B.Sc. NUTRITION AND DIETETICS

PROGRAMME OUTCOME

PO1. KNOWLEDGE

Students:

- Follow the developments in the field of nutrition and dietetics
- Have knowledge and skill of the information and communication technologies essential to follow today's technological developments and improve themselves in this field
- Acquire the skill of understanding the basic values and culture of the society they live in, adapting to these and changing themselves positively
- Have knowledge of the concepts of physiology, nutritional biochemistry, nutrition, dietetics and other terminologies related to human health.

PO2. SKILLS

Students:

- Apply the knowledge and skills they obtain to the situations encountered in both national and international level, as well as the ability of lifelong learning
- Aware of professional ethics in the nutrition and dietetics field
- Apply the scientific methods and techniques, as well as quality management processes related to food, nutrition and dietetics service sector
- Apply the skills of designing experiments/projects to solve issues related to nutrition and dietetics in the society

PO3. COMPETENCES

Students:

- Use the knowledge to increase the level of health and quality of life in the society they live.
- Apply the professional competency acquired during the process of learning towards their career growth with the collaborative and cooperative attitude.

Program Specific Objectives (PSO)

Nutrition & Dietetics students will acquire

1. Understanding, critically assessing and knowing how to use and apply information sources related to nutrition, food, lifestyle and health.

2. Being familiar with nutrients, their function in an organism, bioavailability, requirements and recommended quantities, as well as the bases of energetic and nutritional balance.

3. Interpreting a nutritional diagnosis, evaluating nutritional aspects of a clinical record and implementing a dietary treatment plan.

4. Understanding the structure of food services, nutrition departments and hospital nutritionists, identifying and developing the functions of a nutritionist-dietician in a multidisciplinary team.

5. Perform food system management and leadership functions that consider sustainability in business, healthcare, community, and institutional areas

Title of the Course: Food Science

COURSE OUTCOMES

CO	Course Outcomes	Knowledge level	Units
CO1	Identify and classify foods based on the food grouping system and illustrate their use	K1, K2	I
CO2	Define the foods, describe its structure and distinguish their Composition	K1, K2	II,III,IV,V
CO3	Demonstrate their ability in selecting quality food and appraise the varieties in a food	K3, K5	II,III,IV,V
CO4	Compare the nutrients present in different types of food and choose foods rich in specific nutrients	K4, K3	II,III,IV,V
CO5	Analyse the effect of cooking on the quality of food and discriminate the desirable and undesirable changes	K4, K5	II,III,IV,V

Title of the Course: FOOD SCIENCE PRACTICAL

COs	Course Outcomes	Knowledge Levels
CO1	Examine the physicochemical changes of food	K4
CO2	Demonstrate the methods of nutrient retention while cooking	K5
CO3	Illustrate the factors that affect cooking quality of different food	K5
CO4	Prepare variety of foods by adopting different cooking methods	K6

Title of the course: NUTRITION AND FITNESS (Skill Enhancement SEC 1 (NME))

Cos	Course Outcomes	Knowledge Level	Units
CO1	Understand the concept of nutrition in relation to fitness	K1,K2	I, II, III
CO2	Determine the nutritional requirement for fitness and physical Performance	K3, K2	I,II,IV
CO3	Illustrate the relationship between body composition and fitness	K2, K3	I, III
CO4	Interpret and explain the role of physical activity in preventing lifestyle disorders	K2, K4	II, III, IV
CO5	Relate and speculate the role of nutrition in preventing lifestyle related diseases	K2, K3, K6	IV
CO6	Assess and validate the role of stress management	K5, K6	V

Title of the course: DIMENSIONS OF HEALTH (Skill Enhancement (Foundation Course))

COs	Course Outcomes	Knowledge Level	Units
CO1	Enumerate the determinants and dimensions of health	K1	I
CO2	Discuss the physical aspects of health	K2	II
CO3	Illustrate the determinants and factors affecting social health	K2	III
CO4	Examine the importance of emotional and social health	K3	IV
CO5	Cite the interaction between health dimensions and health Promotion	K2	V

