



ISLAMIAH WOMEN'S ARTS AND SCIENCE COLLEGE

Permanently Affiliated to Thiruvalluvar University
Recognized by UGC under sections 2(f) and 12(B) of the UGC Act 1956
Accredited with "B" Grade by NAAC
Approved by the Government of Tamil Nadu
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PG DEPARTMENT OF FOODS AND NUTRITION

POs, PSOs and COs

B.Sc (NFSM & D)

Regulation	Proof
2023-2024	Link
2022-2023	Link
2020-2021	Link

M.Sc (Foods and Nutrition)

Regulation	Proof
2023-2024	Link
2022-2023	Link
2020-2021	Link

2017-2018 REGULATION

PROGRAMME SPECIFIC OUTCOMES (PSOs)

PSO1: Eligible to work as a “Chief Dietician”.

PSO2: Work as a “Chief Chef”.

PSO3: Good quality controller in Food service Industry.

PSO4: Good diet counselor for the patient.

PSO5: Good food left –over Manager.

PSO6: Good baker.

PSO7: Best table Decorator.

PSO8: Best health and fitness Manager.

COURSE OUTCOME

SEMESTER I

COURSE: MICROBIOLOGY

CREDIT:06

CO1: Understand the role of microorganisms in spoilage of various foods.

CO2: Explain the micro-organism in relation to food and food preservation.

CO3: Design the principles of food preservation.

CO4: Outline the destruction of micro-organism.

CO5: Describe the micro-organism in human welfare.

CO6: Determine the contamination and spoilage of foods.

CO7: Compare and contrast the micro biology of food poisoning, food infection and food borne diseases.

COURSE: CHEMISTRY -I

CREDIT: 4

CO1: Identify electronic configuration and periodic properties.

CO2: Understand the different types of chemical bonds.

CO3: Describe about nomenclature of aliphatic and alicyclic compounds.

CO4: Analyze different types of states of matter

- CO5: Describe basic concepts of bonding in Organic Chemistry
CO6: Explain about different types of Volumetric Analysis
CO7: Analyze classification of elements and factors affecting atomic radii.

SEMESTER II

COURSE: HUMAN PHYSIOLOGY

CREDIT: 05

- CO1: Explain the structure and functions of a typical cells and tissues.
CO2: Identifying the blood grouping.
CO3: Determine the blood pressure and ECG.
CO4: Understand the structure and basic physiology of various organs of the body.
CO5: Understand the principles of nutrition through the study of physiology.
CO6: Determine the Heart beat and Cardiac Cycle.

COURSE: CHEMISTRY -II

CREDIT: 4

- CO1: Discuss about s and p-block elements group study.
CO2: Analyse the comparative study of alkane
CO3: Explain about dienes and stability of cycloalkanes
CO4: Discuss about quantum mechanics and thermodynamics
CO5: Describe about first law of thermodynamics.
CO6: Discuss about thermochemical equations.

COURSE: (A) MICROBIOLOGY (B) HUMAN PHYSIOLOGY – Core Practical – I

CREDIT: 03

- CO1: Define Microscope.
CO2: Identify the yeast, molds, protozoa and bacteria.
CO3: Explain the simple staining and gram method of staining.
CO4: Understand the demonstration of determination of blood count.
CO5: Classify the tissue and Endocrine glands.

SEMESTER III

COURSE: FOOD SCIENCE

CREDIT: 03

CO1: Define basic 5 food Groups.

CO2: Understand changes during cooking.

CO3: Classify various method of cooking.

CO4: Compare and contrast the nutritive values of Milk, Meat and Poultry.

CO5: Determine stages of sugar cookery.

COURSE: NUTRITIONAL BIOCHEMISTRY (Allied- II) CREDIT: 03

CO1: Define biochemistry and relation to Nutrition.

CO2: Classify the based on amino acid.

CO3: Explain the chemical composition of Fats.

CO4: Determine the Nucleic Acids and protein bio synthesis.

