❖ PROGRAMME OUTCOME (PO) :

PO No.	Programme Outcomes Upon Completion Of The B.Sc. Degree Programme, the graduate will be able to
PO – 1	Emerge with competency in the subject of Nutrition and Dietetics and apply the knowledge to cater to the needs of Society / Employer / Institution / Own Business / Enterprise.
PO – 2	Imbibe analytical / logical / innovative thinking skills in the field of Food Processing, Community Nutrition and Clinical Nutrition.
PO – 3	Acquire distinct traits and ethics with high professional and to gain a broader insight into the domain conceded, the nation and themselves.
PO – 4	Inculcate scientific temperament through the Projects, Internship and Case study which strengthens the knowledge, skills and research procedures.
PO – 5	Articulate academic understanding, entrepreneurship, community role and skill development by practicing in the state-of-the-art nutrition laboratory and attain empowerment through food industry, health clinics and publics sectors.
PO – 6	To acquire comprehensive and sufficient knowledge of understanding in Nutrition.
PO – 7	Use research based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information or provide valid conclusions regarding nutrition solving diseases.
PO – 8	Excellent communication of nutrition in community survey, hospital visit, ICDS Center visit to develop other branches of sciences, to think existing open programme in nutrition.
PO – 9	Identify, formulate, research literature and analyze complex health problems and searching out the solutions by applying the modified foods and nutrients to mitigate the problems.
PO – 10	Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional dietitian practice.

❖ PROGRAMME SPECIFIC OUTCOME (PSO) :

PSO No.	Programme Specific Outcomes Upon Completion Of These courses, the students would
PSO – 1	Develops a holistic and multidimensional understanding of the basic aspects of Food Science, Nutrition concerns in different stages of life cycle and Food Processing and Preservation for ensuring food availability.

PSO – 2	Provides a planned Professional experience for offering scientific opinion on modern Nutrition and Dietetics related issues and controversies.
PSO – 3	Helps to transpire as a Diet Counsellor, Nutrition / Health Communicator for creating awareness in the society through various Communication Strategies in Nutrition Education emphasizing Information Technology.
PSO – 4	Applies the analytical principles of Food and Nutrients in Food Safety and Security and Public Health strategies to overwhelm current spectrum of malnutrition.
PSO – 5	Strengthens the Competent Graduates, successful Entrepreneurs and energized Professionals to take up carriers in academics, Health Care Centers and Food Processing Industries.
PSO – 6	To make students learn nutrition and apply Nutritional knowledge to important public health issues and distribute such knowledge to population.
PSO – 7	Nutrition graduates have ample scope in academics, higher research institutes, hospital industry, NGO services, food industry, government services and many others.
PSO – 8	Students of Nutrition will get an idea of various aspects of entrepreneurship, various food service outlets and their staff organization, menu planning, service style, beverages.
PSO – 9	Students acquire practical knowledge on diet counseling and diet planning.
PSO – 10	Students will able to gather recent knowledge in different practical techniques regarding nutrigenomics.
PSO – 11	Students will be able to discuss and practice professional standards of scientific inquiry and responsible conduct of scientists that are essential for pursue of new knowledge. Students will be able to process and analyzed at make sound interpretations.

❖ COURSE OUTCOME (CO) :

CO – 01	
CORE COURSE : *1* ***PAPER :*** *C1* ***COURSE TITLE :*** *Basic Nutrition*	
Course Outcomes	• *Utilize knowledge from the physical and biologic al sciences as a basis for understanding the role of food and nutrients in health and disease processes.* • *Provide nutrition counselling and education to individuals, groups, and communities throughout the lifespan using a variety of communication strategies.* • *In this course, students will learn about healthy eating, what micronutrients are and their effects on the body, and how to hold improvement and prevent malnutrition.* • *The topics that are covered in this course include: Basic Chemistry of Vitamins and Minerals. Role of the macro nutrients and micronutrients like Vitamins and Minerals in the Body.*
CO – 02	
CORE COURSE : *2* ***PAPER :*** *C2* ***COURSE TITLE :*** *Food Science and food commodity*	