Semester II

Title of the course: HUMAN PHYSIOLOGY

COs	Course Outcomes	Knowledge Level	Units
CO1	Examine the role of cells, tissues and immune System	K1	I
CO2	Describe the anatomy of the various organ systems in the human body	K1,K2	I, II, III, IV, V
CO3	Differentiate the major organs and the accessory organs	K2,K4	I, II, III, IV, V
CO4	Relate the functions of each organ in the human system	K3	I, II, III, IV, V
CO5	Compare the hypo and hyper function of the endocrine glands	K5	IV

Title of the Course: HUMAN PHYSIOLOGY PRACTICAL

Cos	Course Outcomes	Knowledge Level
CO1	Identify and differentiate the different types of cells and organs	K4
CO2	Describe the histology of muscles	K3
CO3	Distinguish the different blood groups and recognize the Rh factor	K4
CO4	Determine the bleeding and clotting time	K3
CO5	Measure blood pressure and record the respiratory and pulse rate.	K5

Title of the course: BASICS OF FUNCTIONAL FOODS [Skill Enhancement SEC 2 (NME II)]

COs	Course Outcomes	Knowledge Level	Units
CO1	Describe and classify the functional foods	K1, K2	I, II, III, IV
CO2	Explain the sources and enumerate the health benefits of prebiotics	K3, K1	II
CO3	Differentiate the probiotics and synbiotics and associate their health Benefits	K4, K2	III
CO4	Justify the effects of bioactive compounds and cite the role of functional components and antioxidants	K5,K2	IV
CO5	Summarize the preventive role of functional foods in diseases	K5	V

Title of the course: FUNDAMENTALS OF BAKERY [Skill Enhancement SEC 3]

Cos	Course Outcomes	Knowledge Level	Units
CO1	Enumerate the principles of baking and classification of baked products	K1	I
CO2	Cite the role of ingredients in baked products	K2	III
CO3	Differentiate the major and minor equipment	K2	II
CO4	Prepare different types of baked products	K3	IV, V
CO5	Appraise the faults in baked products	K5	IV, V

SEMESTER III

Core/Major Course III: Nutritional Biochemistry

Course Learning Outcomes:

1. To acquire knowledge related to the role of TCA cycle in central carbon metabolism.
2. To understand the importance of lipid as storage molecules and as structural component of bio membranes.
3. Capable of describing biochemical pathways relevant in nutrient metabolism.
4. To understand the concepts of preparation of buffers
5. To acquire fundamental knowledge on enzymes and their importance in biological reactions.

Core/Major Practical III: Nutritional Biochemistry

Course Learning Outcomes:

1. To learn qualitative and quantitative analysis of biological fluids such as urine, blood and their estimation using standard methods.

SBEC I: Food Preservation and Processing

Course Learning Outcomes:

1. Describe the principles of food preservation
2. Suggest the application of the preservation process depending on the type of food.
3. To understand the principles of processing plant foods and to study the need for processing foods.
4. Choose the appropriate application of certain conservation processes with regard to the preservation of quality and the satisfactory durability of food products.
5. 0ptimize process parameters for selected conservation processes taking into account the physico-chemical properties of food products.

SEMESTER IV

Core/Major Course IV: Principle of Human Nutrition

Course Learning Outcomes:

1. Summarize and critically discuss and understand both fundamental and applied aspects of nutrition.
2. Able to explain functions of specific nutrients in maintaining health
3. Identifying nutrient specific force and apply the principles from the various factors of foods.
4. Gain in basic knowledge of the different nutrients and their role in maintaining health of the community
5. Develop skills in qualitative analysis and quantitative estimation of nutrients.

Core/Major Practical IV: Food Analysis and Quality Control

Course Learning Outcomes:

1. To understand different sampling techniques employed in chemical analysis of foods
2. To understanding on the quality attributes, their measurement principle and instrumentation of various instruments used in food quality analysis.
3. To learn about the importance of various methods to identify any adulteration aspect of food.

