

2.6.1 Programmes and course outcomes of the programmes offered by the institution

Department of Chemistry

Programme outcomes

PO1: To inculcate the scientific temperament in the students and outside the scientific community.

PO2: Use modern techniques, decent equipment's and Chemistry software's.

PO3: The syllabus very well designed and it covers the spectroscopy, Analytical Chemistry, Industrial Chemistry, Pharmaceutical compounds, Principles of Volumetric and Gravimetric estimations.

PO4: Acquire the skills in handling scientific instruments, planning and performing in laboratory experiments.

PO5: To apply standard methodology to the solutions of problems in chemistry.

PO6: Provide students with knowledge and skill towards employment or higher education in chemistry or multi-disciplinary areas involving chemistry

PO7: To develop an independent and responsible work ethics.

PO8: Understand titration curves, indicators for precipitation titrations involving silver nitrate Volhard's and Mohr's methods and their differences. Indicators for EDTA titrations, theory of metal ion indicators. Determination of hardness of water

PO9: Understand the chemical constituents and applications in Food additives, adulterants and contaminants, artificial food colorants.

PO10: To determine Chemical Oxygen Demand (COD) in waste water sample

Course outcomes (COS):

At the end of the course student should be able to:

1. Bohr's theory and its limitations, dual behavior of matter and radiation, deBroglie's relation, Heisenberg Uncertainty principle.
2. To learn Rules for filling electrons in various orbitals, Electronic configurations of the atoms.
3. Stability of half-filled and completely filled orbital's, concept of exchange energy. Relative energies of atomic orbitals, Anomalous electronic configurations.
4. Statement of Born-Landé equation for calculation of lattice energy, Born-Haber cycle and its applications, polarizing power and polarizability. Fajan's rules, ionic character in covalent compounds, bond moment, dipole moment and percentage ionic character.

5. Nucleophiles and electrophiles. Reactive Intermediates: Carbocations, Carbanions and free radicals.
6. Molecular representations and inter conversion of Wedge Formula, Newman, Sawhorse and Fischer representations.
7. Clear the concept learning mechanism of Free radical mechanism of halogenations of alkanes.
8. Students will have to learn and gain hands on experience of standard solution preparation in different concentration units and learn volumetric estimation through acid-base, redox reactions and Complexometric titrations
9. Critical phenomena, critical constants and their calculation from vander Waals equation (numerical problems).
10. Andrews isotherms of CO₂. Maxwell Boltzmann distribution laws of molecular velocities, molecular energies and their importance.
11. Effect of temperature on surface tension and coefficient of viscosity of a liquid (qualitative treatment only).
12. Refractive index and its determination by Abbe's refractometer.
13. Theories of Reaction Rates: Collision theory and Activated Complex theory of bimolecular reactions. Comparison of the two theories.
14. To enable the students to understand the three dimensional crystal structures of solids, predict the number of particles in unit cells. Understand Defects in crystals.
15. To understand the Carboxylic acids and their derivatives. Relative Strengths of carboxylic acids.
16. Understanding the alloy preparation by phase diagram studies.
17. To enable the students to understand the scope of Ultraviolet and Infrared Spectroscopy.
18. Students learn to demonstrate the determination pH of biological fluids using pH meter.
19. Students will learn to verify Beer-Lambert's law and determine the concentration of unknown solution of copper sulphate
20. Determination of pH of solution by hydrogen electrode, quinhydrone and glass electrode
21. Students will be able to explore new areas of research in both chemistry and allied fields of science and technology.
22. Students will be able to explain why chemistry is an integral activity for addressing social, economic, and environmental problems.

23. Students will be able to function as a member of an interdisciplinary problem solving team.
24. Stoichiometric calculations of chemical equations to determine the quantities of reactants and products, limiting reagent problems, and enthalpies of reactions.
25. To build confidence in the candidate to be able to work on his own in industry and institution of higher education.
26. To develop an independent and responsible work ethics.

Department Physics

Programme Outcomes

PO1: The study of Physics in undergraduate level instills among the students to strengthen the fundamentals.

