FATIMA COLLEGE (AUTONOMOUS), MADURAI – 625018

NAME OF THE PROGRAMME: M. SC HUMAN NUTRITION AND NUTRACEUTICALS **PROGRAMME CODE: PSNN**

PROGRAMME OUTCOMES:

Students will be able to

PO1: Apply acquired scientific knowledge to solve major and complex issues in the society/industry.

PO2: Attain research skills to solve complex cultural, societal and environmental issues.

PO3: Employ latest and updated tools and technologies to solve complex issues.

PO4: Demonstrate Professional Ethics that foster Community, Nation and Environment Building Initiatives.

PROGRAMME SPECIFIC OUTCOMES:

PSO1: Advanced scientific knowledge in food, nutrition and nutraceuticals

PSO2: Professional competence in planning therapeutic diets and counselling

PSO3: Social responsibilities by participating in community health programmes

PSO4: Enterprising – by developing innovative value added food products

PSO5: Environmental concerns – by understanding the role of microbes in human health and diseases

PSO6: Acquisition of skills in analysing food components and blood constituents

PSO7: Desire for knowing more about nutraceuticals from familiar and unfamiliar foods

PSO8: Creative thinking in choosing the appropriate research design

2019 - 2020

COURSE CODE	COURSE TITLE	COURSE OUTCOMES
19PG1N1	Advanced Human Nutrition	CO1: Recall the functions of nutrients in human body. CO2: Explain the digestion, absorption, sources & requirements of different nutrients CO3: Compare the energy value of foods by using different calorimetry CO4: Build the knowledge of nutrient and drug interrelationship CO5: Summarize the importance of fluid and electrolyte balance in human body

19PG1N2	Advanced Dietetics	CO1: The students will be able to Describe nutritional care process CO2: Recognize the nutritional needs of different stages of life cycle CO3: Explain medical nutritional management. CO4: Plan therapeutic interventions for traumatic conditions. CO5: Categorize meal planning for sports, sea and air travel.
19PG1N3	Applied Physiology	CO1: Identify and recall the aspects of human physiology CO2: Illustrate the anatomy of the various organ systems of the body CO3: Categorize the functions of all the systems CO4: Describe the interrelationship of nutrition and physiology CO5: Compare the alterations in organ systems during disease conditions
19PG1N4	Advanced Dietetics Lab	CO1: Plan and prepare menu for normal life cycle. CO2: Choose appropriate supplementary foods for infants. CO3: Solve problems of nutritional deficiency disorders with modified diets.

		CO4: Differentiate the various hospital diets. CO5: Construct diets for sports, burns and weight management.
19PG1N5	Clinical Laboratory Techniques Lab	CO1: Identify organic, inorganic and abnormal constituents of urine CO2: Explain the quantitative analysis of urine CO3: Describe the haematological examination CO4: Organize the examination of blood glucose and lipid profile CO5: Recognize the serum constituents
19PGNEDC1	Nutrition & Dietetics	CO1: Define the different terms in nutrition and food. CO2: Classify the food and nutrients CO3: Describe the functions of macro and micro nutrients. CO4: Choose the food sources of micro and macronutrients CO5: Illustrate food pyramid and explain the food groups.
19PG2N6	Clinical Nutrition & Diet Therapy	The students will be able to CO1: Identify the characteristics of various disease conditions. CO2: Describe the medical nutritional management of different

		disease. CO3: Plan diets for degenerative diseases. CO4: Categorize the foods used in the treatment of diseases. CO4: Summarize the treatment strategies for food allergy and food intolerance.
19PG2N7	Functional Foods and Nutraceuticals	CO1: Define and understand the concepts of functional foods. CO2: Categorize the bioactive components of functional foods. CO3: Distinguish the role of prebiotics, probiotics & synbiotics as functional ingredients. CO4: Explain the efficacy of herbs and flowers as functional foods CO5: Build knowledge on the role of Nutraceuticals in treating diseases
19PG2N8	Research Methodology	CO1: Classify the types of research based on intent and methods CO2: Restate in own words the significance and formulation of

