Government City College (A)
Nayapul, Hyderabad
Affiliated to Osmania University
Accredited with 2.76 B^{++} Grade

DEPARTMENT OF APPLIED NUTRITION

COURSE OUTCOMES

Course I: Basics of Biochemistry

CO1	**Remembering:** Recalling the basic structure of carbohydrates, proteins, amino acids, nucleic acids and lipids.
CO2	**Understanding:** Understand the process of carbohydrate, protein, nucleic acid and lipid metabolisms and their physiological functions.
CO3	**Applying:** Apply knowledge of biomolecules in practical situations or solve problems related to their structures and functions.
CO4	**Analyzing:** Break down the components of biomolecules, analyze their structures, and understand the relationships between different molecules.
CO5	**Creating:** Generate new ideas or concepts related to biomolecules, such as proposing models or hypotheses.

Course II: Nutritional Biochemistry

CO1	**Remembering:** Recall key nutrients like vitamins, minerals, basic concepts of enzymes and hormones and their functions in the body. Recall the basic concepts of water and electrolyte balance in the body.
CO2	**Understanding:** Explain the classification of vitamins, how different nutrients contribute to overall health and well-being. Explain the mechanisms by which the body regulates water and electrolyte balance, mechanisms of hormone action, the factors influencing enzyme activity and specificity.
CO3	**Applying:** Apply knowledge of vitamin and mineral deficiencies to assess dietary needs and recommend appropriate interventions. Apply knowledge of water and electrolyte balance to analyze and solve problems related to imbalances. Apply knowledge of enzyme kinetics to predict the outcomes of reactions under different conditions.
CO4	**Analyzing:** Analyze the impact of excessive vitamin intake or deficiency on health, the factors that can disrupt water and electrolyte balance and their physiological consequences. Analyze enzyme-substrate interactions and the role of enzymes in metabolic pathways.
CO5	**Creating:** Develop dietary recommendations based on individual needs and health goals. Develop strategies for maintaining or restoring water and electrolyte balance in specific scenarios. Design experiments to investigate enzyme properties or develop new applications for enzymes.

Course III: Food Service Management

CO1	**Remembering:** Recall key terms, concepts, and regulations related to food service management.
CO2	**Understanding:** Explain the principles and theories behind effective food service management like understanding the concept of inventory control and its importance in minimizing waste in a food service operation.
CO3	**Applying:** Apply knowledge of food service management principles to solve practical problems like menu planning strategies to create a balanced and cost-effective menu for a specific clientele.
CO4	**Analyzing:** Analyze the factors that affect food service operations, such as customer preferences, budget constraints, and industry trends.
CO5	**Creating:** Develop and implement comprehensive food service management plans.

Course IV: Food Science

CO1	**Remembering:** Recall fundamental principles and terminology in food science, types of cereals, pulses, milk products, fleshy foods, condiments, vegetables and fruits and their nutrition profiles.
CO2	**Understanding:** Demonstrate comprehension of the underlying theories and concepts in food science, nutritional benefits of the different foods. Explain the role of condiments in enhancing flavor and texture in different cuisines
CO3	**Applying:** Apply knowledge of food science to solve problems or conduct experiments. knowledge of cereal properties in food preparation, pulse cooking methods, knowledge of dairy product properties in cooking, beverage preparation techniques. Analyze the nutritional content of different vegetables and fruits and their potential health benefits.
CO4	**Analyzing:** Dissect the factors influencing food properties and behaviors in different conditions. the impact of processing methods on the nutritional content of cereals, the role of pulses in plant-based diets and their impact on health, impact of processing on the nutritional content of milk products
CO5	**Creating:** Develop hypotheses, experiments, or innovative solutions based on a deep understanding of food science. Develop new recipes or products with different foods