Course Outcomes	• *Studying biochemistry is crucial for understanding the chemical processes that occur within living organisms. It forms the basis for various scientific disciplines, including biology, medicine, pharmacdogy, and biotechnology. Here are some essential topics and concepts that are fundamental to the study of biochemistry. Atoms, Molecules, and Chemical Bonds: Understanding the structure of atoms, the formation of molecules, and the different types of chemical bonds (covalent, ionic, hydrogen bonds) that hold molecules together.* • *Studying the various types of chemical reactions, such as oxidation-reduction reactions, hydrolysis, and condensation reactions, and their importance in biochemical processes Enzymes and Enzyme Kinetics: Understanding the role of enzymes as biological catalysts, their specificity, and how they accelerate chemical reactions. Enzyme kinetics deals with the study of enzyme reaction rates and mechanisms.* • *Understanding the structure, function, and folding of proteins, which play critical roles in cellular structure, metabolism, and signaling. Studying the 20 standard amino acids, their properties, and how they are linked together during protein synthesis (translation). Understanding the structure and function of carbohydrates, including monosaccharaides, disaccharides, and polysaccharides, as essential sources of energy and cellar recognition.* • *Understanding the different types of lipids, including fats, phospholipids, and steroids, and their roles in energy storage, cell membranes, and signaling. Understanding the structure and function of DNA and RNA, including DNA replication, transcription, and translation. Studying the biochemical pathways induced in the breakdown and synthesis of molecules for energy production and cellular processes. Understanding how cells produce energy through aerobic and anaerobic respiration and how plants convert light energy into chemical energy during photosynthesis.* • *By delving into these essential aspects of biochemistry, researchers and professionals gain a deeper understanding of the molecular basis of life, disease mechanisms, dung development, and various applications in biotechnology and medicine.*
CO – 03	
CORE COURSE : *3* ***PAPER :*** *C3* ***COURSE TITLE :*** *Nutritional Biophysics And Biochemistry*	
Course Outcomes	• *Student can give knowledge about viscosity, surface tension and colloids.* • *Gain knowledge about replication translation transcription.* • *Gain Knowledge about acid base balance and electrolyte fluid.* • *Gain knowledge about general properties digestion absorption metabolism of carbohydrate protein fat.*
CO – 04	
CORE COURSE : *4* ***PAPER : C****4* ***COURSE TITLE :*** *Human Physiology*	

Course Outcomes	• *Studying human physiology is essential for understanding how the human body functions and how its various systems work together to maintain health. Here are some key aspects that are essential for the study of human physiology.* • *Understanding the structure and function of cells is fundamental to grasping how organs and tissues are formed and how they function. Knowledge of the body's structure, including organs, tissues, and organ systems, is crucial for understanding their physiological functions.* • *Understanding the chemical processes that occur within living organisms provides insight into how cells and systems carry out their functions.* • *Understanding the genetic basis of physiological processes helps explain variations in human physiology and susceptibility to certain diseases.* • *Studying the nervous system is essential for understanding how the brain and nerves control body functions and how the body responds to various stimuli.* • *Understanding how the heart and blood vessels function to transport oxygen, nutrients, and waste products throughout the body. Understanding how the lungs and respiratory system facilitate gas exchange and provide oxygen to the body.* • *Understanding the role of hormones and the endocrine system in regulating various physiological processes and maintaining homeostasis.* • *Understanding how the digestive system processes food, absorbs nutrients, and eliminates waste products. Understanding the kidney's role in maintaining fluid and electrolyte balance, filtering waste products, and regulating blood pressure.* • *Understanding how muscles contract and enable movement. Understanding the body's immune system and how it defends against pathogens and maintains immune tolerance.* • *Understanding the processes involved in human reproduction and how hormones regulate reproductive functions.* • *Understanding the functions of the skin, such as protection, temperature regulation, and sensory reception. Studying how the body responds and adapts to physical activity and exercises.* • *By studying these essential aspects of human physiology, researchers and medical professionals gain a deeper understanding of the human body, enabling them to diagnose and treat diseases, develop new medical interventions, and promote overall health and well-being.*
CO – 05	
CORE COURSE : *5* ***PAPER : C****5* ***COURSE TITLE :*** *Family Meal Management & Meal Planning*	
Course Outcomes	• *Gain knowledge about balanced diet, food groups and planning of balanced diet.* • *Energy modification and nutritional care for weight management.* • *Methods of improving nutritional quality of foods, fermentation, fortification, germination.* • *Introduction, importance of goals of meal planning.* • *Factor affecting milk management.* • *Know the factor affecting the nutrient needs during different stages of life cycle and the RDA for various age groups.*