CO5: Describe the inborn errors of Metabolism.

COURSE: BAKERY (SBS – I) CREDIT: 03

CO1: Understand basic concepts of baking.

CO2: Discuss with the role of various major and minor ingredients in bakery products.

CO3: Explain baking process and operation.

CO4: Define the quality parameters of baking products.

CO5: Formulate the icing pasturing preparation.

COURSE: HEALTH AND FITNESS (NME – I) CREDIT: 02

CO1: Define health and wellness.

CO2: Describe nutrition and exercise.

CO3: Explain nutrition in sports nutrient.

CO4: Describe basic components of physical activity.

CO5: Explain awareness health and fitness.

SEMESTER IV

COURSE: HUMAN NUTRITION CREDIT: 03

CO1: Define the Health Statics of the people.

CO2: Determine the Energy required by various age groups.

CO3: Understand the effect of lipid on health statics.

CO4: Classify the protein based on the quality.

CO5: Describe the Role of vitamins and minerals.

COURSE: FOOD PRESERVATION (Allied)

CREDIT: 04

CO1: Understand the principles of preservation.

CO2: Compare the preservation by high osmotic pressure concentration of salt.

CO3: Explain the preservation by uses of high and low temperature.

CO4: Classify the preservation by using chemicals and food radiation.

CO5: Compare and contrast the drying and dehydration.

**COURSE: FOOD PRODUCT DEVELOPMENT AND MARKETING STRATEGY
(SBS –II)**

CREDIT -03

CO1: Develop new marketable, nutritionally and economically viable food products.

CO2: Create entrepreneurship skills for setting up small scale industries.

CO3: Understand packaging of different food products.

CO4: Analyze financial management and marketing food products.

COURSE: NUTRITION FOR THE FAMILY (NME–II)

CREDIT:02

CO1: Classify the basic 5 food groups.

CO2: Explain the dietary problem eating disorders.

CO3: Classify the types of supplementary foods

COURSE: (A) FOOD SCIENCE (B) HUMAN NUTRITION (Practical – II)

CREDIT:03

CO1: Evaluate the Qualitative estimation of CHO.

CO2: Determine the Protein & Minerals present in the food materials.

CO3: Explain the techniques used in measurement of food stuff.

CO4: Formulate different recipes using basic 5 food groups.

CO5: Prepare hot & cold beverages.

COURSE: NUTRITIONAL BIOCHEMISTRY (B) FOOD PRESERVATION (Allied)

Practical

CREDIT:03

CO1: Determination of CHO – Qualitative tests.

CO2: Explain the blood glucose level.

CO3: Classify the class I, class II food preservatives.

CO4: Identify the uses of sorbic acid and sulphurdioxide as antimicrobial preservatives.

CO5: Classify the Traditional methods of food preservation.

SEMESTER V

COURSE: DIETETICS – I

CREDIT:05

CO1: Define role of diet.

CO2: Understand principles of diet.

CO3: Describe menu planning and serving therapeutic diet.

CO4: Analyze the nutritive values.

CO5: Determine the diet in infections and fevers.

CO6: Outline disease of the gastro intestinal tract.

COURSE: NUTRITION THROUGH LIFE CYCLE

CREDIT: 05

CO1: Explain nutrition during life span.

CO2: Prepare the dietary modification.

CO3: Classify the Recommended allowances.

CO4: Describe the nutrition in pregnancy.

CO5: Determine physiology of lactation hormonal control and reflex action.

CO6: Prepare the infancy feeding programme.

CO7: Explain the packed lunch for school going children.

COURSE: COMMUNITY NUTRITION

CREDIT:05

CO1: Define the role of Community Nutrition.

CO2: Understand the mal nutritional Problems among the community.

CO3: Outline the nutrition and health in national development.

CO4: Apply nutrition policy and programs.

CO5: Describe the skills needed to delivery nutrition services.

COURSE: HOSPITAL FOOD SERVICE ADMINISTRATION (Elective – I)

CREDIT:03

CO1: Define role of hospital food service administration.