Course V: Quantity Food Production

CO1	**Remembering:** Recall different methods of quantity food production, key factors in planning and controlling food production processes. Recall the essential components of effective food management.
CO2	**Understanding:** Explain the principles of quantity food production and factors influencing menu planning for large groups. Explain the importance of inventory management, cost control in food service operations and the role of food management in ensuring operational efficiency and customer satisfaction.
CO3	**Applying:** Apply quantity food production and food management techniques in a practical kitchen setting. Apply principles of planning and control to create a cost-effective menu.
CO4	**Analyzing:** Analyze the efficiency and effectiveness of different production methods, the impact of different factors on planning and controlling food production processes. Analyze the financial implications of food management decisions.
CO5	**Creating:** Develop innovative approaches to quantity food production that address specific dietary needs or preferences. Develop comprehensive plans for food production and control for a new food service establishment. Create a strategic food management plan that addresses sustainability and ethical considerations.

Course VI: Family & Community Nutrition

CO1	**Remembering:** Recall basic principles of meal planning, including the importance of balanced diets. Recall the key nutrients crucial during pregnancy, lactation, school going, adolescence and geriatric group
CO2	**Understanding:** Explain the components of effective meal planning, considering nutritional needs and preferences. Explain the physiological changes during pregnancy, lactation, school going, adolescence and older adults that influence nutrient requirements.
CO3	**Applying:** Apply meal planning principles to create a balanced and nutritious weekly meal plan. Apply knowledge of nutrient requirements to recommend a prenatal diet, lactation friendly diet, suitable diets for school going, adolescence and older adults
CO4	**Analyzing:** Analyze the impact of different dietary patterns on health and well-being. Analyze the consequences of nutrient deficiencies during pregnancy, lactation, school going, adolescence and older adults
CO5	**Creating:** Develop a customized meal plan for individuals with specific dietary restrictions or health conditions. Develop a comprehensive prenatal nutrition guide, lactation specific diet, school going, adolescence and older adult specific diets considering various cultural and dietary preferences.

Course VII: Clinical Dietetics

CO1	**Remembering:** Recall the basic principles of therapeutic diets and their role in managing health conditions. Recall common chronic diseases, common diseases affecting the alimentary tract, hepatic and excretory systems and their dietary implications.
CO2	**Understanding:** Explain the rationale behind prescribing specific therapeutic diets for different health conditions. Explain how dietary choices can influence the progression and management of chronic diseases, diseases of alimentary tract, hepatic and excretory diseases.
CO3	**Applying:** Apply knowledge of therapeutic diets to create meal plans for individuals with specific health concerns. Apply knowledge of dietary guidelines to create plans that support individuals with chronic diseases, diseases of alimentary tract, hepatic and excretory diseases.
CO4	**Analyzing:** Analyze the nutritional implications of therapeutic diets and their impact on overall health. Analyze the impact of specific nutrients on chronic disease risk and progression, gastrointestinal health, hepatic and excretory functions.
CO5	**Creating:** Develop a comprehensive guide on therapeutic diets for a specific health condition such as chronic diseases, diseases of alimentary tract, hepatic and excretory diseases.

Course VIII: Public Health, Food Hygiene & Sanitation

CO1	**Remembering:** Recall key principles and concepts in public health and health education. Recall common pathogens responsible for foodborne illnesses, common types of food adulteration and their potential risks.
CO2	**Understanding:** Explain the scope and objectives of public health initiatives, modes of transmission and sources of foodborne diseases, importance of health literacy in promoting positive health behaviors, motives behind food adulteration and its impact on consumer health.
CO3	**Applying:** Apply knowledge of public health and health education strategies to address specific community health challenges and to communicate health information effectively. Apply food safety practices to prevent foodborne illnesses in a kitchen setting. Apply knowledge of food testing methods to detect adulteration in food products.
CO4	**Analyzing:** Analyze the impact of public health policies and health education programs on population health outcomes and behavior change respectively. Analyze outbreaks of foodborne diseases and identify contributing factors. Analyze the consequences of consuming adulterated food on public health.
CO5	**Creating:** Develop a public health campaign and health education curriculum addressing a prevalent health issue in a specific community and for a specific target audience respectively. Develop a comprehensive food safety protocol for a specific food service establishment and set up guidelines for a new food product to ensure compliance with national and international food standards.