

	<b>Program:</b>	<b>Nutrition and Dietetics, Chemistry, Zoology (NDCZ)</b>		
		<b>NUTRITION AND DIETETICS</b>		
	<b>PO Code</b>	<b>Programme Outcomes:</b>		
	<b>PO 1</b>	Evaluate nutrition information based on scientific reasoning for clinical, community, food science and food service application.		
	<b>PO 2</b>	Perform food management functions.		
	<b>PO 3</b>	Practice state of art nutrition care for various age groups and health conditions.		
	<b>PO 4</b>	Apply technical skills, knowledge of health behavior and clinical judgment to evaluate nutritional status of individual or community.		
	<b>PO 5</b>	Provide nutritional counseling and education to individuals, groups and communities throughout life span.		
<b>Semester</b>	<b>Course Code</b>	<b>Course Name</b>	<b>CO Code</b>	<b>Course Outcomes</b>
I	ND1BN	Basic nutrition	CO1	The student will be able to apply basic nutrition knowledge in making foods choices and obtaining an adequate diet
			CO2	The student will gain knowledge about energy requirements and the Recommended Dietary Allowances
			CO3	The student will understand the functions and role of macronutrients, their requirements and the effect of deficiency and excess
			CO4	The student will be able to analyze the role of various minerals and vitamins important in maintaining health
			CO5	The student will be able to appreciate the importance of water and electrolytes in the human body.
			CO6	The student learns the impact of various functional foods on our health

			CO7	The student gains competence in connecting the role of various nutrients in maintaining health and learn to enhance traditional recipes.
II	ND2FS	Food Science	CO1	The student will be able to analyze the underlying properties of various food components
			CO2	The student will get a clear understanding about objective and descriptive sensory evaluation methods and their application
			CO3	Students will learn about various foodstuffs ,its components, nutritional aspects and their value added products after processing
			CO4	The students will know the specifications of various products, their variation in composition basis and nutritional details after cooking and other processing methods
			CO5	The student will be able to relate various food laws with their amendments and regulation guidelines followed in national and international level
			CO6	Students will acquire knowledge about various food processing techniques and will know the importance of various preservation methods.
III	ND3NLC	Nutrition in the Life Cycle	CO1	The student will learn and apply the latest in research-based nutrient needs of pregnant and lactating females
			CO2	The student gains knowledge about the changing nutritional needs of an infant and about complementary feeding
			CO3	The students will be able to relate nutrient needs to developmental stages and plan diets which will adequately meet nutritional needs during childhood.
			CO4	The student will learn the impact of growth and development in arriving at the nutritional needs of adolescents
			CO5	The student will be able to connect the role of changing metabolism, risk of chronic diseases and impact of functional foods in effectively planning diets for adults
			CO6	The student gains competence on meeting nutrition needs and establishing dietary patterns to promote optimum

				health and reducing the impact of chronic diseases in the elderly
IV	ND4FM	Food Microbiology	CO1	The student gains knowledge about the origin of food microbiology, learns to classify and understand the characteristic features of microorganisms
			CO2	The student will be able to understand the bacterial growth and culturing of bacteria
			CO3	The student will be able to relate the role of various factors involved in the growth and death of microorganisms; and gains insight into the Food safety assurance systems.
			CO4	The student realizes the importance of various aspects in connection with spoilage of different food commodities
			CO5	The student will gain fundamental understanding of the relationship between environment, microorganisms and food borne infections and intoxications.
			CO6	The student will gains competence in understanding the role of food microbiology in preservation of foods using fermentation and biotechnology.
V	ND5PHN	Public Health Nutrition	CO1	The students will have a clear understanding about the concept of health care delivery at different levels in a community
			CO2	The students will be able to describe the major causes and impact of communicable and non-communicable diseases and their pathology.
			CO3	Defining, assessing, and understanding the health status of population, determinants of health and illness and factors contributing to health promotion and disease prevention
			CO4	The students will be able to understand the concept of Nutrition Security and get familiarised with the various approaches and strategies for combating malnutrition
			CO5	The students will be able to identify and monitor malnutrition and hunger in individuals and communities, using