SBEC II: Food Standard and Quality Control

Course Learning Outcomes:

1. To provide an opportunity to learn food quality standards.
2. To develop the skills on the standardization of food products with respect to quality maintain according to universal food standards worldwide.
3. To understand the principles of sensory evaluation
4. To develop skills to carry out sensory evaluation of a newly developed product

SEMESTER V

Core/Major Course V: **Nutrition in Life Cycle**

Course Learning Outcomes:

1. To apply knowledge of the science of nutrition to human health across the lifespan.
2. Relate foods and nutrients to the biological requirements of humans at different stages of the life cycle.
3. Explain, compare and contrast the nutritional requirements of humans during different stages of the life cycle.
4. Apply collaboration and team work skills through shared learning in nutritional disease topics.
5. To formulate a dietary intervention plan to address nutritional deficiencies or excesses according to the health needs of individuals relative to age, developmental and disease status.

Core/Major Course VI **Advanced Dietetics**

Course Learning Outcomes:

1. Integrate knowledge of research principles and methods associated with nutrition and dietetics practice.
2. Use effective and appropriate communication skills in providing information, advice and professional opinion to individuals, groups and communities.
3. Collect, organize and assess data relating to the health and nutritional status of individuals, groups and populations.
4. Demonstrate initiative and judgment using a professional, ethical and entrepreneurial approach advocating for excellence in nutrition and dietetics.
5. Independently plan and execute a research project in regard to nutrition and dietetics practice.

Core/Major Practical V: Nutrition in Life Cycle

Course Learning Outcomes:

1. Nutrition in life cycle focuses on food management through proper planning, preparation, monitoring, implementation and supervision of different age groups and to develop basic counseling skills as dietitian.

Elective Course I: Public Health Nutrition

Course Learning Outcomes:

1. Finally, the concepts and knowledge required for the delivery of community nutrition services will be applied to program planning, intervention and program evaluation.
2. Gaining knowledge on nutritional programmes and policies overcoming malnutrition.
3. Understanding the national, international and voluntary nutritional organizations to combat malnutrition.
4. Able to organize community nutrition education programme with the application of computers.
5. Apply immunological intervention programmes to overcome epidemic of communicable diseases.

Elective Course II: Basic in Research Methodology

Course Learning Outcomes:

1. Basic knowledge on the role and importance of research in science.
2. Critically analyse research methodologies identified in existing literature.
3. Understanding the complex issues inherent in selecting a research problem, selecting an appropriate research design, and implementing a research project.
4. Develop a research proposal or industry project plan.
5. Search for, select and critically analyse research articles and paper.

SBEC III : Bakery Science

Course Learning Outcomes:

1. Resize recipes to meet production needs and equipment capacities.
2. Scale, mix, mold, proof and bake yeast raised goods.
3. Prepare cookies using various common dividing and panning techniques.
4. Prepare product finishes such as washes, glazes, icings and fillings.
5. To develop skills for setting up a bakery unit. And to enhance entrepreneurial skills in bakery and confectionery.

SBEC IV Practical I Food Preservation and Bakery

Course Learning Outcomes:

1. Apply major food preservation techniques and explain underlying principles.
2. Design common bakery and confectionery recipes.

SEMESTER V& VI

Core/ Major Course VII: Institutional Training

Course Learning Outcomes:

1. Explore career alternatives prior to graduation.
2. Integrate theory and practice.
3. Develop work habits and attitudes necessary for job success.
4. Develop communication, interpersonal and other critical skills in the job interview process.
5. Build a record of work experience.

SEMESTER VI

Core / Major Course VIII: Food Microbiology

Course Learning Outcomes:

1. Explain the interactions between microorganisms and the food environment, and factors influencing their growth and survival.
2. Explain the significance and activities of microorganisms in food.
3. Describe the characteristics of food borne, waterborne and spoilage microorganisms, and methods for their isolation, detection and identification.
4. Understand the role of microorganisms in environment.
5. Apply preservation techniques to avoid food spoilage.

Core/ Major Course IX: Quantity Food Service Physical Facilities

Course Learning Outcomes:

1. Manage the human resources within a food services organization or department.
2. Communicate appropriately with clients, staff and management.
3. Apply food services technology and operate industry equipment.
4. Develop nutritional menus for food service production.
5. Design and run a quantity food service establishment.

