

Department of Zoology

PROGRAM OUTCOMES (PO)

PO1: Effective Communication Skills

Graduates will demonstrate proficiency in both written and spoken communication, effectively utilizing formal communication techniques necessary for professional environments. They will be adept at conveying ideas clearly and confidently in English and other relevant languages.

PO2: Critical Analysis and Interpretation

Graduates will acquire and apply critical thinking skills to analyze diverse forms of information, including literary texts, financial statements, business operations, and legal frameworks. They will be capable of interpreting and evaluating data to make informed decisions in various contexts.

PO3: Technological Proficiency

Graduates will gain practical knowledge and skills in utilizing modern technology, including software applications, programming languages, and development tools. They will be able to manage and implement technological solutions for business, research, and professional practices.

PO4: Quantitative and Analytical Skills

Graduates will develop strong quantitative and analytical skills through the study of mathematics, statistics, and business mathematics. They will apply these skills to solve complex problems, conduct research, and make data-driven decisions in professional settings.

PO5: Research and Problem-Solving

Graduates will be equipped with comprehensive research skills, including problem definition, research design, data collection, and report formulation. They will be capable of conducting independent research and presenting their findings effectively.

PO6: Financial Acumen

Graduates will have a solid foundation in accounting, financial management, and taxation. They will be proficient in preparing and analyzing financial statements, understanding cost and management accounting, and making informed financial decisions.

PO7: Management Knowledge and Application

Graduates will comprehend and apply management principles and methodologies, including decision-making processes, modern management trends, and human resource management practices. They will be prepared to handle organizational leadership and entrepreneurial ventures.

PO8: Legal and Ethical Awareness

Graduates will possess a sound understanding of business laws, corporate laws, and intellectual property rights. They will navigate legal frameworks and appreciate ethical considerations in business practices, promoting social responsibility and sustainable practices.

PO9: Cultural and Social Awareness

Graduates will develop an appreciation for cultural diversity and social issues through the study of literature, history, and intercultural communication. They will be aware of contemporary issues such as environmental sustainability and human rights, integrating these principles into their professional conduct.

PO10: Marketing and Entrepreneurship

Graduates will gain insights into marketing management, brand building, consumer behavior, and entrepreneurial skills. They will be prepared to identify market opportunities, develop marketing strategies, and manage new business ventures.

PO11: Scientific and Environmental Literacy

Graduates will understand fundamental scientific principles and their applications, including environmental impacts and sustainability. They will be aware of biodiversity conservation, ecosystem functions, and sustainable agriculture practices.

PO12: Interdisciplinary Competence

Graduates will be adept at integrating knowledge from various disciplines, fostering a comprehensive understanding of complex issues. They will be equipped to approach problems from multiple perspectives and propose innovative solutions.

PO13: Practical and Vocational Skills

Graduates will acquire practical skills relevant to their field of study, including laboratory techniques, project management, and technical proficiency. They will be prepared for hands-on roles in industry, research, and self-employment opportunities.

PO14: Socio-Cultural Consciousness and Ethical Responsibility

Graduates will develop an awareness of major contemporary issues and ethical considerations. They will internalize values that promote social justice, ethical behavior, and global citizenship, responding positively to societal challenges.

Program Specific Outcomes (PSO)

Program Specific Outcome (PSO)	Students will be able to.....	Mapped Program Outcomes (PO)
PSO 1: Language Proficiency and Communication Skills	<p>Confidently use English in both written and spoken forms. Develop competency in literary forms like Short Story and Novel in Hindi. Acquire vocabulary and conversational skills in French for various day-to-day scenarios. Enhance written and oral communication skills in both English and Hindi through literary analysis and translation exercises.</p>	PO 1, PO 9
PSO 2: Literary and Cultural Appreciation	<p>Appreciate and enjoy works of literature from various cultures and languages. Understand the aesthetic, cultural, and social aspects of literature. Analyze literary elements and themes in prose, poetry, and drama. Develop an understanding of the historical and social contexts of literary works.</p>	PO 9, PO 14

<p>PSO 3: Scientific Inquiry and Research Skills</p>	<p>Gain proficiency in experimental techniques in both chemistry and biology. Develop skills in research communication, scientific documentation, and statistical analysis. Acquire knowledge of research methodologies and designs applicable to biological studies. Instill critical thinking, skill, and research aptitudes in basic and applied biology.</p>	<p>PO 3, PO 5, PO 12</p>
<p>PSO 4: Environmental Awareness and Conservation</p>	<p>Understand environmental issues, conservation strategies, and the impact of human activities on ecosystems. Develop consciousness regarding biodiversity conservation and sustainable practices. Acquire knowledge of toxicology, pollution control measures, and human rights related to environmental protection. Gain awareness of waste management, organic farming, and sustainable resource utilization.</p>	<p>PO 11, PO 14</p>