				clinical, dietary, anthropometric and biochemical measures.
			CO7	The student will be able to assess, monitor and evaluate the impact of public health programs
			CO6	The students will be able to integrate biological and social factors affecting health to develop intervention (prevention) programs that will have an impact on the nutritional status of a community.
V	ND5DI	Dietetics I	CO1	Use the Nutrition Care Process model to make decisions, identify nutrition-related problems and determine and evaluate nutrition interventions Nutrient Delivery Understand the transition of diet from clear liquid to full-liquid to soft and to normal diet and its principles. Identify three routes used to deliver nutrients to clients and potential complications with these routes. Discuss the kinds of commercial formulas available for oral and enteral feedings. Differentiate between enteral and parenteral feeds.
			CO2	Study and differentiate the etiology, symptoms and treatment of typhoid and tuberculosis List basic principles of energy imbalance. Discuss the effects of weight loss on the body. Identify the medical, psychological, and social problems associated with too much and too little body fat. Discuss the guidelines for the identification, evaluation, and treatment of Overweight and obesity in adults. Describe the symptoms commonly exhibited by a client with anorexia nervosa and/or bulimia. Evaluate at least three fad diets used for weight reduction/

			CO3	<p>Understand the dietary treatment of celiac disease related to its pathophysiology. Differentiate nutritional care for clients with Crohn disease from that for ulcerative colitis. Relate the nutritional care for clients with hepatitis to that for cirrhosis, and treatment, indicating the importance of early interventions. Relate the nutritional aspects of medical treatment for cholecystitis and cholelithiasis..</p> <p>Relate the relationship between diet and the development of cardiovascular diseases. Distinguish between MI, CHF and atherosclerosis as to aggravating factors and focus of dietary modifications. Identify strategies that are most likely to reduce the risk of cardiovascular disease. Compare and contrast dietary modifications for clients with myocardial infarction, atherosclerosis and heart failure. Understand the DASH diet. List several flavorings and seasonings that can be substituted for salt on a sodium restricted diet.</p>
VI	ND6DII	Dietetics II	CO1	<p>After completing this chapter, the student should be able to: Define and classify diabetes mellitus and describe the treatment for each type of the disorder. Discuss the goals of nutritional care for persons with diabetes mellitus. List nutritional guidelines for people with diabetes mellitus for illness, exercise, delayed meals, alcohol, hypoglycemic episodes, vitamin and mineral supplementation, and eating out. Describe the types of hypoglycemia and dietary treatment. Understand the complications of Diabetes</p>
			CO2	<p>After completing this chapter, the student should be able to: Identify the major causes of acute and chronic kidney failure. List the goals of nutritional care for a client with kidney disease. List the nutrients commonly modified in the dietary treatment of chronic kidney disease (CKD). Discuss the relationship among kilocaloric intake, dietary protein utilization, and uremia. Discuss the nutritional care of</p>

				clients with kidney disease in relation to their medical treatment.
			CO3	After completing this chapter, the student should be able to: The student will compare the hypermetabolic (burns, surgery, trauma) conditions that increase resting energy expenditure and hence kilocaloric requirements. The students will understand how metabolism differs in the different hyper metabolic states eg burns, trauma and pre and post surgeries. The student will suggest recommendations for the safe refeeding of malnourished clients. Diet in HIV and AIDS To Define AIDS and HIV and list transmission routes for the virus. List nutrition-related complications seen in clients infected with HIV and to describe interventions to improve nutritional status. To understand why malnutrition is commonly seen in clients with HIV or AIDS.
			CO4	After completing this chapter, the student should be able to: Understand the types of food allergies • List the foods that people are prone to cause allergies • List diagnostic tests for allergies. • Identify the causes of allergies • The importance of elimination diet in allergies • Identify the causes of gout, symptoms • List the foods to be avoided in an episode of a gouty attack

