

Session 2019-20

# Programme and Course Outcome

**MSc. Food & Nutrition**



**Multani Mal Modi College,  
Patiala**

## **Program Outcomes (POs)**

**PO-1:** After completing Postgraduation in food & nutrition, students would gain a thorough knowledge of Food & Nutrition..

**PO-2:** The Food & Nutrition focussed curriculum offers a number of specializations and practical exposures which would equip the student to face the modern day challenges in Food & Nutrition .

**PO-3:** The all inclusive outlook of the course offers a number of value based and job-oriented courses ensures that students are trained up to date and the student will be able to do higher education and advanced research in the field of Food & Nutrition.

**PO-4:** The knowledge of food & Nutrition beyond fundamentals result in affective development of the students, hence will make them progress to valuing and organization levels.

**PO-5:** Will gain through systematic and subject skills& practical skill within various disciplines of food, health, nutrition ,advance ,food science, biochemistry, therapeutic nutrition and dietary counselling.

## Course Outcomes (COs)

### Msc food & Nutrition- I

#### Semester-1st

Code	Course
Paper1	Biochemistry
Paper2	General Microbiology
Paper 3	Advance Nutrition-I
Paper4	Community Nutrition

#### Semester-2nd

Code	Course
Paper 1	Biochemistry
Paper2	Food & Industrial Microbiology
Paper3	Advance nutrition II
Paper4	Food Science

#### Biochemistry- 1

After completing this course the students will be able to

- CO1 Structure and function of nutrients and other dietary constituents.
- CO2 Chemical structure and metabolic functions of essential and Physiological and biochemical basis for nutrient requirements.
- CO3 Integration, coordination, and regulation of macro-and micronutrient metabolism
- CO4 Regulation of nutrient metabolism and nutritional needs by hormones and growth factors.

#### General Microbiology

After completing this course the students will be able to

- CO1 Evaluate the nature and impact of food borne disease on food industry and public health
- CO2 Evaluate role of microorganism in health and disease.
- CO3 Demonstrate knowledge to identify food safety hazards and to take preventive measures.
- CO4 Understand HACCAP it's need, Benefits and Principles.  
Understand Biosensors: and it's Applications.

#### Advance Nutrition

After completing this course the students will be able to

- CO1 At the end of course, student should be
- CO2 Concepts of Health, Nutrition, Nutrients, Nutritional Status, Nutritional Care, Malnutrition, Nutrient Density,
- CO3 Dietary Reference Intakes (DRIs); Food Guide Pyramid

## **Programme & Course Outcomes of MSc. Food & Nutrition (Session 2019-20)**

- CO4 Food Exchange Lists: Importance & Uses.
- CO5 Understand the metabolism of carbohydrates, protein, fat.

### **Community Nutrition**

After completing this course the students will be able to

- CO1 At the end of course, student should be able to
- CO2 Identify the clinical implications of malnutrition, both under- and over-nutrition
- CO3 Evaluate nutritional status as per standard and recommended
- CO4 corrective measures to improve the nutritional health of individuals and communities
- CO5 Explain the methodology and importance of growth monitoring in promotion of health.

### **Paper-I BIOCHEMISTRY-II**

After completing this course the students will be able to

- CO1 Amino Acids: Structure, Classification, Properties, Amino acids as building blocks of proteins, Essential amino acid,
- CO2 Amino Acids Metabolism: General pathways for metabolism of amino acids, Transamination, Deamination.
- CO3 Proteins: Structure of proteins, Primary, Secondary, Tertiary & Quaternary,
- CO4 Nucleic Acids: Classification & Structure of nucleic acids, Purine & Pyrimidine bases, Nucleosides & Nucleotides.
- CO5 Gene Cloning: Recombinant DNA technology

### **Food Industry Microbiology**

After completing this course the students will be able to

- CO1 Evaluate the nature and impact of food borne disease on food industry and public health
- CO2 Evaluate role of microorganism in health and disease.
- CO3 Demonstrate knowledge to identify food safety hazards and to take preventive measures.
- CO4 Understand HACCAP it's need, Benefits and Principles.
  - a. Understand Biosensors: and it's Applications.

### **Advance nutrition IInd**

After completing this course the students will be able to

- CO1 Dietary Reference Intakes (DRIs); Food Guide Pyramid
- CO2 Nutrient supplements—risks/benefits, life stage, bioavailability. Explain Fundamentals of Nutrition and identify classes of nutrients and their characteristics.
- CO3 Categorize macro and micro nutrients as per their functions and properties .
- CO4 Appraise the role of macro and micronutrients in promotion of
- CO5 Health and preventive diseases.