CO2: Develop skills to maintain medical records.

CO3: Understand the management of resource in hospitals.

CO4: Describe the principles of hospitals management.

CO5: Design hospital diets and housekeeping department.

COURSE: INTERNSHIP (SBS – III)

CREDIT: 03

CO1: Define role of diet.

CO2: Understand principles of diet.

CO3: Describe menu planning and serving therapeutic diet.

CO4: Analyze the nutritive value of food ingredients.

CO5: Identify the nutrition related problems, determine and evaluate nutrition intervention programs.

SEMESTER VI

COURSE: DIETETICS –II

CREDIT: 05

CO1: Classify the principles of diet therapy and different therapeutic diets.

CO2: Develop attitude for taking up dietetics as a profession.

CO3: Describe the menu planning to therapeutic diet.

CO4: Explain the food sensitivity and genetic disorder.

CO5: Classify the stages of HIV infections and medical nutritional therapy.

CO6: Compare and contrast the modification of diet in obesity and underweight.

CO7: Outline the disease of liver, gall bladder and pancreas.

COURSE: FOOD SERVICE MANAGEMENT

CREDIT: 04

CO1: Create and awareness on the organizational aspect and functioning of different types of food service institutions.

CO2: Develop managerial skills among the students.

CO3: Understand the space allocation and arrangement of food service units.

CO4: Explain quantitative and qualitative food analysis.

COURSE: HUMAN DEVELOPMENT & COUNSELLING **CREDIT: 04**

CO1: Define concept of development and growth.

CO2: Understand development aspects from conception to old age as they can be guided effectively.

CO3: Explain the behavior pattern of the individual and various factors influencing them.

CO4: Describe the prenatal and postnatal development.

CO5: Classify the stages of life span.

COURSE: FOOD STANDARD AND QUALITY CONTROL (Elective –II)

CREDIT: 03

CO1: Define government regulation in quality control.

CO2: Classify the AGMARK and specification for food grains.

CO3: Explain the consumer protection Act.

CO4: Design the company quality Assurance program.

CO5: Identify the quality control and common food standard.

COURSE: NUTRACEUTICALS AND NUTRIGENOMICS (Elective –III)

CREDIT: 03

CO1: Define Nutraceuticals and nutrigenomics.

CO2: Explain the role of dietary supplements and nutraceuticals in health and disease.

CO3: Classify the probiotics and prebiotics.

CO4: Determine the application of nutrigenomics in health and disease.

COURSE: PERSPECTIVE OF HOME SCIENCE (SBS –IV) **CREDIT:03**

CO1: Understand the concept and scope of Home science and its components.

CO2: Explain the job opportunities in home science.

CO3: Create new design in home science.

CO4: Outline balanced diet for various age groups.

CO5: Describe human development.

COURSE: (A) NUTRITION THROUGH LIFE CYCLE (B) DIETETICS –I

(Practical - III)

CREDIT: 03

CO1: Describe menu planning.

CO2: Formulate the food preparation.

CO3: Compare nutritional requirement for infant to old age.

CO4: Analyze nutritional requirements for Expectant and Lactating women

CO5: Describe the menu planning to therapeutic diet.

COURSE: (A) FOOD SERVICE MANAGEMENT (B) DIETETICS –II (Practical – IV)

CREDIT: 03

CO1: Outline well organized food service unit.

CO2: Explain table settings.

CO3: Prepare quantity cookery.

CO4: Differentiate normal and therapeutic diet

CO5: Plan and prepare a diet for diabetes mellitus with and without insulin.

M.Sc. FOODS AND NUTRITION

PROGRAMME SPECIFIC OUTCOMES (PSOs)

PSO1: To work as a chief dietician.

PSO2: Best Creech center manager.

PSO3: Best New- food formulator.

PSO4: Best food quality controller.

PSO5: Best preservation manager (or) using natural colour.

PSO6: Best kitchen Dietician.

PSO7: Best beverage department manager.