			CO5	<p>After completing this chapter, the student should be able to: .Explain how normal cells become cancerous. Relate nutritional factors to the incidence of cancers at some of the common sites. Summarize dietary guidelines for the prevention of cancer. Define cachexia and correlate its characteristics with the challenges of managing the condition.. Highlight on the role of diet in prevention of cancers. List ways of dietary management for clients who undergo therapy. After completing this chapter, the student should be able to: Identify four groups of clients likely to experience food–drug interactions and indicate possible consequences of improper administration or management. Describe four ways in which foods, nutrients, drugs, and dietary supplements can interact and give an example of each. Explain why separating grapefruit juice ingestion from oral doses of affected drugs is not an effective strategy for preventing interactions. Name the most common food, drug, and dietary supplement to be involved in drug–nutrient interactions. Discuss the tyramine-restricted diet and relate it to the pathophysiology involving monoamine oxidase inhibitors (MAOIs).. Relate the mechanism by which warfarin achieves anticoagulation to the diet required for therapeutic success.</p>
VI	ND6EIM	Elective- Institutional Management	CO1	<p>After studying this unit the student will be able to understand: • To identify the different areas and segments of the hospitality industry. • Development of Food Service Institutions.</p>
			CO2	<p>After studying this unit the student will be able to understand: • How to manage the human resources within a food services organization or department. • To communicate appropriately with clients, staff and management • The Approaches to Management • The Principles and Functions of management. • The Tools of Management • The management of Resources</p>

			CO3	After studying this unit the student will be able to understand: • Personnel Management Concepts • Staff Employment • Employee Benefits • Staff Training and Development
			CO4	After studying this unit the student will be able to understand: • Legal Aspects of Personnel Management
			CO5	After studying this unit the student will be able to understand: • Food Service Spaces: Planning and Organisation • Plan kitchen Spaces • Plan storage Spaces • Plan service Areas
			CO6	After studying this unit the student will be able to understand • The different types of catering equipment • Criteria for selection of Equipment • The advantages of different equipment Design, Installation and Operation • The different methods employed in the purchasing of equipment • Methods to care and maintain equipment
			CO7	After studying this unit the student will be able to understand: • That resources cannot by their mere presence lead to the success of a food service, but need to be nurtured and skilfully utilised through imaginative management techniques, to make them grow and bear fruit. • That the environment is changing all the time, requiring managers to continually keep pace with the new challenges. • The most important resource for any establishment today is its management skill and when this resource is well developed, all others can be utilised to advantage. • Survival for an establishment in its ever-changing and competitive environment, resources need to be utilised to their maximum, because no resource can be increased indefinitely. • To focus attention on the utility of each resource available to a food service manager.



			CO8	<p>After studying this unit the student will be able to understand: Financial Management:</p> <ul style="list-style-type: none"> <li>• Financial management is concerned with the manner in which funds are procured for and used in a business.</li> <li>• The important role to play in making decisions concerning investment, operations and disposition.</li> <li>• Application of financial management techniques to help to make decisions for individuals as well as for organisations, whether they are profit-making or non-profit making.</li> <li>• In any operation financial decision making involves three aspects: <ul style="list-style-type: none"> <li>• (i)Funding</li> <li>• (ii)Investing in assets</li> <li>• Controlling operations for profitability.</li> </ul> </li> <li>• Coordination's of the above decisions in every organisations to make <ul style="list-style-type: none"> <li>• effective use of resources.</li> </ul> </li> <li>• The scope of financial management to catering establishments, along with a glimpse of some non-conventional accounting techniques, which have become essential to enable managers to cope with the cost control pressures of the business environment of today.</li> <li>• Costing and Budgeting</li> <li>• Pricing</li> </ul>
	ND6EQFP	Elective-Quantity Food Production	CO1	The students will demonstrate the ability to plan nutritious, appealing food combinations and menu patterns that meet the needs of the defined clientele within economic and physical limitations of a food service facility.
			CO2	The students will understand the use of computer applications in the management of quantity food service
			CO3	The students will find the purpose of food distribution systems and the role of marketing and merchandising in the business of food service.
			CO4	The students will learn the biological, physical, and chemical changes which occur when food is cooked and stored
			CO5	The students will develop further knowledge of the factors which affect food composition, food quality and yield and food preparation factors which affect the nutritional value of food.
			CO6	The students will acquire the ability to scale recipes to serve a forecasted