Elective Course III: Nutrition for Sports and Fitness

Course Learning Outcomes:

Upon successful completion of the course students shall be able to:

1. Explain the principles of physical fitness and nutrition (such as body composition, energy intake, energy expenditure, and the acute and chronic physical changes related to exercise and nutrition) complement each other in helping to develop physiological well-being and overall health.
2. Explain the principles of fitness and nutrition (such as setting realistic short-term behavior change goals and the relationship of exercise and diet to stress reduction) complement each other in helping to develop psychological well-being and overall health.
3. Identify some of the social and cultural influences on food habits and exercise/activity patterns.
4. Evaluate current nutritional information with regard to its contribution to Health and physical fitness.
5. Apply the knowledge acquired for planning diet for athletes.

Core Practical VI: Dietetics

Course Learning Outcomes:

1. Understanding of the conditions where nutrition plays a significant role in disease management.
2. Develop the knowledge to provide nutrition and dietetic care for individuals, groups and populations who have or already are at risk of developing long-term health conditions.

SBEC V: Diet Counselling

Course Learning Outcomes:

1. Understanding the diet counseling skills and acquaint them with basic principle.
2. Determine and translate nutrient needs into menus for individuals and groups across the lifespan, in diverse cultures and religions.
3. Students will be able to interpret and apply nutrition concepts to evaluate and improve the nutritional health of individuals with medical conditions
4. Produce oral and written communications for a group education

session.

5. Interview individuals for diet histories and Counsel individuals.

SBEC IV: Entrepreneurship Development

Course Learning Outcomes:

1. Understand the concept of entrepreneurship.
2. Identify ways to approach supportive Institutions and Banks for starting an enterprise.
3. Analyze the steps in product selection and form of ownership.
4. Focus on the formation of project proposal and practice effective accounting processes.
5. Understand the requirements to become an entrepreneur.

SEMESTER III

Allied Course II: General Home Science I

Course Learning Outcomes:

1. Develop an understanding of concepts and basics of textiles.
2. Understands and define the key textile terms.
3. Understand basic principles of clothing construction.
4. Concept, definition, universality and scope of family resource management.
5. Practicing knowledge gained on selection of site and building principles in real life situations.

SEMESTER III & IV

Allied Practical II General Home Science

SEMESTER IV

Allied Course II: General Home Science II

Course Learning Outcomes:

1. Provide situations to understand significance of family income and expenditure and saving for future.
2. Know the importance of early childhood years and significance of intervention programs for early childhood development.
3. Learn about women's human rights and laws related to women in India.

4. Gain knowledge on consumer protection Laws and Acts and reflect upon personal rights and responsibilities
5. Learn about the concept of extension, extension approaches and models

SEMESTER III (other major)

NMEC I Basic Food Science

Course Learning Outcomes

The students will be able to

1. Know the composition of various foods.
2. Understand the effects of cooking on nutritive value.

SEMESTER IV (other major)