	• *Prepare diet chart for infant, preschool children, school children, and old age, adolescent.* • *Prepare special nutrition for pregnancy, lactation, sports, space.*
CO – 06	
CORE COURSE : 6 PAPER : C6 ***COURSE TITLE : Community Nutrition & Nutritional Epidemiology***	
Course Outcomes	• *To understand the etiology, prevalence, clinical signs and symptoms of nutritional deficiency diseases (Vitamin A deficiency, anaemia, IDD, PEM etc.).* • *To gain understanding of physiology in health and pathophysiology in disease.* • *The Nutritional Epidemiology specialization provides rigorous training in the biological aspects of nutrition, epidemiology, biostatistics, and select related disciplines.* • *The overall objective is to enable students to investigate relationships between diet and disease.* • *The Nutritional Epidemiology specialization provides rigorous training in the biological aspects of nutrition, epidemiology, biostatistics, and select related disciplines.* • *The overall objective is to enable students to investigate relationships between diet and disease.* • *The basic aim of nutrition education is to get consumers to eat a diet that promotes health and decreases the risk of nutrition-related diseases.* • *Public health surveillance, field investigation, analytic studies, evaluation, and linkages.* • *Epidemiology is the study of how often diseases occur in different groups of people and why.* • *Epidemiological information is used to plan and evaluate strategies to prevent illness and as a guide to the management of patients in whom disease has already developed.*
CO – 07	
CORE COURSE : 7 PAPER : C7 ***COURSE TITLE : Basic Dietetics***	
Course Outcomes	• *To understand the role, code of ethics, classification of dietitian.* • *To know about the general objective, importance, various factors of diet therapy.* • *To know about the principle of therapeutic diet and the factors to be considered in planning therapeutic diet.* • *To gain knowledge about various types of routine hospital diet (regular, clear fluid diet, full fluid, diet, soft diet) and know about parenteral and eternal feeding.* • *To know about various health issues and problems, their etiology, symptoms, types, dietary management, and included and excluded food of various diseases.* • *To know issues and symptoms of feeding problem, management of feeding problem.*
CO – 08	

SKILL ENHANCEMENT COURSE : 1 PAPER : SEC1 ***COURSE TITLE : Immunology, Toxicology And Public Health***	
Course Outcomes	• *To demonstrate active and passive immunity.* • *Describe mechanisms of cell mediated immunity.* • *To identify the mechanism of action and resultant toxicities of xenobiotic like metal, lead, arsenic, pesticides: organophosphates, carbonates, organochlorine.* • *Elaborate clear concept of avian and aquatic toxicology, BOD & COD.* • *To know about the mechanisms of humoral immunity, immunoglobulin isotopes.*
CO – 09	
CORE COURSE : 8 PAPER : C8 ***COURSE TITLE : Diet and Dietetics***	
Course Outcomes	• *To understand about lactose intolerance, galactosemia, phenylketonuria and its dietary management.* • *To know etiology, symptoms, diagnostic tests and dietary management of various intestinal disease.* • *To know etiology, symptoms, diagnostic tests and dietary management of malabsorption syndrome, celiac sprue, tropical sprue, intestinal brush border deficiency and understand about RUTF.* • *To understand about liver disease, liver function tests and nutritional care in liver disease.* • *To know etiology, symptoms, diagnostic tests and dietary management of anaemia, arthritis and gout.*
CO – 10	
CORE COURSE : 9 PAPER : C9 ***COURSE TITLE : Food Microbiology***	
Course Outcomes	• *Microorganisms can cause spoilage of foods, Microorganisms are used to manufacture a wide variety of food products Microbial diseases can be transmitted by foods. Explain the interactions between microorganisms and the food environment, and factors influencing their growth and survival.* • *Explain the significance and activities of microorganisms in food.* • *Upon successful completion, students will have the knowledge and skills to: Describe diversity of microorganisms, bacterial cell structure and function, microbial growth and metabolism, and the ways to control their growth by physical and chemical means.* • *Food microbiology is the study of the microorganisms that inhabit, produce or contaminate food.* • *Its purpose is based on detecting and determining the germ content, minimizing the risks of contamination and preventing outbreaks of foodborne diseases.* • *Microbiology is used in many aspects of daily life, including food production, biodegradation, the manufacture of commercial goods and genetic engineering.* • *They are required in a variety of dishes. Microorganisms, for instance, are required for the production of curd and cheese.*