				number of clients with a consistent (expected) quality outcome.
			CO7	The students will gain knowledge about basic food microbiology and be able to assess risk factors of food borne diseases in food preparation, preservation, processing, and service
			CO8	The students will become familiar with quantity preparation, service, and holding equipment, and understand function, use, and maintenance of equipment.
	<b>Chemistry</b>			
	<b>PO Code</b>	<b>Programme Outcomes:</b>		
	PO1	Analyze critically and evaluate constructively the concept of science and effectively bring out the knowledge derived from that, organize and apply that knowledge skillfully and ethically to provide constructive solutions to social, economic and environmental problems faced by the society globally.		
	PO2	Apply scientific theories and concepts to critically debate, evaluate and create solutions to meet the needs of social, economic and environmental requirements of the society.		
<b>Semester</b>	<b>CourseCode</b>	<b>CourseName</b>	<b>CO Code</b>	<b>Course Outcomes</b>
I	CHEM1B	Chemistry 1	CO1	Explain the basic concepts of mathematics for efficient learning and application in chemistry
			CO2	Apply appropriate techniques of analytical chemistry, conduct experiments, analyze data and interpret results with an understanding of the limitations

			CO3	Recall the basic concepts of atomic structure and identify patterns in molecular bonding and relate to their chemical properties
			CO4	Analyze, interpret and identify crystal systems using X-ray crystallography.
			CO5	Explain HSAB concepts, its applications in different areas and its limitations. Discuss the importance of different non-aqueous solvents, their chemical reactions and applications.
			CO6	Categorize the different binary solutions and deduce their behavior with change in external parameters.
			CO7	Recall the basic knowledge of organic chemistry to name new compounds and formulate their conformations.
			CO8	Predict the reactivity of an organic compound based on its structure, justify the mechanism based on chemical effects and develop systematic methods for the preparation of different compounds
II	CHEM2B	Chemistry 2	CO1	Apply the law of thermodynamics to thermal cycles, understand the significance of state variables, thermodynamic functions, illustrate their roles in determining equilibrium under different conditions and solve related problems.
			CO2	Explain the terms in phase rule and interpret the phase diagrams in unary and binary systems
			CO3	Explanation of radioactivity, its measurement, major components of a nuclear reactor and applications of tracer techniques
			CO4	Illustrate methods to determine the molecular weight of inorganic polymers and discuss some commercially important polymers
			CO5	Understand the properties of coordination compounds, their structures and stability. Apply Crystal Field Theory to understand the magnetic properties and describe the stability of metal complexes using stepwise formation constant and thermodynamic parameters

			CO6	Create interest in different magnetic properties and functional properties of structural materials and smart materials
			CO7	Apply various rules to understand the stability of alkenes and reactions of dienes and alkynes
			CO8	Elaborate electrophilic substitution reactions of benzene under the influence of activating and deactivating groups. Predict aromaticity based on Huckel's rule and illustrate the molecular orbital picture of benzene.
III	CHEM3B	Chemistry 3	CO1	Identify the challenges in the conservation of water and design feasible solutions to overcome the limitations . Formulating and implementing green solutions to some of the reactions which are hazardous to the bio-system and sensitizing the younger generation chemists to design, produce and generate greener products.
			CO2	Interpret the basic concepts involved in inorganic analysis. Infer the knowledge of buffers and their biological applications.
			CO3	Explain the use of various industrial materials and their applications. Upgrade the conventional methods to design latest technologies for the economical and smarter production.
			CO4	Explore the dynamic world of nano materials, interpret their unique properties and discover the plethora of possibilities of their applications in various fields for a better and smarter life.
			CO5	Relate and examine the theories and concepts of electrochemistry. Develop deep knowledge of the application of measurements useful in analytical estimations.
			CO6	Enumerate the fundamentals of the kinetics of chemical reactions followed by a detailed study of catalysis.
			CO7	Understand the mechanisms to predict the outcome of various reactions. Relate elimination or substitution reactions to their energy profile diagrams
			CO8	Discuss in detail alcohols, phenols and epoxides. Understand and recall mechanisms of aromatic electrophilic