		research CO3: Categorize methods of data collection CO4: Distinguish the sampling techniques CO5: Summarize the steps in formulation of hypothesis and tabulation
19PG2N9	Clinical Nutrition and Diet Therapy Lab	CO1: Recall the dietary principles for the planning and preparation of diet for metabolic disorders. CO2: Demonstrate therapeutic diet for cardiovascular disorders. CO3: Demonstrate therapeutic diet for cardiovascular disorders. CO4: Focus on the aspects of planning and preparation of diet for kidney disorders CO5: Indicate the dietary principles in the preparation of diet for cancer and AIDS.
19PG2N10	Functional Foods and Nutraceutical Lab	CO1: Identify the various nutraceutical components present in functional foods. CO2: Choose the appropriate methods to analyze the specific

		nutraceutical component. CO3: Construct the experimental research with the knowledge of the analytical methods. CO4: Draw conclusions on the therapeutic availability of nutraceuticals.
19PGNEDC2	Nutrition & Dietetics	CO1: Define the different terms in nutrition and food. CO2: Classify the food and nutrients CO3: Describe the functions of macro and micro nutrients. CO4: Choose the food sources of micro and macronutrients CO5: Illustrate food pyramid and explain the food groups.
COURSE CODE	**COURSE TITLE**	**COURSE OBJECTIVES**
19PG3N11	Functional Foods & Nutraceuticals in Preventive Dietetics	CO1: Identify the role of functional foods and nutraceuticals in oral, gut and renal health. CO2: Describe the importance of functional foods in weight management and CVD CO3: Categorize the functional foods for bone health and

		diabetes CO4: Summarize the effect of functional foods and Nutraceuticals in cancer CO5: Choose the functional foods for the management of nervous and respiratory disorders
19PG3N12	Community Nutrition	CO1: Identify National Nutritional problems CO2: Recognize the relation of nutrition in national development CO3: Explain the strategies to overcome malnutrition CO4: Categorize nutrition intervention programmes and organization CO5: Describe national nutrition policy and nutrition surveillance system
19 PG3N13	Analytical Instrumentation	CO1: Explain the principles of analytical instrumentation techniques. CO2: Choose the relevant analytical techniques for food.

		CO3: List the applications of different analytical instruments. CO4: Categorize the different types of isotopes and its application CO5: Describe the principles and application of microbial assays.
19PG3NE1	Food Product Development And Sensory Evaluation	CO1: Identify the food needs and consumer demands in the society CO2: Explain the classification, characteristics and future trends in food product development CO3: Choose the different sensory tests employed for food evaluation CO4: Build knowledge on the marketing and evaluation of food products CO5: Categorize the food products according to the product cost
19 PG3NE2	Institutional Management	CO1: Recognize the key areas of food service institutions. CO2: Identify the theories and concepts of institutional

		management. CO3: Analyse the scope and theories of personnel management. CO4: Explain the aspects of food cost management. CO5: Categorize the different laws governing food service establishment.
19PG3N14	Community Nutrition Lab	CO1: Identify the nutritional status of various age groups CO2: Classify and construct audio visual aids CO3: Organize nutrition awareness programmes for community CO4: Categorize and plan supplementary foods for the vulnerable groups in the community
19PG3N15	Techniques for Experimental Nutrition Lab	CO1: Recall the principles of analytical techniques CO2: Identify the amount of ascorbic acid in foods CO3: Explain the procedure for the estimation of β-carotene CO4: Compare the amount of free fatty acid and peroxide values in fats and oil

		CO5: Choose the method of analyzing amount of antioxidant present in foods
19PG4N16	Food Microbiology	CO1: Recall the basic concepts of food microbiology CO2: Describe the principles of food preservation CO3: Distinguish the contamination and spoilage of foods CO4: Choose the appropriate method of food preservation CO5: Explain the food and water borne diseases and enumerate the microbes in the food.
19PG4N17	Nutritional Biochemistry	CO1: Identify the structure of biomolecules CO2: Explain cellular respiration CO3: Construct the metabolic pathways of biomolecules CO4: Categorize the inborn errors of metabolism of biomolecules CO5: Compute the energetic of metabolism of biomolecules
19PG4N18	Advanced Food Science and Processing Techniques	CO1: Illustrate the structure and milling of cereals.

