

**J.D. BIRLA INSTITUTE**  
**Department of Food Science & Nutrition Management**  
**M.Sc (Food & Nutrition)**

**Programme Outcomes (PO)**  
**Programme Specific Outcome (PSO)**  
**Course Outcomes**

**Programme Outcomes (PO)**

**PO1: Scientific Knowledge:** Utilization of knowledge of nutrition & dietetics in disease management and prevention for the welfare of the community.

**PO2: Food Handling & Safety:** Implementation of strategies for food access, food toxicity, procurement, preparation, and safety for all fields of food & nutrition.

**PO3: Critical Thinking:** Able to apply technical skills, knowledge of health behavior, clinical judgment, and decision-making skills when assessing and evaluating the nutritional status of individuals and communities and their response to nutrition intervention.

**PO4: Problem Solving:** Utilize research methodology and project work to infer and interpret data in order to provide valid conclusions and solutions.

**PO5: Practical exposures:** Identify and equip learners to face the modern-day challenges in the industry.

**Programme Specific Outcome (PSO)**

**PSO1:** Excel as academicians and research personnel.

**PSO2:** Develop comprehensive and analytical skills in food industries and health sectors.

**PSO3:** Take up professions in community upliftment programmes.

**PSO4:** Gain insight in public health nutrition for employment in state and central government.

**PSO5:** Professionally competent to take up careers in academics, health care and service industry.

<b>Class/ Paper/Semester</b>	<b>Title</b>	<b>Course Outcome</b>
1 <sup>st</sup> year M.Sc (FN)-I	Statistics-I (MFN101)	<p><b>CO1:</b> Design the tools for collection; identify the samples, interpretation of data with the use of tables and pictorial representations.</p> <p><b>CO2:</b> Apply the knowledge in representing the data and interpreting appropriate results.</p> <p><b>CO3:</b> Competent to select appropriate statistical tools to investigate a research hypothesis.</p> <p><b>CO4:</b> Assess the numerical data for providing statistical evidences to support the research results.</p> <p><b>CO5:</b> Identify limitations to statistical results and avoid misleading quantitative analysis.</p>
1 <sup>st</sup> year M.Sc (FN)-I	Functional Foods (MFN102)	<p><b>CO1:</b> Well-versed with different probiotic and prebiotic foods.</p> <p><b>CO2:</b> Describe the functionality of antioxidants.</p> <p><b>CO3:</b> Application of functional foods in various fields.</p> <p><b>CO4:</b> Assess and analyze the bioactive components present in foods.</p> <p><b>CO5:</b> Describe and prescribe the therapeutic use of functional foods.</p>
1 <sup>st</sup> year M.Sc (FN)-I	Food Toxicology (MFN103)	<p><b>CO1:</b> Study different types of toxins in food.</p> <p><b>CO2:</b> Understand the mechanism of the toxins.</p> <p><b>CO3:</b> Aware about the toxins in food from processing conditions.</p> <p><b>CO4:</b> Updated on the toxin estimation protocols.</p> <p><b>CO5:</b> Learn about assessing risk and detoxification strategies.</p>
1 <sup>st</sup> year M.Sc (FN)-I	Nutritional	<p><b>CO1:</b> Well-versed in the structure and biochemistry of</p>