<p>PSO 5: Biological Knowledge Application and Practical Skills</p>	<p>Apply theoretical knowledge in organic chemistry to practical situations such as qualitative analysis and reaction mechanism determination. Develop practical skills in aquarium management, quail farming, vermicomposting, and apiculture for self-employment. Gain hands-on experience in performing physiological experiments on plants and animals. Acquire proficiency in taxonomy, anatomy, and physiology through practical exercises and specimen identification.</p>	<p>PO 13</p>
<p>PSO 6: Cultural and Social Awareness</p>	<p>Understand the socio-cultural context of literary works and folk arts. Recognize the ritual, ritualistic, and cinematic influences on literature and performing arts. Develop intercultural awareness through language learning and appreciation of diverse cultural expressions. Internalize values imparted through literary texts and social issues raised in literature.</p>	<p>PO 9, PO 14</p>

<p>PSO 7: Professional Development and Vocational Skills</p>	<p>Develop critical thinking skills, research aptitude, and problem-solving abilities relevant to biological sciences. Gain knowledge of present and future applications of biosciences, including their role in agriculture, industry, and healthcare. Acquire vocational skills in areas such as aquarium management, vermicomposting, and apiculture for self-employment and sustainability. Create awareness in society about the importance of waste management, organic farming, and environmental conservation.</p>	<p>PO 5, PO 12, PO 13</p>
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Course Outcomes(CO)

Course	Course Outcome (CO)	Bloom's Taxonomy	Mapped PSO
EN1CCT01	CO1: To introduce the students to the basics of grammar, usage, and effective communication.	Understanding	PSO1
	CO2: Confidently use English in both written and spoken forms.	Applying	PSO1
	CO3: Use English effectively for formal communication.	Applying	PSO1
EN1CCT02	CO1: To sensitize students to the aesthetic, cultural, and social aspects of literature.	Understanding	PSO2
	CO2: To develop in the learners an appreciation of the subtle nuances of literary expression.	Understanding	PSO2
	CO3: To improve the learners' use of language as a means of subjective expression.	Applying	PSO2
	CO4: Appreciate and enjoy works of literature.	Understanding	PSO2
Prose and One Act Plays	CO1: Identify different trends in the development of Hindi Literature and acquire knowledge about different forms of Prose.	Understanding	PSO2
	CO2: Summarize the central theme and other relevant details of Hindi Prose.	Understanding	PSO2
	CO3: Familiarize with the structural concepts of drama and one-act play.	Understanding	PSO2
	CO4: Social and Cultural Consciousness.	Understanding	PSO2

	CO5: Develop Critical Thinking and Communication Skills.	Analyzing	PSO2
Kathasahityam	CO1: To fathom the role of short story and novel in the prose fiction.	Understanding	PSO2
	CO2: To chart subaltern, dalit, and ecocritical nuances in contemporary literature.	Analyzing	PSO2
	CO3: To acquaint the students about the possibilities of exploiting them.	Applying	PSO2
French Language and Communication Skills-I	CO1: Learn the basics of reading and comprehension.	Understanding	PSO4
	CO2: Gain an understanding of basic vocabulary in the French language.	Understanding	PSO4
	CO3: Intercultural awareness.	Understanding	PSO4
	CO4: Acquire essential grammar skills.	Applying	PSO4
	CO5: Develop conversational and writing skills on various day-to-day scenarios.	Applying	PSO4
Basic Theoretical and Analytical Chemistry	CO1: Understand atomic structure and various atomic models.	Understanding	PSO3
	CO2: Gain knowledge regarding different kinds of Chemical bonding and the theories behind them.	Understanding	PSO3
	CO3: Understand the Periodic table and analyze the various periodic properties.	Understanding	PSO3
	CO4: Understand the basic principles of Analytical Chemistry.	Understanding	PSO3
	CO5: Understand the different Chromatographic techniques and their principles.	Understanding	PSO3