				substitution reactions. Describe the synthetic application of Grignard reagents.
IV	CHEM4B	Chemistry 4	CO1	Recall and integrate the characteristic properties of the lanthanoides and monitor their applications in revolutionizing industry and medical field. Identify and summarize the significance of organometallic compounds in the catalytic industry.
			CO2	Utilize the knowledge of the latest technology, skills and tools in the production field to generate smarter and economical products
			CO3	Compose and formulate ideas to create the much required energy harvesting sources like solar cells and fuel cells with the fundamental knowledge of the working of the electrochemical cells.
			CO4	Illustrate the effect of absorption of light by matter. Application of the photochemical processes in different fields
			CO5	Explain the principles and working of various instruments and application of these instruments for qualitative and quantitative analysis
			CO6	Classify polymers and explain the mechanism of polymerization. Differentiate thermosetting and thermosoftening polymers with special mention to commercially important polymers
			CO7	Recall the IUPAC nomenclatures. Detailed discussion of aldehydes and ketones
			CO8	Predict the mechanisms and compare the reactivity of different carboxylic acids and their derivatives. Understanding amines in detail and studying the various applications of biologically important amines
V	CHEM5BPB	Chemistry 5	CO1	Outline and exemplify the classification, reactions, properties and biological significance of proteins.
			CO2	Explain and understand the chemical structure, reactions, properties, function and use of broad range of food carbohydrates and various components of nucleic acids

			CO3	Contrast the structure of fats, phospholipids, steroids and explain various properties of the above macromolecules. Interpret the biological roles of diverse hormones and to study their mode of action
			CO4	Categorize enzymes based on their action and understand the kinetic parameters of enzymatic reactions. Illustrate the coenzyme function of water soluble vitamins and select appropriate methods to control harmful effects of synthetic vitamins
			CO5	Evaluate the basic theory and instrumentation of microwave, IR and UV/Vis spectroscopy as a qualitative and quantitative method.
			CO6	Understand the symmetry elements and the corresponding symmetry operations that lead to the classification of molecules into point groups
V	CHEM50IB	Chemistry 6	CO1	Apply principles of coordination chemistry to explain how nature tailors properties of metal centers for specific applications in biochemical systems.
			CO2	Outline the types of catalysis and applications of certain well known and industrially important reaction-specific catalysts used globally.
			CO3	Imagine the structural formulae of organic compounds in a 3D perspective. Understand the importance of stereochemistry in organic chemistry and apply the knowledge gained in this course to a variety of chemical problems. Apply the knowledge in the synthesis, enantiomeric separation and characterisation of a range of chiral compounds in the laboratory for further research.
			CO4	Examine the enantiomers, diastereomers and epimers of simple sugars. Understand how the ring structures of aldehyde and ketone sugars are formed. Construct the ring structure of any 5 or 6 carbon containing monosaccharide from its corresponding straight chain structure

			CO5	Outline various reaction mechanisms of heterocyclic compounds. Illustrate different methods for the synthesis of 5- and 6-membered heterocyclic compounds and summarise their properties, and biological importance
			CO6	Distinguish and characterize various classes of natural products by their structures. Identify pharmaceutically active products of natural origin.
VI	CHEM6BO PCB	Chemistry 7	CO1	Understand complex biochemical pathways within living cells. Elaborate the importance of ATP.
			CO2	Solution to various disorders caused due to impairment of various metabolic pathways in the living system.
			CO3	Discuss the role of active methylene compounds in various organic syntheses, illustrate the mechanisms involved and propose the synthesis. Identify the importance of coupling reaction in dye industry. Apply organometallics in synthetic organic chemistry
			CO4	Understand and compare the principle and theory of various spectroscopic techniques. Determine the effect of conjugation on UV-Visible absorption spectrum. Interpret the spectra of compounds, determine functional groups and propose structures for compounds. Apply the knowledge in the characterisation of organic compounds in research and chemical industry
			CO5	Explain the principle of Raman and ESR spectroscopy and their application to simple molecules
			CO6	Understand the working principle, experimentation and applications of Fluorescence Spectrometry, GC, HPLC, ion-exchange chromatography, CV, and thermogravimetric analysis
VI	CHEM6EPC B	Chemistry 8	CO1	Understand the basic principles of pharmacology, pharmacodynamics and pharmacokinetics. Outline the various stages and practical application of pharmacokinetics. Describe the various phases of clinical studies. Explain the rationale for the complete development plan (pharmaceutical, pre-clinical and

