

MASTER OF SCIENCE HOME SCIENCE-FOOD SCIENCE NUTRITION AND DIETETICS

COURSE OUTCOMES (COs)

On completion of the course students will be able to

COURSE COMPONENT	COURSE	COURSE OUTCOME
CORE THEORY I	ADVANCED FOOD SCIENCE	<p>CO1: Overview the relationship between the chemical structure and the properties of the main components in food like starch, protein and lipids.</p> <p>CO2: Understand the Composition and characteristics of various food commodities.</p> <p>CO3: Explain the cooking quality of foods and apply food science knowledge in food industries</p> <p>CO4: Identify and understand the nutrients and functions of foods in maintaining health</p> <p>CO5: Analyze the proper use of food colors and food additives in safe food preparation.</p>
CORE THEORY II	ADVANCED HUMAN PHYSIOLOGY	<p>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.</p> <p>CO 2: Understand the structural and functional organization of Blood and Cardiac System</p> <p>CO 3: Understand the structural and functional organization of Respiration, Immunity and Endocrine GIT and Urinary System</p> <p>CO 4: Comprehend the structural and functional organization Digestive System and Reproductive System</p> <p>CO 5: Understand the structural and functional organization of Skin, Nervous and Excretory system</p>
CORE THEORY III	MACRO NUTRIENTS	<p>CO1: The essentials of nutrients in growth and development of humans</p> <p>CO2: The importance of major nutrients in maintaining human</p>

		<p>health and leading active lifestyle</p> <p>CO3: The enhancement of nutritional quality of the diet.</p> <p>CO4: Identify the various types & sources of food borne illness and methods of prevention.</p> <p>CO5: The role of nutrients in health and diseases.</p>
CORE PRACTICAL I	ADVANCED FOOD SCIENCE PRACTICAL	<p>CO1: Gain knowledge on sensory analysis and cereal cookery concept</p> <p>CO2 :Understand the properties of various food.</p> <p>CO3: Analyze the cooking quality of foods and apply knowledge in food industries.</p> <p>CO4: Identify and understand the Physical characteristics.</p> <p>CO5: Revise appropriate food preparation and processing methods to ensure standards in food industry.</p>
ELECTIVE I	FOOD PROCESSING AND TECHNOLOGY	<p>CO1: The concepts and principles of food processing</p> <p>CO2 :The various processed food products from plant and animal sources.</p> <p>CO3: The by-products utilization from food processing.</p> <p>CO4: The systematic knowledge of basic and applied aspects in food processing and technology.</p> <p>CO5: The various post-harvest technologies for different food products</p>
CORE THEORY IV	RESEARCH METHODS IN NUTRITION	<p>CO 1: Demonstrate knowledge of the scientific method, purpose and approaches to research and Become a qualified researcher.</p> <p>CO 2 :Identify and selection of the research sampling and scales of measurement</p> <p>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</p> <p>CO 4: Assess the numerical data for providing statistical evidences to support the research results and</p>

		<p>interpretation of data with the use of tables and pictorial representations</p> <p>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</p>
CORE THEORY V	ADVANCED DIETETICS	<p>CO1: Critique the Nutritional screening technique</p> <p>CO2: Comprehend the current concepts of therapeutic diets and critically ill</p> <p>CO3: Implement the dietary principles on various disorders.</p> <p>CO4: Acquire the knowledge of diet counseling skills.</p> <p>CO5: Apply the dietary principles to manage the lifestyle disorders in the society</p>
CORE THEORY VI	NUTRITIONAL BIOCHEMISTRY	<p>CO1: Understand the role of enzymes and co enzymes in biological oxidation.</p> <p>CO2: Gain knowledge on metabolism and regulation of carbohydrate.</p> <p>CO3: Understand the concept of metabolism and bioenergetics of lipids.</p> <p>CO4: Discuss the classification, structure, organization and metabolic pathway of protein.</p> <p>CO5: Comprehend the biological metabolism and functions of nucleic acid and understand recent concepts in biochemistry.</p>
CORE PRACTICAL II	ADVANCED DIETETICS PRACTICALS	<p>CO1: Evaluate various therapeutic diets</p> <p>CO2: Identify the requirements for disease conditions and critically ill patients.</p> <p>CO3: Assess and plan the diets for various disease conditions.</p> <p>CO4 :Create Knowledge in nutrient calculations and dietary principles.</p> <p>CO5: Design the personalized diets for different individuals in the society</p>
ELECTIVE II	PERSPECTIVES OF	CO 1: Understand the concept of