NMEC II Basic Nutrition

Course Learning Outcomes

The students will be able to

1. Understand the principles of nutrition
2. Learn about the nutrients and deficiency

M.Sc. FOOD &NUTRITION

PROGRAMME OUTCOMES - M.Sc FOOD AND NUTRITION	
PO1	**Disciplinary knowledge and skills:** Possesses sound knowledge on the principles of Food science nutrition and the relationship between diet and health; acquires skill in Applying knowledge gained to prevent and manage disease conditions, promote health And be a productive member in the food processing and health sector.
PO2	**Skilled communicator:** Acquires the ability to translate evidence-based scientific Information into practical applications for health promotion; Develops skills necessary to be an effective dietitian/nutritionist.
PO3	**Critical thinker and problem solver:** Develops analytical skills and capabilities to resolve the problems. Efficiently to cater to the needs of a client, customer, an individual, family and society. Either independently or with the support of concerned authorities.
PO4	**Sense of inquiry:** Develops capability to probe the factors affecting the diet disease Relationshipandarriveatdietmodificationsandrecommendationstoenhancehealth and to a manage disease efficiently.
PO5	**Team player/worker :** Displays ability to be a good team player either as a dietitian in the healthcare industry or as an employee in the food industry.
PO6	**Skilled project manager:** Demonstrates managerial skills required to be an Entrepreneur or serve in various capacities in the foodservice industry, hospitals and Fitness centres.
PO7	**Digitally Efficient:** Acquires the ability to utilize ICT for professional purposes in the hospital or in the food processing industry.
PO8	**Ethical awareness/reasoning:** Remains committed to ethical regulations while practicingasnutritionists,dieticians,foodservicemanagersandhospital administrators.
PO9	**National and international perspective:** Values and appreciates societal, environmental,health,safety,andculturalissuesrelatedtofoodwithinlocaland Global contexts.
PO10	**Lifelong learners:** Motivated to be updated at all times in order to achieve personal And professional goals and contribute significantly towards the health and well-being Of the family, community and society at large.

PROGRAMME SPECFIC OUTCOMES	
PSO1	Attain enhanced knowledge of the recent advancements and trends in Nutrition, Dietetics and its Allied Sciences
PSO2	Acquire scientific temper leading to critical thinking and research motivation in Nutrition, Dietetics and its Allied Sciences
PSO3	Design and communicate scientific concepts, experimental results & analytical arguments and develop solutions for challenging problems of the society
PSO4	Demonstrate the commitment to the discipline of Personalized and Public Health Nutrition to uphold ethical principles in their career and contribute to societal health, safety and legal issues; and practice their responsibilities as a Nutritionist / Dietitian and other professionals
PSO5	Acquire essential skills in different lab techniques and interpret experimental data, applicable for innovative methods and advanced researches to draw logical conclusions.
PSO6	Comprehend the principles and applications of Nutrition and Dietetics and its Allied Sciences and apply them to enhance our life style

SEMESTER I

Title of the Course: Advanced Food Science

CO No.	CO Statement
CO1	Overview the relationship between the chemical structure and theproperties of the main components in food like starch, protein and lipids.
CO2	Understand the Composition and characteristics of variousfood commodities.
CO3	Explain the cooking quality of foods and apply food scienceknowledge in food industries
CO4	Identify and understand the nutrients and functions of foods inmaintaining health
CO5	Analyze the proper use of food colors and food additives in safe foodpreparation.

Title of theCourse: **Advanced Human Physiology**

CO No.	CO STATEMENT
CO 1	Develop insight of normal functioning of all the organ systems of the body and their interaction. Understand the current state of knowledge about the functional organization of Human Cell and Histology.
CO 2	Understand the structural and functional organization of Blood and Cardiac System
CO 3	Understand the structural and functional organization of Respiration, Immunity and Endocrine GIT and Urinary System
CO 4	Comprehend the structural and functional organization Digestive System and Reproductive System
CO 5	Understand the structural and functional organization of Skin, Nervous and Excretory system

Title of theCourse: **Advanced Food Science Practical**

COURSE OBJECTIVES:

1. To enable the students
2. Comprehend the knowledge gained on characteristics and properties of foods during cookingApply the properties of food in various food processing and preparations Analyse the factors affecting cooking quality of foods
3. Create appropriate food preparation and processing methods to ensure quality standards

COURSE OUTCOME:

On successful completion of the course the students will be able to

CO No.	CO Statement
CO1	Gain knowledge on sensory analysis and cereal cookery concept
CO2	Understand the properties of various food.
CO3	Analyze the cooking quality of foods and apply knowledgein food industries.
CO4	Identify and understand the Physical characteristics.
CO5	Revise appropriate food preparation and processingmethods to ensure standards in food industry.

Title of theCourse: Macronutrients

COURSE OUTCOMES:

After studying this paper, the students would know

CO No.	CO STATEMENT
CO1	The essentials of nutrients in growth and development of humans
CO2	The importance of major nutrients in maintaining human health and leading active lifestyle
CO3	The enhancement of nutritional quality of the diet.
CO4	Identify the various types & sources of food borne illness and methods of prevention.
CO5	The role of nutrients in health and diseases.

