Villa Marie Degree College for Women
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Affiliated to Osmania University, Management Program Approved by AICTE
Recognised by UGC u/s 2(f), an ISO 9001:2015 Certified Institution
Accredited by NAAC with B++ Grade

DEPARTMENT OF SCIENCES

B.Sc (CLINICAL NUTRITION & DIETETICS, ZOOLOGY, CHEMISTRY)

ACADEMIC YEAR 2025 – 2026

COURSE OBJECTIVES AND COURSE OUTCOMES - SEMESTER I & II

S. No	Course Title	Course Code	Course Objective	Course Outcome
1	Basic Nutrition	DSC-103	• Understand Basic Nutritional Concepts • Describe the Process of Digestion and Absorption • Analyse Nutrient Needs Across the Life Span • Evaluate the Relationship Between Diet and Health	• Understood the functions, sources, and daily requirements of essential nutrients (carbohydrates, proteins, fats, vitamins, minerals, water). Learnt basic cognitive concepts of attention, perception, Memory, thinking, reasoning and learning. • Understood how the body breaks down and absorbs food, and how nutrients are metabolized in the process of digestion and absorption. • Recognized the nutritional requirements at different life stages (infancy, childhood, adolescence, adulthood, pregnancy, and elderly). • Learnt regarding impacts the risk of chronic diseases like obesity, diabetes, heart disease, and cancer.
2	Zoology	DSC-I	• To understand the origin of life, study the diverse forms of Invertebrates and Vertebrates • To learn the general characteristics, discuss the classification, structural and functional aspects of Invertebrates and Vertebrates	• Students will be able to learn the importance of systematics, taxonomy and structural organisation of Invertebrates and Vertebrates • Better understand different levels of organisation, coelom formation, able to identify and

			• Students can acquire knowledge regarding economic value and affinities of Invertebrates • Make the students learn the concepts of diversity, adaptations, organization and taxonomic status of Invertebrates and Vertebrates.	group animals from Protozoa to Mammalia. • Understand evolutionary history and relationship of different animals through structural and functional aspects. • Able to appreciate the diversity of living forms and their varied habits and habitats.
3	Chemistry	DSC-I A	• Understand electronic structure, trends, properties, preparation, and reactions of p-block elements (groups 13-18), including anomalous behavior and industrial applications. • Master valence bond theory, hybridization, resonance, and molecular shapes to predict reactivity and stability in organic compounds. • Study nomenclature, isomerism, preparation, and reactions (addition/substitution) of alkanes, alkenes, alkynes, including free radical mechanisms. • Students should be able to apply chemical concepts to real world situations, including environmental, biological, and industrial applications.	• Understood the basic concepts of chemistry, including atomic structure, periodic table, chemical bonding, and chemical reactions. • Students gained knowledge on analyzing and interpretation of chemical data, including laboratory results and experimental data. • Understood the properties and behavior of different types of matter, including gases, liquids and solids. • The students should know how to apply chemical concepts to real world situations, including environmental, biological, and industrial applications.
4	Nutritional BioChemistry	DS 203	• To understand the basic concepts of nutritional biochemistry and its relevance to human health. • To study the chemical nature, structure, and functions of nutrients such as carbohydrates, proteins, lipids, vitamins, and minerals. • To understand the digestion, absorption, metabolism, and utilization of nutrients in the human body.	• Explain the basic concepts of nutritional biochemistry and its importance in human health. • Describe the structure, classification, and functions of major biomolecules such as carbohydrates, proteins, lipids, vitamins, and minerals. • Understand the processes of digestion, absorption, and metabolism of nutrients in the human body.

			• To gain knowledge about energy production and metabolic pathways involved in nutrition.	• Analyze energy production and metabolic pathways involved in nutrition.
5	Zoology	DSC-II	• To understand the comparative anatomy and functional organization of vertebrate organ systems from fishes to mammals. • To study the structural and functional adaptations in digestive, respiratory, circulatory, excretory, reproductive and nervous systems. • To acquire knowledge of developmental biology including gametogenesis, fertilization, cleavage and organogenesis. • To understand embryonic development and the role of evolutionary developmental biology in vertebrates.	• Students will understand the comparative structure and functions of vertebrate organ systems. • Students will be able to explain evolutionary adaptations and developmental processes in vertebrates. • Students will acquire knowledge regarding embryology, organogenesis and evolutionary biology. •
6	Chemistry	BS 201	• Understand the chemistry of transition and inner transition elements, including electronic configuration, oxidation states, magnetic properties, and complex formation. • Explain the preparation, properties, mechanisms, and stereochemistry of important organic compounds such as halogen compounds, alcohols, phenols, ethers, aldehydes, and ketones. • Apply principles of electrochemistry including conductance, transport number, electrode potentials, EMF, and potentiometric methods. • Develop analytical thinking and mechanism-based understanding in inorganic, organic, physical, and general chemistry.	• Electronic structure and periodic behavior of d- and f-block elements • Reaction mechanisms in organic chemistry • Molecular orbital interpretation of bonding • Electrochemical applications and calculations