	Biochemistry (MFN104)	<p>important nutrients.</p> <p><b>CO2:</b> Identify the importance of enzymes and biological oxidation.</p> <p><b>CO3:</b> Assess the interaction between various metabolic pathways.</p> <p><b>CO4:</b> Understand the application of biochemical knowledge to problems of human health &amp; nutrition.</p> <p><b>CO5:</b> Understand the effect of metabolic alterations towards the development of a disease.</p>
1 <sup>st</sup> yearM.Sc (FN)-I	Nutritional Biochemistry (MFNP105)	<p><b>CO1:</b> Identify biochemical constituents of biological samples.</p> <p><b>CO2:</b> Appraise skills in handling different instruments and glassware used in the laboratory and learn their maintenance.</p> <p><b>CO3:</b> Explain the normal and abnormal constituents present in biological samples.</p> <p><b>CO4:</b> Understand the importance of biochemistry in solving problems of human health and nutrition.</p> <p><b>CO5:</b> Appraise skills in the different techniques involved in the collection and analysis of biological samples.</p>
1 <sup>st</sup> yearM.Sc (FN)-I	Computer Application and Information Communication Technology (MFNP106)	<p><b>CO1:</b> Optimize the use of Microsoft Office tools.</p> <p><b>CO2:</b> Enhance use of PowerPoint as a visual aid for effective communication.</p> <p><b>CO3:</b> Skills developed to design audio-visual aids.</p> <p><b>CO4:</b> Use of technology to optimize learning and communication.</p> <p><b>CO5:</b> Understand basic concepts of creating multimedia applications and websites.</p>
1 <sup>st</sup> yearM.Sc (FN)-II	Statistics-II (MFN201)	<p><b>CO1:</b> Apply statistical tools to ensure reliability and validity of data.</p> <p><b>CO2:</b> Assess the numerical data for providing statistical evidences to support the research results.</p> <p><b>CO3:</b> Perform statistical analysis.</p> <p><b>CO4:</b> Interpret and justify the research findings.</p> <p><b>CO5:</b> Present research data in a scientific manner.</p>
1 <sup>st</sup> yearM.Sc (FN)-II	Research Methodology (MFN202)	<p><b>CO1:</b> Provide foundation knowledge of research methods used in Food Science &amp; Nutrition.</p> <p><b>CO2:</b> Competent in selecting an appropriate research design, and implementing a research project.</p> <p><b>CO3:</b> Developed awareness about the skills in report writing and research paper.</p> <p><b>CO4:</b> Capable to convert a problem description into testable research hypotheses.</p> <p><b>CO5:</b> Insights in the concepts and procedures of sampling, data collection, analysis and reporting.</p>
1 <sup>st</sup> yearM.Sc (FN)-II	Clinical Nutrition (MFN203)	<p><b>CO1:</b> Insights on the interaction between nutrition and diseases.</p> <p><b>CO2:</b> Competent to plan therapeutic diets.</p> <p><b>CO3:</b> Well-versed with specific nutrients for management of diseases.</p> <p><b>CO4:</b> Insights on the complications of various diseases and their nutritional management.</p> <p><b>CO5:</b> Updated knowledge in the recent advances in the area of clinical nutrition.</p>
1 <sup>st</sup> yearM.Sc (FN)-II	Clinical Nutrition (MFNP204)	<p><b>CO1:</b> Insights on the interaction between nutrition and diseases.</p> <p><b>CO2:</b> Competent to plan and prepare therapeutic diets.</p> <p><b>CO3:</b> Utilize specific nutrients for management of</p>

		<p>diseases.</p> <p><b>CO4:</b> Competent to interpret and apply nutrition concepts to evaluate and improve the nutritional health of diseased individuals</p> <p><b>CO5:</b> Updated knowledge in the recent advances in the area of clinical nutrition.</p>
1 <sup>st</sup> yearM.Sc (FN)-II	Advanced Food Microbiology (MFNP205)	<p><b>CO1:</b> Understand classification, morphology, reproduction, cultivation and microscopic examination of microorganisms.</p> <p><b>CO2:</b> Explain the methods of control of microorganisms.</p> <p><b>CO3:</b> Understand sources, spoilage and contamination of foods.</p> <p><b>CO4:</b> Appraise the basic principle of sanitation and hygiene to prevent foodborne infections and poisonings.</p> <p><b>CO5:</b> Demonstrate microbial estimation in food.</p>
1 <sup>st</sup> yearM.Sc (FN)-II	Term Assignments (MFNP206)	<p><b>CO1:</b> Enhance the ability to plan, design and research new studies adhering to ethical guidelines.</p> <p><b>CO2:</b> Improved problem-solving skills.</p> <p><b>CO3:</b> Scrutinize a situation; apply critical thinking towards a conclusion and solution.</p> <p><b>CO4:</b> Draw connections and inferences from collected data.</p> <p><b>CO5:</b> Apply theoretic understanding to practical skills.</p>
2 <sup>nd</sup> yearM.Sc (FN)-III	Nutrition for Geriatrics (MFN301)	<p><b>CO1:</b> Understand the multi-faced aspects of ageing.</p> <p><b>CO2:</b> Understand the importance of nutritional care of elderly with various ailments.</p> <p><b>CO3:</b> Enable to provide nutritional and health care for the elderly.</p> <p><b>CO4:</b> Awareness of community agencies and services available to free living elderly individuals.</p> <p><b>CO5:</b> Knowledge about various policies and programmes pertaining to older adults.</p>
2 <sup>nd</sup> yearM.Sc (FN)-III	Food Technology (MFN302)	<p><b>CO1:</b> Systemic knowledge of basic &amp; applied aspects of food processing &amp; technology.</p> <p><b>CO2:</b> Updated on the technology used in food processing.</p> <p><b>CO3:</b> Understanding the influence of the processing conditions on the food.</p> <p><b>CO4:</b> Study the alternatives to the foods available.</p> <p><b>CO5:</b> Aware about the advantages of food processing.</p>
2 <sup>nd</sup> yearM.Sc (FN)-III	Quantity Food Production (MFNP303)	<p><b>CO1:</b> Competent in planning and executing of quantity cooking.</p> <p><b>CO2:</b> Well-versed with food pricing and budgeting.</p> <p><b>CO3:</b> Entrepreneurial skills developed for meal preparation.</p> <p><b>CO4:</b> Develop small-scale marketing strategies for improving food sales.</p> <p><b>CO5:</b> Competent with culinary innovations in meal preparations.</p>
2 <sup>nd</sup> yearM.Sc (FN)-III	Public Health Nutrition (MFNP304)	<p><b>CO1:</b> Engage in advocacy on issues that affect public health and nutrition policy.</p> <p><b>CO2:</b> Understand, plan and facilitate the process of implementation of programmes using various modules for a successful nutrition education program.</p> <p><b>CO3:</b> Well-versed with the role of national, international and voluntary nutritional organizations to combat malnutrition.</p> <p><b>CO4:</b> Excel in interaction with the community to collect</p>