	• *Understand the regulation of biochemical pathway and possible process modifications for improved control over microorganisms for microbial product synthesis.*
CO – 11	
CORE COURSE : 10 PAPER : C10 ***COURSE TITLE : Food Processing And Preservation***	
Course Outcomes	• *Processing and preservation methods help eliminate or reduce harmful bacteria, pathogens, and contaminants in food, making it safe for consumption and reducing the risk of foodborne illnesses.* • *These techniques extend the shelf life of food products, preventing spoilage and reducing food waste.* • *Processing and preservation allow food to be available throughout the year, regardless of seasonal variations in supply.* • *Certain preservation methods retain the nutritional content of food, ensuring essential vitamins and minerals are not lost during storage.* • *Processed and preserved foods offer convenience and ease of use, making meal preparation more accessible for consumers.* • *Preservation enables the transportation of food over long distances, facilitating global trade and ensuring food security in various regions.* • *Food Innovation: Food processing allows for the development of new and innovative products, leading to a diverse and expanded food market.* • *Food processing and preservation industries create jobs and contribute significantly to the economy.* • *Overall, food processing and preservation play a crucial role in ensuring food safety, availability, and sustainability, making them essential for a well-functioning food system.*
CO – 12	
SKILL ENHANCEMENT COURSE : 2 PAPER : SEC2 ***COURSE TITLE : Women Health And Nutrition***	
Course Outcomes	• *Studying women's health is essential to address the unique biological, psychological, and social aspects that affect women throughout their lives.* • *It helps in understanding conditions specific to women, such as reproductive health, hormonal changes, and gender-related health disparities.* • *This knowledge enables healthcare professionals to provide better care and develop targeted interventions to improve women's quality of life.*
CO – 13	
CORE COURSE : 11 PAPER : C11 ***COURSE TITLE : Public Health And Hygiene***	
Course Outcomes	• *To understand about food adulteration, various food standard and laws such as PFA, FASSAI, HACCP, ISO, Consumer guidance society, consumer rights, and the role of food inspectors.* • *To gain knowledge about the importance of water to the community, water borne disease, waste and waste disposal.*

	• *To gain knowledge about various food borne infections disease such as typhoid, paratyphoid, Cholera, amoebiasis and know about various toxins in food.* • *To know various communicable diseases and their prevention through hygiene and sanitation and how a food handler maintain hygiene and sanitation.* • *To know about Indices of thermal comfort, various etiology, effect and prevention of air pollution.* • *To know about health, disease, normality and mental health, prevention of mental diseases and various mental services in India and gain knowledge about alcohol related and drug related problems.* • *To know about health care delivery system, history, three tire health care delivery system, primary health care, CHV, urban health infrastructure.* • *To know about demographic cycle, population pyramid, factors affecting fertility and its indicator, population explosion as a public health problem, various approaches for population control and learn about various family planning method.*
CO – 14	
CORE COURSE : 12 PAPER : C12 ***COURSE TITLE : Research Methodology***	
Course Outcomes	• *Students who complete this course will be able to understand and comprehend the basics in research methodology and applying them in research/ project work.* • *This course will help them to select an appropriate research design.* • *How to formulate a research problem and how to design your research. We will cover how to sample data for research, collect and process the data and how to analyse and present it.* • *How to formulate a research problem and how to design your research. We will cover how to sample data for research, collect and process the data and how to analyse and present it.* • *Research methodology gives the education researcher the necessary training in gathering material and arranging or card-indexing them, participation in the field work when required, and also training in techniques for the collection of data appropriate to particular problems, in the use of statistics, questionnaires.* • *The main objective of this course is to introduce the basic concepts in research methodology in social science.* • *This course addresses the issues inherent in selecting a research problem and discuss the techniques and tools to be employed in completing a research project.*
CO – 15	
DISCIPLINE SPECIFIC ELECTIVE : 1 PAPER : DSE-1 ***COURSE TITLE : Food Sanitation and Hygiene***	
Course Outcomes	• *Know everything in details about personal hygiene and its Importance different types of food hazards and contaminants different cleaning methods.* • *Studying food sanitation and hygiene is essential to ensure the safety of consumers.* • *It helps prevent foodborne illnesses, contamination, and the spread of diseases.*