PSO8: Best interior designer.

COURSE OUTCOME (CO)

SEMESTER I

COURSE: ADVANCED PHYSIOLOGY

CREDIT: 05

CO1: Understand the general structure and function of various system and organ in the body.

CO2: Outline the abnormal changes in tissues and organs in de ceased condition.

CO3: Explain endocrine glands and reproductive organs.

CO4: Compare and contrast respiration and gastrointestinal tract.

CO5: Analysis of blood composition.

CO6: Describe nerves system.

CO7: Explain immunity system.

COURSE: ADVANCED FOOD SCIENCE

CREDIT: 05

CO1: Understand the principles of cooking.

CO2: Design the composition of various foods.

CO3: Formulated the effect of cooking on composition.

CO4: Analysis the Meat & Meat products.

CO5: Evaluate the Milk and Milk products.

CO6: Classify the Fats & Oil food products.

CO7: Classify the sugar cookery and beverages essentials of macro nutrients.

COURSE: ESSENTIALS OF MACRO NUTRIENTS

CREDIT: 05

CO1: Understand the role of macronutrients.

CO2: Classify the carbohydrate metabolisms.

CO3: Explain metabolism of macronutrients.

CO4: Describe lipids structure.

CO5: Define Energy content food.

CO6: Analysis of CHO, Protein and Fat.

CO7: Define the metabolism of macro nutrients.

COURSE: HEALTH AND FITNESS (Elective – I)

CREDIT: 03

CO1: Define health and wellness.

CO2: Describe nutrition and exercise.

CO3: Explain nutrition in sports nutrient.

CO4: Describe basic components of physical activity.

CO5: Explain awareness health and fitness.

SEMESTER II

COURSE: ESSENTIALS OF MICRO NUTRIENTS

CREDIT: 03

CO1: Develop competence to carryout investigation of nutrition.

CO2: Explain principles Micro nutrients.

CO3: Describe vitamin A, D, E, and K.

CO4: Determine Electrolytes content of fluid compartments.

COURSE: NUTRITION THROUGH LIFE CYCLE

CREDIT: 05

CO1: Explain nutrition during life span.

CO2: Prepare the dietary modification.

CO3: Classify the Recommended allowances.

CO4: Describe the nutrition in pregnancy.

CO5: Determine physiology of lactation hormonal control and reflex action.

CO6: Prepare the infancy feeding programme.

CO7: Plan and prepare a day's menu of adolescent and adult.

COURSE: FOOD MICROBIOLOGY

CREDIT: 05

CO1: Understand the role of microorganisms in spoilage of various foods.

CO2: Explain the micro-organism in relation to food and food preservation.

CO3: Design the principles of food preservation.

CO4: Outline the destruction of micro-organism.

CO5: Describe the micro-organism in human welfare.

CO6: Determine the contamination and spoilage of foods.

CO7: Compare and contrast the micro biology of food poisoning, food infection and food borne diseases.

COURSE: FOOD STANDARDS AND QUALITY CONTROL (Elective –II)

CREDIT: 03

CO1: Explain fundamental of food quality control procedures.

CO2: Define the common food standard.

CO3: Classify the food laws.

CO4: Determine food safety and Hygiene.

COURSE: ADVANCE FOOD SCIENCE & ESSENTIAL OF MACRO NUTRIENTS

(Practical – I)

CREDIT: 04

CO1: Understand the preparation of rice based products.

CO2: Classify the composition of various foods.

CO3: Identify the effects of cooking on composition.

CO4: Explain the stages of sugar cookery.

CO5: Understand the qualitative and quantitative analysis.

CO6: Describe the total protein by microkjeldhal method.

CO7: Analyse the fat by soxhlet method.

COURSE: (A) ESSENTIALS OF MICRO NUTRIENTS &(B) NUTRITION

THROUGH LIFE CYCLE (Practical –II)

CREDIT: 04

CO1: Analysis calcium of food.

CO2: Determine ascorbic acid in cabbage by dye method.