Cryptogams, Gymnosperms, and Plant Pathology	CO1: Understand the diversity of plants with respect to Algae, Fungi, Lichens, Bryophytes, Pteridophytes, and Gymnosperms.	Understanding	PSO4
	CO2: Analyze the economic importance of cryptogams in areas such as medicine, agriculture, and industry.	Analyzing	PSO4
	CO3: Understand the diversity, classification, and distribution of gymnosperms.	Understanding	PSO4
	CO4: Identify and describe the major types of plant diseases, including their causes, symptoms, and life cycles.	Analyzing	PSO4
General Perspectives in Science & Protistan Diversity (Practical)	CO1: Create an awareness of the basic philosophy of science, concepts, and scope.	Understanding	PSO3
	CO2: Appreciate different levels of biological diversity through systematic classification.	Understanding	PSO3
	CO3: Familiarize taxa level identification of animals.	Understanding	PSO3
	CO4: Impart interest in Protistan diversity.	Applying	PSO3
EN2CCT03	CO1: Students can respond rationally and positively to the issues raised.	Applying	PSO6
	CO2: Identify major issues of contemporary significance.	Analyzing	PSO6
	CO3: Internalize the values imparted through the excerpts.	Understanding	PSO6
EN2CCT04	CO1: Students will familiarize the Classics from various lands.	Understanding	PSO2
	CO2: Understand the features that go into the making of a Classic.	Understanding	PSO2

Short Stories and Novel	CO1: Understanding different trends in Hindi Literature.	Understanding	PSO2
	CO2: Develop competency in literary forms like Short Story and Novel.	Applying	PSO2
	CO3: Analyze Short stories and Novels with reference to the literary elements.	Analyzing	PSO2
	CO4: Develop Socio-Cultural Consciousness.	Analyzing	PSO2
	CO5: Improved reading fluency and vocabulary in Hindi.	Applying	PSO2
Kavitha	CO1: To acknowledge critical appreciation and reading capacity.	Understanding	PSO2
	CO2: To direct expressionistic poetry.	Applying	PSO2
	CO3: To realize topical relevance and the life vision expressed in writing.	Understanding	PSO2
	CO4: To understand the nuances of Malayalam poetry.	Understanding	PSO2
	CO5: To conceptualize the new trends in poetic beauty and poetic language.	Understanding	PSO2
	CO6: To have a cognizance of the possibilities of cyber poetry and the novelty of contemporary poetry.	Analyzing	PSO2
	CO7: To encourage critical reading of poetry.	Analyzing	PSO2
French Language and Communication Skills-II	CO1: Acquire vocabulary related to topics like French gastronomy, couture, etc.	Understanding	PSO1
	CO2: Gain an understanding of grammar concepts like reflexive verbs, negations, relative pronouns, direct & indirect speech, etc.	Understanding	PSO1

	CO3: Learn to design conversations on various scenarios like travel reservations, restaurants, shops, etc.	Applying	PSO1
	CO4: Learn to write short invitations and positive and negative responses to the same.	Applying	PSO1
	CO5: Intercultural awareness.	Understanding	PSO1
Basic Organic Chemistry	CO1: Understand the fundamental concepts of organic chemistry.	Understanding	PSO5
	CO2: Enable students to write reaction mechanisms.	Applying	PSO5
	CO3: To impart knowledge on advanced stereochemical aspects of organic compounds.	Understanding	PSO5
	CO4: Educate students on various types of Natural and synthetic polymers.	Understanding	PSO5
Volumetric Analysis (Practical)	CO1: Facilitate the learner to make solutions of various molar concentrations.	Applying	PSO5
	CO2: Estimate volumetrically the strength of unknown acid and base.	Analyzing	PSO5
	CO3: Estimate the strength of Mohr salt and Oxalic acid by permanganometric titration.	Applying	PSO5
Plant Physiology	CO1: Describe the processes of photosynthesis and transpiration in plants, including the underlying biochemical and physiological mechanisms.	Understanding	PSO5
	CO2: Explain the roles and regulation of plant hormones in growth, development, and responses to environmental stimuli.	Understanding	PSO5