Title of theCourse: Food processing and technology

COURSE OUTCOME:
On successful completion of the course the students will be able to

CO No.	CO Statement
CO1	The concepts and principles of food processing.
CO2	The various processed food products from plant and animal sources.
CO3	The by-products utilization from food processing.
CO4	The systematic knowledge of basic and applied aspects in food processing and technology.
CO5	The various post-harvest technologies for different food products

SEMESTER II

CORE: IV: RESEARCH METHODS IN NUTRITION

OBJECTIVES:

1. To provide students understandings about the basic concepts, approaches and methods in conducting research thereby enabling them to appreciate and critique the nuances of designing a research study as well the ethical dimensions of conducting researches.
2. To explain the importance of research in food science and nutrition.
3. To make students understand the types of tools applicable to research problem and develop skills of preparing out line of research work and construct common data collection tools.

COURSE OUTCOME:

On successful completion of the course the student will be able to

CO No.	CO STATEMENT
CO 1	Demonstrate knowledge of the scientific method, purpose and approaches to research and Become a qualified researcher.
CO 2	Identify and selection of the research sampling and scales of measurement
CO 3	Understand the types of tools applicable to research problem and develop skills of preparing out line of research work and construct common data collection tools

CO 4	Assess the numerical data for providing statistical evidences to support the research results and interpretation of data with the use of tables and pictorial representations
CO 5	Present research data in a scientific manner and Understand the key elements of a research report and various applications of computer in Nutrition research

CORE - V ADVANCED DIETETICS

COURSE OBJECTIVES:

1. To acquire Knowledge regarding the effect of various diseases on nutritional statusand nutrient requirement
2. To understand the modifications in nutrients and dietary requirements fortherapeutic condition.
3. To Learn recent concepts in dietary management of different diseases.

COURSE OUTCOME:

On successful completion of the course the students will be able to

CO No.	**CO Statement**
CO1	Critique the Nutritional screening technique
CO2	Comprehend the current concepts of therapeutic diets and critically ill
CO3	Implement the dietary principles on various disorders.
CO4	Acquire the knowledge of diet counseling skills.
CO5	Apply the dietary principles to manage the lifestyle disorders in the society

CORE VI: ADVANCED DIETETICS PRACTICALS

COURSE OBJECTIVES:

1. To acquire Knowledge in planning diets for various disordersTo gain knowledge in diet counselling and educating patients.
2. To understand the therapeutic modifications of diet.

COURSE OUTCOME:

On successful completion of the course the students will be able to

CO No.	CO Statement
CO1	Evaluate various therapeutic diets
CO2	Identify the requirements for disease conditions and critically ill patients.
CO3	Assess and plan the diets for various disease conditions.
CO4	Create Knowledge in nutrient calculations and dietary principles.
CO5	Design the personalized diets for different individuals in the society

ELECTIVE –III: **NUTRITION THROUGH LIFECYCLE**

COURSEOBJECTIVES:

To know

- The computation of Recommended Dietary Allowances
- Impart knowledge on the importance of nutrition during lifespan.

COURSE OUTCOME:

On successful completion of the course the students will be able to

CO No.	CO Statement
CO1	Identify the nutritional deficiency symptoms among the population
CO2	Prevent and alleviate nutritional deficiencies common among population
CO3	Understand the role of nutrition in different stages of lifecycle

CO4	Gain knowledge to formulate weaning foods, packed lunch and age/activity specific diets adequate in quality and quantity
CO5	Understand and tackle age specific food related problems and eating behaviours

ELECTIVE -IV PERSPECTIVES OF HOME SCIENCE

OBJECTIVES:

To enable students to have a sound knowledge in various branches of Home Science forstrengthening the extension and research base.