		CO2: Explain the processing methods of pulses and oilseeds. CO3: Choose the methods of harvesting & storage of vegetables and fruits CO4: Classify the processing & preservation methods of flesh foods CO5: Identify the processing & preparation of milk & egg products
19PG4NE3	Food Safety And Quality Control	CO1: Define the concept of food safety and food laws. CO2: Explain the toxicants in animal and plant foods. CO3: Classify the food additives. CO4: Plan the various quality assurance systems in food industries. CO5: Categorize the packaging materials and properties.
19PG4NE4	Nutrition In Critical Care And Disasters	CO1: Identify nutritional screening and nutritional status assessment.

		CO2: Recognize nutritional support system for critically ill. CO3: Summarize the role of immune enhancers, suppresants and special diets in critical care CO4: Classify rehabilitation diets CO5: Describe the patho-physiology in critical illnesses
19PG4N19	Food Microbiology Lab	CO1: Describe the working principle of compound microscope CO2: Compare the culturing techniques CO3: Choose the appropriate method of media preparation CO4: Identify and enumerate the microbes in food.
19PG4N20	Nutrient Analysis Lab	CO1: Identify the calorific value of foods. CO2: Explain the protein estimation procedure CO3: Choose the analytical methods of minerals CO4: Build knowledge on the estimation of moisture content in foods CO5: Compare the amount of crude fibre present in foods.

2015 – 2019

COURSE CODE	COURSE TITLE	COURSE OBJECTIVES
PG1N1	Advanced Human Nutrition	• To enable the students to • Gain in depth knowledge in the study of major and minor nutrients. • Understand the recent trends in the study of nutrients • Develop competence for undertaking nutritional investigations.
PG1N2	Advanced Dietetics	To enable students • To identify and describe the nutritional needs through life cycle. • To identify and describe various disease conditions. • To gain knowledge on appropriate nutritional management. • To develop the attitude and capacity for taking up dietetics as a profession.
PG1N3	Advanced Food Science and technology	To enable students • To study the technological know -how's of food.
PG1N4	Community Nutrition	To enable students

		• To understand national nutritional problems and their implications. • To become familiar with the national and international contributions towards improvement of nutrition in India. • To become better prepared to evaluate nutrition projects in the community.
PGNEDC1	Nutrition & Dietetics	To enable students • To understand the basics of nutrition. • To learn the menu planning methods for family members • To learn the clinical aspects of disease conditions and manage the same through the diet therapy
PG2N7	Clinical Nutrition & Diet Therapy	To enable students • To identify and describe the nutritional needs through life cycle. • To identify and describe various disease conditions. • To gain knowledge on appropriate nutritional management. • To develop the attitude and capacity for taking up dietetics as a profession.
PG2N8	Functional Foods and	To enable students

	Nutraceuticals	• To understand the relation between Functional Foods, Nutraceuticals to Food and Drugs • To introduce them to various functional food groups and products • To enable students understand the regulatory aspects of Functional Foods and Nutracueticals.
PG3NE1	Food Safety and Quality Control	To enable students • Develop approaches to identify food safety hazards in food processing • Apply preventive measures and control methods to minimize microbiological hazards and maintain quality of foods. • Identify the wide variety of parameters affecting food quality. • Develop quality control strategies
PG4N18	Thesis & Viva Voce	To enable students • Dissertation topics chosen on socially relevant feasible topics • Formulation and standardization of food products • Packaging of developed products in various packing materials. • Supplementation of prepared nutrient dense food products to vulnerable section of the population

		• Projects taken up at industry or research institutes. • External Viva Voce enables the students to defend their work