PO2: The main aim of the department is to provide quality learning in physics, grooming bright undergraduates who will push frontiers of knowledge in physics and its related disciplines through scholarly activities.

PO3: Accomplish the individual with employable skills thus evolving one as a self disciplined personality committed to serve the society with an environment friendly attitude.

Course outcomes (COs): Physics

At the end of the course student should be able to:

1. Understand the application of central force to the stability of circular orbits, Kepler's laws of planetary motion, Orbital Precession and Rutherford scattering.
2. Understand the basics of motion of fluid which includes streamlined and turbulent flows, equation of continuity, critical velocity, flow of a liquid through a capillary tube, capillaries in series and parallel, Stokes' formula.
3. To understand the interrelationship between thermodynamic functions and ability to use such relationships to solve practical problems, formulates, and solve physics problems.
4. To enhance the ability of solving numerical problems
6. The students will have practical understanding of the characteristics of various diodes, transistors, Op-Amp, designing concepts of logic gates and digital circuits.
7. Understand the procedures for nuclear fission and fusion.
8. The experiments specified in the course are consistent with the theory part.
9. Understand the relationship between semiconductor devices and understand the applications of semiconductor devices.

10. Get skills to identify and apply formulas of optics and wave physics
11. Analyze collision problem through laboratory and centre of mass frame of reference.
12. The course structure creates interest about the badly in need applications of Optics and Electricity in our daily life.
13. Students are introduced to new chapters like Classical mechanics, Quantum Mechanics and the Fundamentals of Atomic Spectroscopy.
14. Students are acquainted with enough knowledge to design basic devices in physics and electronics used in routine as household appliances.
15. To create an awareness regarding renewable and non-renewable energy sources.
16. Aims to provide knowledge about Atmosphere, Climate Science and Global Climate Change.

Department of Mathematics

Programme outcome

PO1: Display knowledge of conventions such as notations, terminology, recognize basic geometrical facts and graphical displays. And State important facts resulting from their studies.

PO2: A student should get a relational understanding of mathematical concepts and concerned structures, and should be able to follow the patterns involved , mathematical reasoning.

PO3: A student should get adequate exposure to global and local concerns that explore them many aspects of Mathematical Sciences.

PO4: Develop an ability to analyze the problems, identify and define appropriate computing requirements for its solutions.

PO5: Acquire ability of critical thinking and logical reasoning and capability of recognizing and distinguishing the various aspects of real life problems.

Course outcomes (COS):

At the end of the course student should be able to:

1. Students will use units correctly and convert between metric and standard units of measurement.
2. Students will use mathematics concepts in real world situations.
3. Sketch curves in Cartesian, polar and pedal equations.
4. Explain concepts of Real Valued functions of more than one variable. And define Limits and continuity solve problems
5. Understand the concept of subspace, Linear independence and dependence, its properties

7. Gain Knowledge of fundamental concepts of real numbers.
8. Finding reduction formulae of standard functions
9. Explain Countable and un-countable sets, definition of group and subgroup, its properties.
10. Examples on Different comparison test, Raabe's ratio test and problems.
11. Theorems on R- integrability examples on finding lower and upper sum
12. Evaluate integrals by using Beta and Gamma functions
13. Moment resultant of forces, sign of moment, couples, moment of couples, theorem on moment of couple and problems
14. Define closed set closure, neighborhood. Limit points, dense set, separable sets and examples.
15. Use matrices in commercial field.
16. Acquire knowledge of applications of algebra and calculus through FOSS.

Department of Zoology

Programme outcome

PO1: Analyze complex interactions among the various animals of different phyla, their distribution and their relationship with the environment.

PO 2 : Apply the knowledge of internal structure of cell, its functions in control of various metabolic functions of organisms.

PO 3 : Understands the complex evolutionary processes and behaviour of animals.

PO 4 : Correlates the physiological processes of animals and relationship of organ systems.

PO 5 : Understanding of environmental conservation processes and its importance, pollution control, biodiversity and protection of endangered species.