SPECIFIC OBJECTIVES OF LEARNING:

On successful completion of these units, students are expected :

- To describe the importance of each branch of Home Science
- To understand the essence of each subject
- To prepare them for UGC NET, SLET and ASRB

COURSE OUTCOME:

On successful completion of the course the student will be able to-

CO No.	CO STATEMENT
CO 1	Understand the concept of Extension Education and its importance
CO 2	Comprehend the key aspects of human growth and development and realize the importance of mastering developmental tasks of each life span stage
CO 3	Understand the basic concepts of Textile and Clothing
CO 4	List personal goals and values, set living standards
CO 5	Understand the meaning of Guidance and Counselling and Career perspectives in Home Science

NME I: FOOD PRESERVATION

LEARNING OBJECTIVES

To enable students to

1. Learn the basic concepts and importance of Food Preservation
2. Understand the different methods of Food Preservation
3. Choose appropriate food handling and storage techniques

COURSE OUTCOME

CO No.	CO Statement
CO1	Describe the basic concepts and principles of Food Preservation
CO2	Identify the best methods of storage of different foods based on their shelf life. Recommend appropriate postharvest technology procedures that increase shelf life of food
CO3	Analyze the use of low and high temperature to preserve food and identify the appropriate method to preserve different foods
CO4	Discuss the use and effects of different preservatives on the quality of foods
CO5	Appreciate the use of modern technology in food preservation and managing food wastage.

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SEMESTER III

CORE – VII MICRONUTRIENTS

COURSE OBJECTIVES

1. To enables the students to learn the functions, deficiency symptoms, food sources and requirements of the different micro nutrients.
2. To Gain knowledge of nutrients requirement and management of micronutrients during various stages of life and disease
3. To gain insight about recent concept and findings in field of nutrition and application of the same to prevent disease

COURSE OUTCOMES:

On completion of the course the students will be able to…

CO No.	CO Statement
CO1	Evaluate the specific role of functional foods and nutraceuticals in prevention of degenerative disease.
CO2	Understand the importance of micronutrients in growth and development of humans.
CO3	Analyse the importance of diet in maintaining human health to combat nutrient deficiency in the community
CO4	Gain in-depth knowledge of the physiological and metabolic functions of vitamins and minerals and their implications
CO5	Analyse the recent advances in the field of micronutrient and research for the welfare of the community

CORE – VIII PERFORMANCE NUTRITION

COURSE OBJECTIVES:

To enable the students to

1. Learn about the role of nutrients in enhancing
2. Sports Performance.Understand the fundamentals of planning diet for different sports.
3. Know about the different types of sports supplements and nutrition for special athletes.

COURSE OUTCOME:

On successful completion of the course the students will be able to

CO No.	CO Statement
CO1	Analyze and assess the body composition of athlete.
CO2	Comprehend the role of Macro and micronutrients towards athletic performance
CO3	Emphasize the role of nutrition in competitive performance and for special needs.
CO4	Retrieving the various sports supplements and Ergogenic aids for the athletes.
CO5	Apply personalized nutrition guidance in the area of sports nutrition.

ELECTIVE – V FOOD MICROBIOLOGY

COURSE OBJECTIVES

1. To understand the practical skill in handling microscope and preparation of culture media
2. To Gain knowledge of principles of various techniques of isolationand determination of microorganisms in foods
3. To acquire practical skill in production of fermented foods.

COURSE OUTCOMES:

On completion of the course the students will be able to…

CO No.	CO Statement
CO1	CO1 - Gain knowledge in handling of microscope and develop basic skill in cultivation of bacteria with different culture media
CO2	CO2 - Comprehend insight on various techniques of staining and hanging drop method to understand the morphology o microorganism.

CO3	CO3 - Evaluate and isolate microorganism form different sources like air, water and food.
CO4	CO4 - Describe and determine the viable count of microorganism from food samples.
CO5	CO5 - Understand and apply the concept of food fermentation and isolation of organism from fermented food

NME II DIET AND NUTRITION COUNSELLING

Course objectives

- ✓ To list out the steps in diet counselling process.
- ✓ To Understand and apply the counseling skills in establishing rapport with patients.