CO3: Plan and prepare a day's menu for infancy to old age.

CO4: Explain menu planning for sports person.

CO5: Classify the type of worker sedentary, moderate and heavy worker.

SEMESTER III

COURSE: NUTRITIONAL BIOCHEMISTRY**CREDIT: 04**

CO1: Define biochemistry and relation to Nutrition.

CO2: Classify the based on amino acid.

CO3: Explain the chemical composition of Fats.

CO4: Determine the Nucleic Acids and protein bio synthesis.

CO5: Describe the inborn errors of Metabolism.

COURSE: RESEARCH METHODOLOGY AND APPLIED STATISTICS**CREDIT: 04**

CO1: Explain primary and secondary data.

CO2: Compare and contrast the correlation co- efficient between two variables.

CO3: Analyze statistical data using MS-Excel.

CO4: Describe simple linear regression equation for a set of data.

CO5: Apply test of significance for large and small sample.

COURSE: COMMUNITY NUTRITION**CREDIT: 04**

CO1: Define the role of Community Nutrition.

CO2: Understand the mal nutritional Problems among the community.

CO3: Outline the nutrition and health in national development.

CO4: Apply nutrition policy and programs.

CO5: Describe the skills needed to delivery nutrition services.

COURSE: NUTRITION IN EMERGENCIES (Elective – III)**CREDIT: 03**

CO1: Understand the protecting people's right to nutrition during disaster.

CO2: Prepare for emergencies, to prevent hunger, malnutrition and deficiency disorder.

CO3: Create and awareness on nutrition policies and programmes to combat nutritional problems.

CO4: Outline the communicable disease.

COURSE: FUNCTIONAL FOODS AND NUTRACEUTICALS- ELECTIVE -II**CREDIT: 03**

- CO1: Describe the source of functional foods and nutraceuticals.
- CO2: Explain the role of functional foods and nutraceuticals and dietary supplements in health and disease.
- CO3: Classification based on food source.
- CO4: Create source and role of functional foods and nutraceuticals.

COURSE: INTERNSHIP (SBS – III)

CREDIT: 02

- CO1: Define role of diet.
- CO2: Understand principles of diet.
- CO3: Describe menu planning and serving therapeutic diet.
- CO4: Analyze the nutritive value of food ingredients.

SEMESTER IV

COURSE: DIET THERAPY

CREDIT: 05

- CO1: Understand the principles of diet and nutrition in the causes and treatment of disease.
- CO2: Learn recent concept in dietary management of different disease.
- CO3: Understand the modification in nutrients and dietary requirement for therapeutic condition.
- CO4: Explain principles of nutritional care.
- CO5: Plan and prepare a day's menu of disease condition.
- CO6: Explain parenteral feeding jejunostomy, nasogastric, gastrostomy, rectal feeding.
- CO7: Describe cardio vascular system.

COURSE: FOOD BIOTECHNOLOGY

CREDIT: 03

- CO1: Explain recent updated on recent advanced in the application of genetic engineering in food.
- CO2: Develop an understanding about Nano biotechnology industries.
- CO3: Describe classical strain improvement.
- CO4: Apply the Nano biotechnology in food industries.

**COURSE: (A) NUTRITIONAL BIOCHEMISTRY (B) COMMUNITY NUTRITION
(Practical)**

CREDIT: 04

CO1: Determine the saponification number.

CO2: Describe the serum proteins by Biuret method.

CO3: Determine the albumin/ globulin ratio biuret.

CO4: Develop the plan for nutrition education programmes in community.

CO5: Develop the low cost recipes for infant, preschooler, elementary.

CO6: Classify the communication aids for different groups.

COURSE: DIET THERAPY (Practical – IV)

CREDIT: 04

CO1: Explain the types of diet.

CO2: Understand the principles of therapeutic diet for various disease conditions.

CO3: Plan and Calculate nutritive value of diet

CO4: Classify the type- I and II diabetes mellitus.

CO5: Plan a diet for deficiency disease.