PO 6 : Gain knowledge of agro - based small scale industries like sericulture, fish farming, butterfly farming and vermicompost production

Course outcomes (COS):

Zoology At the end of the course student should be able to:

1. Aware students about knowledge and skill in the fundamentals and systematic of animal kingdom.
2. Gain knowledge of anatomical structure and various metabolic functions of organisms.
3. Understand various physiological processes at molecular level of animals from different phyla.

4. Apply the knowledge and understanding of Zoology to one's own and social life.
5. Gain knowledge of communicable and non-communicable diseases to improve personal and public health.

Department of Botany

Programme outcome

PO1: Evidence based comparative chemistry approach to explain the chemical synthesis and analysis.

PO2: Ability to understand the characterization of materials.

PO3: Basic principle of equipment's, instruments used in the laboratories.

PO4: Experimental techniques and methods of their area of Chemistry, Botany and Zoology.

PO5: The knowledge of identifying major groups of plants and animals and compare their characteristics.

PO6: Evidence based comparative approach to explain the evolution of organism and understand the genetic diversity of plants and animals

Course outcomes (COS):

At the end of the course student should be able to:

1. Develop understanding about the diversity, identification, classification and economic importance of lower plants.
2. Understand the role of plant cytoskeleton and accessory proteins in major cellular processes of plants.
3. Able to identify various life forms of plants, design and execute experiments related to basic studies on evolution, ecology, developmental biology, physiology.
4. Plant interactions with microbes and insects, morphology, anatomy, reproduction, genetics, microbiology, molecular biology, recombinant DNA technology, proteomics and transgenic technology.
5. Capable to perform short research projects using various tools and techniques in plant sciences and develop scientific temperament and research attitude.
7. Learn about absorption translocation and transpiration
8. knowledge about plant breeding methods to produce new superior varieties
9. Demonstrate skills in laboratory, field, and glasshouse work related to mycology and plant pathology.

10. Develop a critical understanding of morphology, anatomy, and reproduction of Algae, Bryophytes, Pteridophytes, and Gymnosperms.

Department of Economics

Programme outcome

PO 1: Understand and apply micro economics for the formulation of policies and planning.

PO 2: Apply economic theories and concepts to contemporary social issues, as well as analyse the policies.

PO 3: Get trained in the art of economic modelling.

PO4: Understand the basics of Quantitative techniques and their applications

PO 5 : Critically evaluate the ongoing economic developments in India and abroad

Course outcomes (COS):

At the end of the course student should be able to:

1. Understand the current problems of Indian Economy..
2. Able to understand the links between household behaviour and the economic models of demand.
3. It will help in developing comprehensible understanding of different forecasting models.
4. Modern theories of international trade. The trade barriers, international order in the trade
5. After studying the structure aspects of Indian Economy, students will be exposed to economic reforms in India and problems of Indian economy.
6. Distinguish between normative and optimistic economics.

Evaluate the macroeconomic policies for solving major problems like poverty and unemployment

8. Approximate and interpret the parameters of multiple regressions.
9. Explain the operation of a market system
10. Analyze the production and cost relationships of a business firm
11. Analyze the sector specific policies adopted for achieving the aspirational goals
12. The students would be able to use spread sheets in an elementary way to garner basic understanding of the available spread sheet software.

Department of History

Programme outcomes

- PO1. History learners increase their knowledge in various fields.
- PO2. The students can get ample knowledge by studying various course papers which would eventually let them to utilize subject oriented skills in their future higher studies and research.
- PO3. To understand the critical thinking.
- PO4. Prepare for various competitive examination.
- PO5. History students get job in schools, colleges, museum, library, research fields, department of archaeology, medias etc.
- PO6. To understand Indian culture in reality.
- PO7. To understand the national, regional, international history for developing historical sense.

Course outcomes (COS):

- CO1 - It teaches the Literary and Archaeological Sources and the influence of Geographical factors.
- CO2 - Concept and Downfall of Indus Valley Civilization and Vedic Civilization.
- CO3 - It also deals with foreign invasions on Northern India.
- CO4 - Understand the Administration, Trade and Commerce and Cultural contributions of Vijaynagara Empire
- CO5- It deals also with the early resistance and revolts of Indians and domestic and foreign policies of British.
- CO6- This paper also focuses on the cultural contribution major dynasties and the Sharana movement led by Shri Basaveshwar.