Course Outcome

CO No	Co statement
CO1	Define Dietician and recall the qualities, role and responsibilities of a dietician
CO2	Describes or explains the steps in diet and nutrition counselling
CO3	Uses the skills in assessment of nutritional status of normal and diseased people
CO4	Relate practical skills in dietary counselling of various health and disease conditions
C05	Developteachingaidsandusescomputerapplicationsandsmart phonesindietcounselling

SEMESTER -IV

CORE –XI PUBLIC HEALTH NUTRITION

COURSE OBJECTIVES:

- To understand the concept of Public Nutrition.
- To enable students to develop a holistic knowledge base on the importance of understanding the nutrition problems and their prevention.
- To understand the nutritional problems during emergencies / disasters as well as the strategies to tackle them.
- To develop skills in preparation of communication aids and planning nutrition education programme for the community

COURSE OUTCOME:

On successful completion of the course the students will be able to

CO No.	CO STATEMENT
CO1	Understand the role of nutrition in national development
CO2	Acquire skill in assessment of nutritional status of community.
CO3	Gain depth knowledge on Strategies for Improving nutrition status and health status of the community.
CO4	Evaluate the role organization in combating malnutrition.
CO5	Understand and apply Nutrition education for the community welfare.

COREXII FOOD PRODUCT DEVELOPMENT

COURSE OBJECTIVES:

To enable students to:

1. Understand the various aspects of food product development Develop products that meet consumerrequirements and demands
2. Formulate products that are nutritionally and commercially viable

COURSE OUTCOME:

On successful completion of the course the students will be able to

CO No.	CO Statement
CO1	Apply a product development process to generate ideas, design, develop and evaluate new products and their markets.
CO2	Demonstrate skill in the application of standard methods for the measurement and evaluation of sensory differences
CO3	Evaluate and analyze the different food packaging material
CO4	Review the appropriate labelling to adhere to standards
CO5	Gain knowledge on pricing and marketing of food product

Project viva voce

Course Objectives

1. To introduce the purpose and importance of research for future developmentand sustenance.
2. To make the students plan and carry out the research work.
3. To learn the methodology of writing thesis and research articles in journals.

COURSE OUTCOME

CO: 1 The project gives students the opportunity to experience real research
CO:2 Students will have a greater problem solving skills.
CO:3 Students will gain better understanding of research methods.
CO: 4 Deeper understanding of the discipline of the research
CO: 5 Better understanding of career and education path.

ELECTIVE –VI FOOD MICROBIOLOGY PRACTICAL

COURSE OBJECTIVES

1. To understand the practical skill in handling microscope and preparation of culture media
2. To Gain knowledge of principles of various techniques of isolation and determination of microorganisms in foods
3. To acquire practical skill in production of fermented foods.

COURSE OUTCOMES:

On completion of the course the students will be able to…

CO No.	CO Statement
CO1	CO1 - Gain knowledge in handling of microscope and develop basic skill in cultivation of bacteria with different culture media
CO2	CO2 - Comprehend insight on various techniques of staining and hanging drop method to understand the morphology of microorganism.
CO3	CO3 - Evaluate and isolate microorganism form different sources like air, water and food.
CO4	CO4 - Describe and determine the viable count of microorganism from food samples.
CO5	CO5 - Understand and apply the concept of food fermentation and isolation of organism from fermented food

SEC: ENTREPRENEURIAL DEVELOPMENT

COURSE OBJECTIVES

To enable the students to

1. Understand basic concepts in entrepreneurship.
2. Acquire knowledge about the various Entrepreneurial development agencies.
3. Adopt key steps in the elaboration of business ideas.
4. Understand major steps involved in setting up a Small-Scale Unit.
5. Highlight the Legislation process and Labor Laws Application.

COURSEOUTCOMES

On successful completion of the course the students will be able to

	COSTATEMENT
CO1	Discern distinct entrepreneurial traits.
CO2	Explain business idea generation techniques, Evaluate parameters to assess opportunities and constraints for new business ideas and device a business plan. Discuss owner ships and SHG
CO3	Explain financial ,working capital and marketing management
CO4	Identify and include Major steps involved in setting up a Small-Scale Unit Elaborate Export Marketing procedures& formalities and learn about Patents &IPRs
CO5	Analyze Legislation process and explain the Labor Laws Application

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