				clinical) according to the proposed therapeutic indication
			CO2	Relate the concepts of active principles and lead compounds in drug discovery; Outline and critically appraise the principal steps in drug discovery Describe the technologies available and those in development of new drugs; Explore the therapeutic opportunities that might arise from the technology(gene therapy)
			CO3	Apply the concepts of enzyme inhibition, drug-receptor interaction, working of proton pumps and ion channel pathways in drug action with suitable illustrations. Relate the factors that modify the effect of drug action. Distinguish drug potency and efficacy. Construct dose-response curves to predict the safety margin of the drug
			CO4	Outline the process of drug development and identify the critical factors and decision points in QSAR approach. Evaluate the advantages of combinatorial organic synthesis in scaling up production of drugs to meet increasing demand
			CO5	Categorise the drugs based on pharmacological-application and interpret their mode of action with suitable illustration. Understand and compare the mechanism of action of each class of drug; relate drug-drug interaction and its impact in patient safety
			CO6	Apply the basic concepts of buffers, acid-base theories and Henderson's equations in buffer preparations and evaluating their functions in pharmacy. Develop analytical skills in predicting the buffer concentrations and develop practical skills in preparing buffers required for an assay of drug. Assess the use of antioxidants in pharmacy. Discuss the role of radio pharmaceuticals in drug industry. Create an awareness about the factors involved in quality control of drugs.



VI	CHEM6EECB	Chemistry 8	CO1	Understand the concept and importance of entrepreneurship and entrepreneur in relation to the characteristics, functions, challenges and types of entrepreneurs.
			CO2	Outline the functioning of the cosmetic industry in terms of raw materials used, Indian standard specifications for production, formulation of cosmetics and quality assurance.
			CO3	Evaluate the nutritional requirements for different age groups, sex, and health conditions through understanding the concept of nutritional value. Explain food production in terms of processing, preservation, additives, qualitative analysis and adulteration.
			CO4	Evaluate the importance of the given soil / water / plant through analysis of the physical and chemical properties of the given soil / water and plants.
			CO5	Understand the drugs in terms of WHO definition, nomenclature, dosage forms, formulations, quality analysis, adulteration and toxicology.
			CO6	Describe the importance of nanomaterials for various applications in daily life, based their properties of various nanomaterials
			CO7	Mention the salient features of various rules and acts related to food, cosmetics and drug
	<b>ZOOLOGY</b>			
	<b>PO Code</b>	<b>Programme Outcomes:</b>		
	<b>PO1:</b>	Analyze critically and evaluate constructively the concept of science and effectively bring out the knowledge derived from that, organize and apply that knowledge skillfully and		

		ethically to provide constructive solutions to social, economic and environmental problems faced by the society globally.		
	<b>PO2</b>	Apply scientific theories and concepts to critically debate, evaluate and create solutions to meet the needs of social, economic and environmental requirements of the society.		
	<b>PO3</b>	To understand and appreciate the diversity of Flora and fauna; to foster interaction of students regarding conservation of endemic plants and animals		
	<b>PO4</b>	To gain knowledge of simplest to most complex plant forms; to provide baseline information on applied aspects of botany		
	<b>PO 5</b>	To acquire knowledge about diversity of the animal kingdom – their morphology, anatomy, physiology, genetics, evolution and social organization		
	<b>PO 6</b>	Enable students to apply the acquired knowledge for holistic development of self and society and also to pursue research		
<b>Semester</b>	<b>CourseCode</b>	<b>CourseName</b>	<b>CO Code</b>	<b>Course Outcomes</b>
I	ZOO1NCID	Non Chordata I	CO1	To become familiar with the invertebrate phyla and their diversity
			CO2	To understand the concept of evolution starting from the most simple unicellular forms –Protozoans to multicellular Annelida
			CO3	To gain knowledge about animals that are successful parasites and their modifications for a parasitic life
			CO4	To understand the concept of evolution starting from the most simple unicellular