	HOME SCIENCE	<p>Extension Education and its importance</p> <p>CO 2 :Comprehend the key aspects of human growth and development and realize the importance of mastering developmental tasks of each life span stage</p> <p>CO 3: Understand the basic concepts of Textile and Clothing</p> <p>CO 4: List personal goals and values, set living standards</p> <p>CO 5: Understand the meaning of Guidance and Counselling and Career perspectives in Home Science</p>
CORE THEORY VII	MICRONUTRIENTS	<p>CO1: Evaluate the specific role of functional foods and nutraceuticals in prevention of degenerative disease.</p> <p>CO2: Understand the importance of micronutrients in growth and development of humans.</p> <p>CO3: Analyse the importance of diet in maintaining human health to combat nutrient deficiency in the community</p> <p>CO4: Gain in-depth knowledge of the physiological and metabolic functions of vitamins and minerals and their implications</p> <p>CO5: Analyse the recent advances in the field of micronutrient and research for the welfare of the community</p>
CORE THEORY VIII	PERFORMANCE NUTRITION	<p>CO1: Analyze and assess the body composition of athlete.</p> <p>CO2: Comprehend the role of Macro and micronutrients towards athletic performance</p> <p>CO3: Emphasize the role of nutrition in competitive performance and for special needs.</p> <p>CO4: Retrieving the various sports supplements and Ergogenic aids for the athletes.</p> <p>CO5: Apply personalized nutrition guidance in the area of sports nutrition.</p>
CORE THEORY IX	FOOD	CO1: Acquire the knowledge on the

	MICROBIOLOGY	<p>advanced concepts of microbial spoilage of various foods and its intoxication.</p> <p>CO2 :Relate the theoretical knowledge with sampling and various microscopic observation methods.</p> <p>CO3: Understand the various concepts related to microorganism in human welfare.</p> <p>CO4: Apply knowledge in field of food preservation and its recent advances.</p> <p>CO5: Comprehend the knowledge gained on the concepts of food borne diseases and to assess the microbiological quality of food</p>
CORE PRACTICAL III	TECHNIQUES IN FOOD ANALYSIS	<p>CO 1: Understand safety rules for the laboratory and demonstrate various instruments used for food analysis.</p> <p>CO 2: Acquire skills to prepare and standardise various solutions to conduct experiments for food analysis.</p> <p>CO 3: Acquire skills in ashing of foods and prepare ash solution to analyse mineral contents in food.</p> <p>CO 4: Demonstrate quantitative analysis of various nutrients in foods i.e. crude fibre, moisture, Vit -C, calcium, phosphorus, iron, etc.</p> <p>CO 5: Demonstrate experiments to check estimation of protein, fat content and Pigment Analysis</p>
ELECTIVE III	FOOD PRODUCT DEVELOPMENT	<p>CO1: Apply a product development process to generate ideas, design, develop and evaluate new products and their markets.</p> <p>CO2: Demonstrate skill in the application of standard methods for the measurement and evaluation of sensory differences</p> <p>CO3: Evaluate and analyze the different food packaging material</p> <p>CO4: Review the appropriate labelling to adhere to standards</p> <p>CO5: Gain knowledge on pricing</p>

		and marketing of food product
CORE THEORY X	PUBLIC HEALTH NUTRITION	<p>CO1: Understand the role of nutrition in national development</p> <p>CO2 :Acquire skill in assessment of nutritional status of community.</p> <p>CO3: Gain depth knowledge on Strategies for Improving nutrition status and health status of the community.</p> <p>CO4: Evaluate the role organization in combating malnutrition.</p> <p>CO5: Understand and apply Nutrition education for the community welfare.</p>
CORE PRACTICAL IV	FOOD MICROBIOLOGY- PRACTICAL	<p>CO1: Gain knowledge in handling of microscope and develop basic skill in cultivation of bacteria with different culture media.</p> <p>CO2 : Comprehend insight on various techniques of staining and hanging drop method to understand the morphology of microorganism.</p> <p>CO3: Evaluate and isolate microorganism form different sources like air, water and food.</p> <p>CO4 : Describe and determine the viable count of microorganism from food samples.</p> <p>CO5: Understand and apply the concept of food fermentation and isolation of organism from fermented food</p>
ELECTIVE IV	ADVANCED FOOD SERVICE MANAGEMENT	<p>CO1: Overview the food service management and techniques of menu planning</p> <p>CO2: Acquire skill in purchase storage and food production</p> <p>CO3: Understand the food management in food service establishment.</p> <p>CO4: Compile the work safety and laws governing</p> <p>CO5: Develop skill in starting own food service establishment</p>
ELECTIVE – V	FOOD SAFETY AND QUALITY CONTROL	<p>CO1: The importance and functions of quality control unit in food industries</p> <p>CO2: The methods used for</p>

		<p>evaluation of food quality</p> <p>CO3: The national and international organization enforcing food quality and safety</p> <p>CO4: The various tests used to detect food adulteration.</p> <p>CO5: The steps to be considered for successful Quality Control Program</p>
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