Department of political science

Programme outcome

- PO1: The purpose of the Programme is to provide high quality learning among students so that they can actively engage in academic and other curricular activities.
- PO2: Political Science is student centric subject having course structure to enhance the Knowledge and develop skills for employability.
- PO3: After the successful completion of the Programme, the students will get an opportunity to select any type of areas which they like.

PO4: The subject itself helps the students to mould their personality and be responsible citizens of the society.

Course outcomes (COS):

At the end of the course student should be able to:

1. Demonstrate critical thinking, including the ability to form an argument, detect fallacies, and martial evidence, about key issues of public policy and politics.
2. Be able to describe and explain political theory, political systems around the world, and politics in the international arena.
3. Be able to explain the resemblance and differences between various types of polities and how they affect their behaviour.
4. Critically measure the actions of actors in the political process and determine their motives.
5. Examining the Fundamental Rights and Duties of Indian citizens with a study of the significance and status of Directive Principles.
6. Evaluating the Electoral Process in India with focus on the Election Commission: Composition, Functions and Role.
7. Examining Indian Foreign Policy: Basic Principles, Evolution and Bilateral Relations.
8. The course is designed to reconcile Political Theory and practice through the ideas and practices related to democracy
9. Students also learn about democratic process and expose them to real expert in legislative work.
10. Students analyze various theories of comparative politics in developed countries.
11. Students will learn E-Governance, its types and benefits of E-Governance
12. This course imparts the Knowledge to students to understand world politics and challenges before India's foreign policy.
13. Students will understand Political Science, theoretically and will gain knowledge to explain and analyze politics at large

Department of English

Programme outcomes

PO1: The study of English language and literature instil among students social and cultural values and help them broaden their attitude towards socio-cultural issues. Thus the Programme will transform them into good and responsible citizens.

PO2: To teach them the important writers, their works, critical concepts trend and movements of English literature.

PO3: At the end of the Programme, the learners will have a broad knowledge of major and minor writers and their works.

PO4: The students will acquire a multidisciplinary approach in higher education and research.

PO5: The learners will be able to write in English with clarity.

Course outcomes (COS):

At the end of the course student should be able to:

1. Read a variety of texts critically and proficiently to demonstrate in writing or speech the comprehension, analysis, and interpretation of those texts.
2. Analyze instances of the variety of literary forms closely in terms of style, figurative language and convention.
3. Will attain and enhance competence in the four modes of literacy: writing, speaking, reading and listening.
4. Would have honed their skills of remembering, understanding, applying, analysing evolution and creating literature.
5. Will have their speaking ability in English both in terms of fluency and comprehensibility.
6. Will able to read intensive information retrieval and interpretation required by university studies
7. This paper aims at introducing English poetry and prose to develop reading and comprehension skills.
8. The learner will have knowledge of objective English useful for Competitive examinations.
9. Students understand, speak and write about the writers and writings of the PostIndependence period in India.

Department of Kannada

Programme outcome

1. ಮಾನವೀಯ ಮೌಲ್ಯಗಳನ್ನು ಬೆಳೆಸಿಕೊಳ್ಳುವುದರ ಜೊತೆಗೆ ಸಕಾರಾತ್ಮಕ ಆರ್ಥಿಕ ಪಡೆಯಲು ಪುನರುತ್ಥಾನ ಸುಸ್ಥಾಪಿಸುವುದು.
2. ಷುರುರ್ಥಿಗಳಿಗೆ ಕನು ಡ ಭಾಷೆಯ ಮೇಲೆ ಅಭಿಮಾನ ಹೊಂದುತ್ತಾ ರೆ
3. ರಾಷ್ಟ್ರೀಯ ಅಭಿಮಾನ ಮೈಗೂಡಿಸಿಕೊಳ್ಳುವುದು ತ್ತಾರೆ
4. ನಿಸಗದ ಮೇಲೆ ಹಚ್ಚಿನ ಮೀಸ ಮತ್ತು ಕಾಳಜಿ ಹೊಂದುತ್ತಾ ರೆ