				forms –Protozoans to multicellular Annelida
II	ZOO2NCLC D	Non Chordata - II and Lower Chordata	CO1	To become familiar with the rest of the invertebrate phyla and their diversity.
			CO2	To understand the concept of evolution of protochordates and chordates
			CO3	To gain knowledge about the lower chordates and the diversity in Super class Pisces
			CO4	To get to know the economic importance of fishes and Pisciculture
III	ZOO3CAD	Higher Chordata, Human Anatomy and Comparative Anatomy	CO1	To introduce the students to the diversity among higher chordates, their origin, and adaptation to their environment
			CO2	To educate the students about human anatomy and functioning of various systems
			CO3	To create an awareness about the similarities and differences and evolutionary trends in various organ systems in the vertebrates
IV	ZOO4CBIH D	Cell Biology, Immunology & Histology	CO1	To make the students aware about the cell organelles cytoskeleton and their dynamic functions
			CO2	To make them appreciate the interaction between the cells and cell division.
			CO3	To educate them about complex activities like cell signaling and cell death
			CO4	To create an awareness about the importance of our immune system, cancer and organ transplantation
V	ZOO5GMB ED	Paper - 5: Genetics, Molecular Biology and Evolution	CO1	To become familiar with the process of inheritance and variation from the normal Mendelian laws
			CO2	To update the students about the latest molecular biology techniques and genetic engineering
			CO3	To impart knowledge about inherited disorders, inborn errors and the possibilities of improving the human race
			CO4	To become familiar with different schools of thought explaining the concept of origin of life on Earth by studying classical theories
			CO5	To gain knowledge about the modern concepts of evolution

			CO6	To follow the path of evolution from primitive forms to the present day complex forms and outline of major transitions in evolution – from origin of life on earth to hominid evolution
	ZOO5GPD	Paper - 6: General Physiology	CO1	To create awareness of the various physiological processes occurring in our body
			CO2	To appreciate the body's ability to maintain homeostasis, the control of digestion by the nervous, endocrine systems and micro fauna
			CO3	Understand the physiological mechanism of circulation, clotting of blood and respiration
			CO4	The complex mechanism of excretion coupled with osmoregulation and formation of Urine is understood by the students
			CO5	Learns about excitable tissue, the mechanism of muscle contraction, nerve conduction and transmission
			CO6	Understands the mechanism and similarities in sensory perceptions and the concept of thermoregulation
VI	ZOO6EERM D	Paper 7: Elect - Ecology & Research Methodology	CO1	To enlighten students about the intricate relationship between the environment and all forms of life
			CO2	To make them understand the abiotic factors and their influence as limiting factors and the laws of thermodynamics
			CO3	To make them appreciate the various interactions between organisms and the concepts of population ecology
			CO4	To create awareness regarding environment pollution, the effects of human interference and conservation of wild life
			CO5	To enlighten the students about the basic requirements and methodology required for research
			CO6	To teach the students about the importance of statistics in research and learn to write a project report.
	ZOO6EAPL TD	Paper 7: Elect - Applied Physiology & Lab Techniques	CO1	Students get knowledge about pathophysiology of disorders of digestive system and precautionary measures to be taken
			CO2	Create awareness about the ill effects of cigarette smoking, silicosis, pulmonary hypertension, common cold ,how to

				reduce asthma attacks and cope with the same
			CO3	Study complex mechanism of excretion coupled with osmoregulation and formation of urine
			CO4	Learns about excitable tissue, the mechanism of muscle contraction, nerve conduction and transmission
			CO5	Understands the mechanism and similarities in sensory perceptions and the concept of thermoregulation.
	ZOO6ENBD	Paper 7: Elect - Neurobiology	CO1	To understand the relationship between Zoology and Psychology
			CO2	To learn the functions of the nervous system and how it influences behavior
			CO3	Understand the neuronal basis of emotions, stress, addiction and psychological disorders
			CO4	Observe that learning, memory, speech and pain are controlled by neurons
	ZOO6DBED	Paper 8: Development Biology and Ethology	CO1	To understand the process of fertilization and development in formation of an embryo in different animals
			CO2	To learn the concept of organizers and the role of genes in development
			CO3	To create awareness about the reproductive cycle, causes of infertility and use of contraception
			CO4	To enlighten students about animal behaviour and understand various means of communication among animals. Social organization and instinctive behaviour such as migration and parental care