	CO3: Analyze the processes of water and mineral uptake, transport, and distribution in plants.	Analyzing	PSO5
Cryptogams, Gymnosperms and Plant Pathology & Plant Physiology	CO1: Identify the morphology of vegetative and reproductive parts of algae, fungi, bryophytes, pteridophytes, and gymnosperms.	Understanding	PSO5
	CO2: Identify the anatomy of bryophytes, pteridophytes, and gymnosperms.	Understanding	PSO5
	CO3: Learn about the principles and techniques of plant disease diagnosis, prevention, and control.	Understanding	PSO5
	CO4: Gain practical experience in performing basic physiological experiments on plants.	Applying	PSO5
	CO5: Acquire skills in using instrumentation and equipment commonly employed in plant physiology research.	Applying	PSO5
Animal Diversity - Non-Chordata (Practical)	CO1: Create appreciation of the diversity of life on earth.	Understanding	PSO5
	CO2: Recognize different levels of biological diversity through the systematic classification of invertebrate fauna.	Analyzing	PSO5
	CO3: Familiarize taxa level identification of animals.	Applying	PSO5
	CO4: Appreciate the evolutionary significance of invertebrate fauna.	Understanding	PSO5
	CO5: Instill curiosity about invertebrates around us.	Applying	PSO5
	CO6: Impart knowledge on parasitic forms of lower invertebrates.	Understanding	PSO5

EN3CCT05	CO1: The subtle negotiations of Indigenous and Diasporic identities within literature.	Understanding	PSO6
	CO2: The fissures, the tensions, and the interstices present in South Asian regional identities.	Analyzing	PSO6
	CO3: The emergence of Life Writing and alternate/alternative/marginal identities.	Understanding	PSO6
Poetry, Grammar, and Translation	CO1: Understand the structure of Hindi Grammar.	Understanding	PSO6
	CO2: Develop Translation Skills.	Applying	PSO6
	CO3: Familiarize with great poets and their views.	Understanding	PSO6
	CO4: Social and Cultural Consciousness.	Analyzing	PSO6
	CO5: Illustrate greater fluency in Hindi by applying theoretical knowledge of Hindi Grammar.	Applying	PSO6
Drusyakalasaahityam	CO1: To have a grasp of the social situation of Kerala folk arts.	Understanding	PSO6
	CO2: To understand the influences of Indian classical art forms.	Understanding	PSO6
	CO3: To discern their ritual influence.	Analyzing	PSO6
	CO4: To know about audience receptivity.	Understanding	PSO6
	CO5: To understand the possibilities of Cinema.	Analyzing	PSO6
	CO6: To have an overview of the rich cultural heritage of Kerala.	Understanding	PSO6
	CO7: To distinguish dramatic language and film language.	Analyzing	PSO6

An Advanced Course in French-I	CO1: Comprehend grammar concepts like past tense, near future, interrogative adjectives, etc.	Understanding	PSO1
	CO2: Acquire vocabulary related to the description of a tourist destination.	Applying	PSO1
	CO3: Develop conversations on topics like weather, weekend plans, etc.	Creating	PSO1
	CO4: Learn to write a biography on various French authors like Colette, Albert Camus, Saint-Exupery, etc.	Creating	PSO1
	CO5: Intercultural awareness.	Understanding	PSO1
An Advanced Course in French-II	CO1: Acquire vocabulary related to topics like health, sports, family, etc.	Remembering	PSO1
	CO2: Gain an understanding of grammar concepts like reflexive verbs, negations, relative pronouns, direct & indirect speech, etc.	Understanding	PSO1
	CO3: Design conversations based on scenarios like medical consultation, job interview, travel reservations, etc.	Creating	PSO1
	CO4: Learn to develop a curriculum vitae in French.	Creating	PSO1
	CO5: Develop a better understanding of French culture and civilization.	Understanding	PSO1
Advanced Bio-Organic Chemistry	CO1: Understand the classification, characteristics, and physiological activities of natural products like terpenoids, alkaloids, etc.	Understanding	PSO5
	CO2: Analyze the properties of cleansing actions and the environmental aspects of soaps and detergents.	Analyzing	PSO5

	CO3: Understand the classification of amino acids and synthesis of peptides.	Understanding	PSO5
	CO4: Describe the structure of proteins as well as denaturation and test for proteins.	Understanding	PSO5
	CO5: Understand the chemistry of enzymes, nucleic acids, carbohydrates, vitamins, steroids, and hormones.	Understanding	PSO5
Organic Chemistry Practicals	CO1: Develop skills in the qualitative analysis of various organic compounds.	Applying	PSO5
	CO2: Gain proficiency in determining the physical constants of organic compounds including melting point and boiling point.	Applying	PSO5
Anatomy and Applied Botany	CO1: Understand different types of plant tissues.	Understanding	PSO5
	CO2: Understand the internal structure of different plant organs with reference to their functions.	Understanding	PSO5
	CO3: Understand the process of normal and anomalous secondary thickening in plants.	Understanding	PSO5
	CO4: Know the morphological and anatomical adaptations of plants growing in different habitats.	Analyzing	PSO5
	CO5: Understand how botanical knowledge could be applied for crop improvement.	Applying	PSO5
Angiosperm Taxonomy and Economic Botany & Anatomy and Applied Botany	CO1: Identify and classify different angiosperm families using taxonomic tools.	Understanding	PSO5