## **Programme & Course Outcomes of MSc. Food & Nutrition (Session 2019-20)**

### **Food Science**

At the end of course students should be able to

- CO1 Relation of cookery to colloidal chemistry
- CO2 Methods of Cooking & Effect of cooking & processing on digestibility & Nutritive value of foods.
- CO3 Organoleptic evaluation of foods.
- CO4 Milk & Milk Products: Composition & Constituents of milk

### **Msc food & Nutrition- I**

#### **Semester-1st**

<b>Code</b>	<b>Course</b>
Paper1	Human Physiology
Paper2	Therapeutic Nutrition
Paper 3	Maternal & Child Nutrition
Paper4	Institutional Food Management –I

#### **Semester-2nd**

<b>Code</b>	<b>Course</b>
Paper 1	Research Methodology & Statistics
Paper2	Clinical Nutrition & Diet Counseling
Paper3	Problems in Human Nutrition
Paper4	Institutional Food Management -II

### **Human Physiology**

After completing this course the students will be able to

- CO1 Body Fluids: Blood and Lymph
- CO2 Body Fluids: Blood and Lymph
- CO3 Anatomy of Respiratory tract, Lung Volume and Capacities.
- CO4 Parts of Digestive System, their secretions and functions (stomach, pancreas, gall bladder), Movements of GIT

### **Paper –II THERAPEUTIC NUTRITION**

After completing this course the students will be able to

- CO1 Introduction to Therapeutic Nutrition
- CO2 Effects of illness on food acceptance and utilization

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CO3 Therapeutic modifications of normal diet:- normal, soft, liquid diets, parenteral feeding.

CO4 Etiology, clinical and biochemical manifestations, nutrition and dietary management for the diseases/conditions.

CO5

**Paper III MATERNAL AND CHILD NUTRITION**

After completing this course the students will be able to

CO1 Importance of maternal and child nutrition.

Physiological and biochemical changes during pregnancy: placenta, hormones, blood circulation, gastrointestinal changes, weight gain, basal metabolism and complications of pregnancy.

CO2 Effect of maternal nutrition on nutritional status of offspring

CO3 Pregravid nutrition and fetal outcome

CO4 Maternal dietary intake and fetal outcome

CO5 Food supplementation and fetal outcome

**IV INSTITUTIONAL FOOD MANAGEMENT-I**

After completing this course the students will be able to

CO1 Basic factors in successful institutional meal planning, Considerations with regard to Religion, Region, Availability of Food and Season, Food habits, Equipment, Physical plant and Financial resources

CO2 Techniques of writing menus

CO3 Types of menus

Food Preparation and Service

CO4 Food Production Systems

CO5 Food Production Process with emphasis on Standardization of Recipes

CO6 Effective use of Left Overs

- CO7 Types and Styles of Food Service in different Institutions--- Formal and Informal Food Service.

**Paper-I RESEARCH METHODOLOGY AND STATISTICS**

After completing this course the students will be able to

- CO1 Sampling Techniques - Definition of population and sample  
CO2 Principles of Experimentation: Planning of scientific experiment.  
Analysis of variance for simple para design.  
CO3 Report writing, foot notes and bibliographical citation  
CO4 Thesis writing, principles and techniques of thesis writing.  
CO5 Test of significance - Large sample test, Test based on standard normal distribution, t and F test.

**Paper II - CLINICAL NUTRITION AND DIET COUNSELING**

After completing this course the students will be able to

- CO1 Food service in health care facilities:  
CO2 Role of health care professionals with emphasis on role of dietitian  
CO3 Feeding of patient  
CO4 Team approach to nutritional care  
CO5 Comprehensive care services  
CO6 Physical handicaps and Rehabilitation of patient  
CO7 Nutritional care of the terminally ill or hospice patient

**Paper III - PROBLEMS IN HUMAN NUTRITION**

After completing this course the students will be able to

- CO1 Energy Protein Malnutrition  
CO2 Vitamin A deficiency

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- CO3 Rickets, Osteomalacia and osteoporosis
- CO4 Nutritional anemia
- CO5 Goiter
- CO6 Hazards of Food Toxins - natural, chemical and microbial
- CO7 Food adulteration- common adulterants, their effects on human health, laws to curb adulteration

**Paper IV – Institution Food Management II**

After completing this course the students will be able to

- CO1 Organization and Management: Definition, types and structure
- CO2 Management: Definition, functions, delegation of responsibilities
- CO3 Personnel Management
- CO4 Labour laws regarding health and safety of employees, general safety rules in food preparation and service areas, accident prevention, welfare policies.