory and crystal field theory, thermodynamic and kinetic aspects of metal complexes.
- Bioinorganic chemistry: toxicity of some metal ions (Hg, Pd, Cd and As), metalloporphyrins with special reference to hemoglobin and myoglobin.
- Biomolecules: carbohydrates, amino acids, proteins and nucleic acids, DNA, RNA, nucleosides, nucleotides, double helical structure of DNA.
- Spectroscopy: introduction, vibrational spectroscopy, raman spectrum, electronic spectroscopy characteristic feature of electromagnetic radiations, regions of spectrum, frank-condon principle, energy levels of simple harmonic motion.
- Electrochemistry: electrolytic conductance, theories of strong electrolyte, migration of ions, electrochemical cells and galvanic cells, single electrode potential, corrosion: types, theories, and preventions.



## PROGRAM OUTCOMES SUBJECT-ZOOLOGY

### BSc-I

- PO1 – The students will be able to classify various animals in a given phylum of invertebrates and vertebrates.
- PO2 – Gain knowledge to identify various larval stages and development in invertebrate.
- PO3 – Describe the morphology, habit and habitat, systematic position and various systems in star fish and solenodon.
- PO4 – Explain various adaptations in avian group as well as migration and flight in birds
- PO5- Categorize the diversity found in the invertebrate groups of animals like Arthropoda, Mollusca and Echinodermata.
- PO6- Cell division (Mitosis and Meiosis) and elementary idea of Cancer cells and cell transformation, An elementary idea of immunity.

### BSc-II

- PO1 – Gain knowledge to define the concepts of the applied subjects like Apiculture and Sericulture.
- PO2 – Identify different species and casts of honeybees and species of silkworm.
- PO3 – The students will be able to Excretion Physiology of excretion, Osmoregulation.
- PO4- Explain the modifications and adaptations in animals.
- PO5- Understood the theories of evolution and highlighted the role of evidences in support of evolution.
- PO6- Describe evolution of horse.
- PO7- Gain knowledge to define the concepts of the Variation, Mutation, Isolation and Natural Selection.

### BSc-III

- PO1 – Understanding go pathology of diseases cause by various microorganisms such as bacteria, virus, parasites and fungus.
- PO3 – Understands about composition of blood, blood borne diseases.
- PO4- Metabolism of carbohydrates nucleic acids and metabolic disorders.
- PO5- Gains knowledge in the areas of responses to laws of limiting factor. Law of minimum, law of tolerance and tragedy of commons.
- PO6- Types of ecosystems- freshwater, marine and terrestrial.
- PO7- Population characteristics and dynamics- conceptual approach.
- PO7- Growth curves and pyramids, sigmoid curve, J curve and hyperbola, logistic equation and concepts relating to growth.
- PO8- Gain knowledge about hormones.
- PO9- Applications of DNA in technology and molecular biology for research.



**Programme Name & B.Sc. Programme Code-UGBS**  
**Course Outcome Sub-Botany**  
**B.Sc. 1 st year**

**Plant Diversity -1**

Algae, Fungi, Lichen, Plant Protection and Bryophytes

Learn about the structure pigmentation food reserves and method of reproduction of Algae, Fungi, Lichen

**Plant Diversity -2**

Pteridophytes, Gymnosperms and Paleobotany

Know about the structure life history and economic importance of Gymnosperms

Studied the method of Fossilization and fossils plant

**Practical**

- 1- Microscopic observation and Identification of algae, fungi, Bryophytes, Lichen, Gymnosperms and Pteridophytes

**B.Sc. 2 nd year**

**Anatomy Taxonomy angiosperms and ecology and plant Physiology**

**Economic Botany and embryology**

- 1- Plant water relation, Photosynthesis, Respiration Plant growth hormones, Population and Community, Environment and ecological factors.
- 2- Economic Botany, Botanical name, Family, Parts used and Uses of the Following Economical plants Fibers, Timber, Medicinal, Food, oil, Fruits Plants.
- 3- Learn the types of Classification artificial natural and Phylogenetic

**Practical**

- 1- Ecological Field study Quadrates and line transect method of vegetation study.
- 2- Identify the economics products related to theory Syllabus and write Botanical name, Family and uses.

**B.Sc. 3 rd year**

**Plant Physiology, Bio Chemistry and Biotechnology**

- 1- Minerals Nutrition, Plant water relation, Basic of emzymology lipid metabolism, Biotechnology, Genetic Engineering.

**Ecology and Utilization of plants**

- 1- Know about History and relevance of herbal drugs and Indian system of medicine.
- 2- Know the Techniques of medicinal gardening, cultivation, marketing and utilization of selected medicinal plants.
- 3- Learn the approaches to the study of ecology.
- 4- Under the population and community ecology.
- 5- Plants and environments.

**Practicals**

- 1- Identification and comment on the plants and plants products belonging to different economic categories.
- 2- Demonstration of evolution of O<sub>2</sub> in Photosynthesis factor effecting of Photosynthesis.



**Programme outcomes**

- PO1 Think critically about the Different social Processes
- PO2 Display the ability to engage in social interactions across the board
- PO3 Engage, design and evaluate research in an Interdisciplinary way
- PO4 Understand their individual responsibility towards civic and sustainability related issues
- PO5 Participate in policy engagement and advocacy

**Programme specific outcomes**

- PSO1- Explain and apply the major theoretical perspectives in sociology they will enable to see the world from others' perspective also
- PSO2- Design and evaluate sociological research with Interdisciplinary Manner.
- PSO3- to understand the central concepts developed by the theorists to analyse the social world
- PSO4- to understand the application of the scientific method to understand 'social realities' with critical approach
- PSO5- They can understand their Responsibility towards civic, Policy Engagement and Sustainability



## **COURSE OUTCOME SUBJECT - SOCIOLOGY**

**Programme Name- M.A Programme Code- PG**

### **M.A 1<sup>st</sup> SEMESTER**

- CO.1 Classical sociological tradition.
- CO.2 Philosophical and conceptual foundation of research methodology.
- CO.3 Social change in India.
- CO.4 Rural sociology.