	CO2: Gain knowledge of the economic importance of angiosperms.	Understanding	PSO5
	CO3: Develop practical skills in plant anatomy, including the study of tissue types, cell structure, and tissue systems in plants.	Applying	PSO5
	CO4: Learn how to prepare and examine plant sections under a microscope, and interpret the anatomical features observed.	Applying	PSO5
Research Methodology, Biophysics, and Biostatistics	CO1: Familiarize the learner with the basic concept of scientific method in the research process.	Understanding	PSO3
	CO2: Have knowledge of various research designs.	Understanding	PSO3
	CO3: Develop skill in research communication and scientific documentation.	Applying	PSO3
	CO4: Create awareness about the laws and ethical values in biology.	Understanding	PSO3
	CO5: Equip the students with the basic techniques of animal rearing, collection, and preservation.	Applying	PSO3
	CO6: Help the student to apply statistical methods in biological studies.	Applying	PSO3
Environmental Biology and Human Rights	CO1: Instill the basic concepts of Environmental Sciences, Ecosystems, Natural Resources, Population, Environment, and Society.	Understanding	PSO4
	CO2: Make the students aware of natural resources, their protection, conservation, the factors polluting the environment, their impacts and control measures.	Analyzing	PSO4

	CO3: Teach the basic concepts of toxicology, their impact on human health and remedial measures.	Understanding	PSO4
	CO4: Create a consciousness regarding Biodiversity, environmental issues & conservation strategies.	Understanding	PSO4
	CO5: Develop the real sense of Human rights – its concepts & manifestations.	Understanding	PSO4
Cell Biology and Genetics	CO1: Appreciate the structure and function of the cell as the fundamentals for understanding the functioning of all living organisms.	Understanding	PSO3
	CO2: Conceptual clarity of different cell organelles, their structure, and role in living organisms.	Understanding	PSO3
	CO3: Develop critical thinking, skill, and research aptitudes in basic and applied biology.	Analyzing	PSO3
	CO4: Emphasize the central role of genes and their inheritance in the life of all organisms.	Understanding	PSO3
Evolution, Ethology & Zoogeography	CO1: Acquire knowledge about the evolutionary history of earth - living and non-living.	Understanding	PSO3
	CO2: Familiarize about evolutionary concepts and theories.	Understanding	PSO3
	CO3: Study the distribution of animals on earth, its pattern, evolution, and causative factors.	Analyzing	PSO3
	CO4: Impart basic knowledge on animal behavioral patterns and their role.	Understanding	PSO3
Human Physiology, Biochemistry, and Endocrinology	CO1: This course will provide students with a deep knowledge in	Understanding	PSO5

	biochemistry, physiology, and endocrinology.		
	CO2: Defining and explaining the basic principles of biochemistry useful for biological studies for illustrating different kinds of food, their structure, function, and metabolism.	Understanding	PSO5
	CO3: Explaining various aspects of physiological activities of animals with special reference to humans.	Understanding	PSO5
	CO4: Students will acquire a broad understanding of the hormonal regulation of physiological processes in invertebrates and vertebrates.	Understanding	PSO5
	CO5: By the end of the course, students should be familiar with hormonal regulation of physiological systems in several invertebrate and vertebrate systems.	Understanding	PSO5
	CO6: This also will provide a basic understanding of the experimental methods and designs that can be used for further study and research.	Understanding	PSO5
Vocational Zoology	CO1: Develop critical thinking skill and research aptitude among students, by introducing the frontier areas of the biological science.	Analyzing	PSO7
	CO2: Emphasize the central role that biological sciences play in the life of all organisms.	Understanding	PSO7
	CO3: Introduce the student to some of the present and future applications of biosciences.	Applying	PSO7
	CO4: Acquire basic knowledge and skills in aquarium management, quail farming, vermicomposting, and apiculture for self-employment.	Applying	PSO7

	CO5: Learn the different resources available and to develop an attitude towards sustainability.	Applying	PSO7
	CO6: Give awareness to society about the need for waste management and organic farming.	Applying	PSO7