Course outcomes (COS):

Kannada At the end of the course student should be able to

1. ರಾಷ್ಟ್ರಭಾಷೆಯನ್ನು ಸುಲಭವಾಗಿ ಕಲಿಯಲು ಅವರಿಗೆ ಕಲಿಸಲು ಮತ್ತು ಫೀರೇಪಿಸಲು ಮತ್ತು ಉತ್ಮಮ ಸಂವಹನ ಕೌಶಲಯ ಕೂಗಿ ಲಕ್ಷ ವಿಶ್ವಾಸವನ್ನು ಸ್ಥಾಪಿಸುವುದು. 2. ಇತಿಹಾಸ, ಲಿಕ್ಯಸ, ಸಾಹಿತ್ಯ ಚಳವಳಿಗಳು ಮತ್ತು ಕಲಿಯುವವರಿಗೆ ಅನ್ವಯ ಮಾಡಿಕೊಡುವುದು.
3. ಜೀವನದ ನೈತಿಕ ಮೌಲ್ಯಗಳನ್ನು ಬೆಳೆಸಲು ಕನು ಡ ಸಾಹಿತ್ಯ ದಲಿ ಸಾಹಿತ್ಯ ಕ ರೂಪಗಳ ಅಭಿವೃದ್ಧಿ .
4. ಶ್ಲಾಸನಗಳ ಪರಿಚಯ ಹಗೂ ಅವುಗಳ ವೈಶಿಷ್ಠ್ಯ ತೆಯ ಅರಿವು ಉಂಟಾಗುತ್ತಿ ದೆ

Department of Sanskrit

Programme outcome

PO1: To understand the basic aspects of Sanskrit language, Vedic and Classical Sanskrit literature.

PO2: To get acquainted with the major literary movements, the prominent forms and writers of Sanskrit literature.

PO3: To get the knowledge of Ethical values and Comparative study between Sanskrit Mahakavyas, Dramas so on.

Course outcomes (COS):

At the end of the course student should be able to:

1. Will be able to learn to write essay in Sanskrit language and also learn how to summarize a passage.
2. The students will be able to classify Veda, Date of Rigveda, Socio-economic life in the age of Rigveda, the different hymns of Rigveda and its Philosophical importance.
3. To get the knowledge of ethical values and comparative study between Sanskrit mahakavyas, Dramas, so on.
4. To empower themselves to train for jobs, skills for teaching, translation and online work.

5. To introduce themselves to some theoretical concepts and practical techniques for development of writing skills in Sanskrit language and literature.
6. To Understand the Moral stories of Sanskrit literature.
7. To get conversant with the major literary activities in Sanskrit literature.
8. To get the knowledge about famous poet Kalidasas Bhavani bhavapariksha of Kumarasambhava.

Department of Computer science

Programme outcome

PO1: Design /development of solutions: Design solutions for complex problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO2: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO3: Modern tools usage: Create, select, and apply appropriate techniques, resources, and modern computing and IT tools including prediction and modeling to complex scientific activities with an understanding of the limitations.

PO4: The software engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional practice.


PO5: Environment and sustainability: Understand the impact of the professional software engineering solutions in societal and environmental contexts, and demonstrate the knowledge of and need for sustainable development

Course outcomes (COS):

At the end of the course student should be able to:

1. To recognize problems and make solutions for systems and organizations while reconciling conflicting objectives.
2. Will be able to apply computing theory and programming principles to practical software design and development.
3. To understand and apply knowledge of computing and mathematics within technical domains.
4. Illustrates the various operations performed on different types of files.

5. Analyze a complex computing problem and apply principles of computing and other relevant disciplines to identify solutions.
6. Apply the fundamental knowledge of analog and digital electronics to get different types analog to digitalized signal and vice-versa converters in real world with different changing circumstances.
7. Have practical knowledge on the application of data structures.
8. Describe the concept of inheritance and apply real world problems
9. Will use AJAX to make our application more dynamics.


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