	• *Proper knowledge in this area ensures that food is handled, prepared, and stored in a way that minimizes risks to public health.*
CO – 16	
DISCIPLINE SPECIFIC ELECTIVE : 2 PAPER : DSE-2 ***COURSE TITLE : Food Quality and Sensory Evaluation***	
Course Outcomes	• *After completion of this course the learner will be able to know about the principle and method of spectrophotometry and calorimetry.* • *Gain knowledge about the mechanism and taster, colour, texture perception.* • *They understand how to apply texture on food.* • *They have knowledge about the physiology of olfaction and gestation.* • *They also gain knowledge about electronic tongue and electron nose.* • *Gain practical knowledge training of sensory panel.* • *They also gain knowledge about texture evaluation of various food samples.* • *Gain knowledge about quality evaluation of various food stuffs.*
CO – 17	
CORE COURSE : 13 PAPER : C13 ***COURSE TITLE : Dietetics And Counselling***	
Course Outcomes	• *Understand the principles and methods of counselling.* • *Understand how to apply counselling methods to patients with different diseases.* • *Gain knowledge on computer operations and applications.* • *Facilitate students to design and use computer-based projects and programs.* • *Gain practical knowledge on planning nutrition counselling session and organizing health camps.* • *Impart the nutrition education using visual aids.* • *Acquire skills in collecting and submitting data of different disease.*
CO – 18	
CORE COURSE : 14 PAPER : C14 ***COURSE TITLE : Entrepreneurship Development, Enterprise Management And Entrepreneurship For Small Catering Units***	
Course Outcomes	• *Study of various aspects of entrepreneurship for setting upon e'sown enterprise in future.* • *Brief idea of various food service outlets and their staff organization, menu planning, service style, beverages.* • *Understand the basic principles of management in food service units.* • *Develop managerial skills in food service industries.* • *Update the skills and techniques in starting up a food service unit successfully.* • *Gain knowledge on personnel management.* • *Learn about SWOT Analysis.* • *Acquire skills in market survey.*
CO – 19	
DISCIPLINE SPECIFIC ELECTIVE : 3 PAPER : DSE-3 ***COURSE TITLE : Geriatric Nutrition***	

Course Outcomes	• *Demonstrate knowledge and understanding of current issues in ageing and later life.* • *Reflect on experiences of ageing and later life.* • *Understanding the implication of ageing population for rehabitation.* • *Understanding Ageing Sensory System and issues with falling.* • *To identify physiological and biochemical changes during old age.* • *Understanding physiological and biochemical changes during old age.* • *How to asses nutritional status of older adults.* • *Studying Generational equality and Geriatric Service for the elderly in Western Countries and India.* • *Know the ethical issues in geriatric medicine.*
CO – 20	
DISCIPLINE SPECIFIC ELECTIVE : 4 PAPER : DSE-4 ***COURSE TITLE : Bakery Technology And Mushroom Culture***	
Course Outcomes	• *To know economic importance, current status, growth rate of Bakery Industry in India.* • *To gain knowledge about various types of equipment used for bread, bun and pizza base products.* • *To assess product quality measurement of cake, biscuits and cookies.* • *To identify breakfast cereals, Macaroni products and Malt.* • *Understanding mushrooms, type and mushroom production.* • *Learning cultivation of different edible mushroom.* • *Building knowledge on diseases and pests of mushroom and their management.* • *Acquaintance with climatic requirements of mushroom cultivation.* • *Learning value added products preparation from mushroom.*