		<p>information about their nutritional status through dietary surveys.</p> <p><b>CO5:</b> Design &amp; prepare and use the various types of communication aids for imparting nutrition education.</p>
2 <sup>nd</sup> year M.Sc (FN)-III	Field Visits & Seminar (MFNP305)	<p><b>CO1:</b> Develop team and independent working skills and understand hierarchy of work.</p> <p><b>CO2:</b> Appraise the ability in preparing scientific reports.</p> <p><b>CO3:</b> Reinforcement of theoretical knowledge into various fields.</p> <p><b>CO4:</b> Develop public speaking and presentation skills.</p> <p><b>CO5:</b> Initiate entrepreneurial skills.</p>
2 <sup>nd</sup> year M.Sc (FN)-III	Minor Project (MFNP306)	<p><b>CO1:</b> Develop independent working skills.</p> <p><b>CO2:</b> Identify current issues and trends in the field of food science and nutrition.</p> <p><b>CO3:</b> Appraise knowledge regarding relevant and interesting topics in food and nutrition.</p> <p><b>CO4:</b> Develop analytical skills and professional scientific writing.</p> <p><b>CO5:</b> Appraise self-confidence.</p>
2 <sup>nd</sup> year M.Sc (FN)-IV	Advanced Food Quality & Analysis (MFN401)	<p><b>CO1:</b> Study the quality parameters for food.</p> <p><b>CO2:</b> Assessing techniques for quality evaluation in foods.</p> <p><b>CO3:</b> Updated on the food standards.</p> <p><b>CO4:</b> Understand the nature of externally added components in food.</p> <p><b>CO5:</b> Compare the national &amp; international food laws.</p>
2 <sup>nd</sup> year M.Sc (FN)-IV	Advanced Food Quality & Analysis (MFNP402)	<p><b>CO1:</b> Study the quality parameters for food.</p> <p><b>CO2:</b> Assessing techniques for quality evaluation in foods.</p> <p><b>CO3:</b> Extensive assessment of the components in food qualitatively.</p> <p><b>CO4:</b> Understand the nature of externally added components in food.</p> <p><b>CO5:</b> Extensive assessment of the components in food quantitatively.</p>
2 <sup>nd</sup> year M.Sc (FN)-IV	Dissertation (MFNP403)	<p><b>CO1:</b> Develop independent working skills.</p> <p><b>CO2:</b> Identify current issues and trends in the field of food science and nutrition.</p> <p><b>CO3:</b> Appraise knowledge regarding relevant and interesting topics in food and nutrition.</p> <p><b>CO4:</b> Develop analytical skills and professional scientific writing.</p> <p><b>CO5:</b> Appraise self-confidence.</p>
2 <sup>nd</sup> year M.Sc (FN)-IV	Internship Training (MFNP404)	<p><b>CO1:</b> Reinforcement of theoretical knowledge into various fields.</p> <p><b>CO2:</b> Ability to be a health and wellness professionals.</p> <p><b>CO3:</b> Apply the knowledge for diet planning and counseling.</p> <p><b>CO4:</b> Develop team and independent working skills and understand hierarchy of work.</p> <p><b>CO5:</b> Initiate entrepreneurship venture.</p>