### **M.A 2<sup>nd</sup> SEMESTER**

- CO.1 Classical sociological thinkers.
- CO.2 Quantitative research techniques in sociology.
- CO.3 Sociology of development.
- CO.4 Indian rural society.

### **M.A 3<sup>rd</sup> SEMESTER**

- CO.1 Classical sociological theories.
- CO.2 Social movements in India.
- CO.3 Perspectives of study to Indian society.
- CO.4 Industry and society in India-I.
- CO.5 Criminology-I.

### **M.A 4<sup>th</sup> SEMESTER**

- CO.1 Modern sociological theories.
- CO.2 Comparative sociology.
- CO.3 Industry and society in India-II.
- CO.4 Criminology-II.



## M.Sc. Chemistry

### Program Outcomes (PO):

**PO1: Creative Thinking:** Students will be able to think creatively (divergently and convergent) to propose novel ideas in explaining facts and figures or providing new solution to the problems in chemistry. The skills of observations and drawing logical inferences from the scientific experiments will also be developed.

**PO2: Interdisciplinary Approach:** Students will realize how developments in any science subject helps in the development of other science subjects and vice-versa and how interdisciplinary approach helps in providing better solutions and new ideas for the sustainable developments. Also the knowledge of subjects in other faculties such as humanities, performing arts, social sciences etc. can have greatly and effectively influence which inspires in evolving new scientific theories and inventions.

**PO3: Personality Development:** Students will imbibe ethical, moral and social values in personal and social life leading to highly cultured and civilized personality. They will also realize that pursuit of knowledge is a lifelong activity and in combination with untiring efforts and positive attitude and other necessary qualities leads towards a successful life.

**PO4 Skills in research and industrial field:** Students will build a scientific temper and will be able to learn the necessary skills to succeed in research or industrial field. In addition they will acquire the skills in handling scientific instruments, planning and performing in laboratory experiments.

**PO5 Communication Skills:** Students will develop various communication skills such as reading, listening, speaking, etc., which we will help in expressing ideas and views clearly and effectively.

**PO6 Environmental monitoring:** Students will be able to understand the environmental issues Global warming, Climate change, Acid rain, Ozone depletion and will create awareness in society .



### **Program Specific Outcomes (PSO):**

**PSO-1** Students will understand the basic concepts, fundamental principles, and the scientific theories related to various scientific phenomena and their relevancies in the day-to-day life. They will also be able to acquire knowledge about the fundamentals and applications of chemical and scientific theories.

**PSO-2** Students will find that every branch of science and technology is related to Chemistry. They will develop scientific outlook not only with respect to science subjects but also in all aspects related to life.

**PSO-3** Students will become familiar with the different branches of chemistry like analytical, organic, inorganic, physical, environmental, polymer and biochemistry. They will also learn to apply appropriate techniques for the qualitative and quantitative analysis of chemicals in laboratories and in industries.

**PSO-4** The student will acquire knowledge of Chemical Thermodynamics, Kinetics, Electrochemistry, Atomic Structure, Organic Chemistry, Spectroscopy and Skill in Industrial Chemistry.

**PSO-5** Viewing chemistry as a tool the developing mind and critical attitude and the faculty of logical reasoning that is prepared to serve in diverse fields.

**PSO-6** Students will gain a thorough Knowledge in the subject to be able to work in projects at different research as well as academic institutions.



### M.Sc. I Sem

## COURSE OUTCOME SUBJECT CHEMISTRY

- \* Student's will study symmetry and group theory in chemistry and understand various type metal cluster, metal ligand, metal complex and will be imagine and visualize the point group.
- \* Organic chemistry is the major part of this chemistry which deals with synthesis of chemicals, bonding inorganic molecules and chemical properties of reaction mechanism.
- \* Students will learn about quantum chemistry, thermodynamic and chemical dynamic.
- \* Students will study the various type rays and infrared spectroscopy, Raman spectroscopy, microwave spectroscopy and their instrumental techniques.

### M.Sc. II Sem

- \*Students will study reaction mechanism of transition metal complex and organometallic compound.
- \*Students will study aliphatic and aromatic electrophile and nucleophile substitution reaction and c-c multiple bonds.
- \*Quantum chemistry is the chemistry deals with chemicals dynamics and thermodynamics.
- \* Students will study learn ultraviolet and visible spectroscopy its basic principle, instrumental and application NMR spectroscopy.



### M.sc III Sem

- \* Student will study resonance spectroscopy nuclear spectroscopy and various organocatalytic reaction and photochemical reaction.
- \* This unit deals with metal element and their significant role in biological process like respiration photosynthesis and catalytic activities.
- \* Surface chemistry is the major part of the macro molecules which deals with synthesis micelle and solid-state chemistry.
- \* Students will learn about the analytical and data analysis and spectrum technique of various chromatography.

### M.Sc. IV Sem

- \* Detailed knowledge about advantage of chromatography x ray atomic emission spectroscopy and understanding about principle and application of AAS, HPLC, GC, IC.
- \* Student will be studying the medicinal chemistry used in our life understanding about antimalarial drug design.
- \* Student will study nuclear chemistry supra molecular chemistry.
- \* This paper contains brief analysis of various types of soil, air, water, food, cosmetic chemical and drug analysis.