

**College of Non- Conventional Vocational Courses
for Women, Kolhapur**

Department of Food Technology

M.Sc. (Food Science and Nutrition) Academic Year 2024-2025

NEP

Program Outcomes	Program Specific Outcomes
<ol style="list-style-type: none">1. Utilize knowledge from the physical and biological sciences as a basis for understanding the role of food and nutrients in health and disease processes. Students will be able to prepare and deliver effective presentations of technical information to food science and nutrition professionals and to the general public.2. Students/ learners will gain a broad knowledge of food science focusing on chemistry, biochemistry, whilst giving them the necessary understanding of food processing, preservation techniques, quality, safety and new product development to excel in the field.3. Students/ learners will develop an in-depth understanding of the principles that underpin the relationships between diet, human health and wellbeing.4. Ability development of Students/ learners to critically appraise the effects of food processing on the nutritional quality of foods and the role of processed foods in the diet.	<ol style="list-style-type: none">1. Able to provide nutrition counseling and education to individuals, groups, and communities throughout the lifespan using a variety of communication strategies.2. 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.3. Students can implement strategies for food access, procurement, preparation, and safety for individuals, families, and communities. Apply food science knowledge to describe functions of ingredients in food.4. Students/ learners will develop the ability to apply fundamental specific concepts to understand the complex characteristics of foods.5. The programme will allow the students to challenge current issues in food production and issues arising from food safety.6. The programme will encourage students to evaluate current issues and developments related to the food science & nutrition discipline.

M.Sc. FSN I - Course Outcomes

Class	Course Code/ Course Name	Course Outcomes
M.Sc. (FSN) I Semester I (NEP)	MMT-101 Human Physiology	<ol style="list-style-type: none"> 1. Students will understand structure and function of cell, tissues and organs of the body. 2. Students will come to know about different systems of the body and their functions. 3. Students will learn the role of body systems in maintaining Homeostasis.
M.Sc. (FSN) I Semester I (NEP)	MMT- 102 Advances In Food Chemistry	<ol style="list-style-type: none"> 1. Students will be able to learn the chemistry of food to control a chemical and biochemical reaction that influence food quality. 2. Students will also learn about the principles behind analytical techniques associated with food components and related problems. 3. Student will understand the role of food nutrients. 4. Students will be able to know the basic nutrients and their requirements for human nutrition. 5. Students will be able to evaluate new product development.
M.Sc. (FSN) I Semester I (NEP)	MMT-104 Food Preservation Techniques	<ol style="list-style-type: none"> 1. Students will be able to understand different processing and preservation techniques. 2. The students will be able to utilize the various preservative methods for food Industrial settings. 3. The students will comprehend the processing techniques utilized in food industries
M.Sc. (FSN) I Semester I (NEP)	MET -105 Advances in Nutrition Science OR Nutrition Through Life- Cycle	<ol style="list-style-type: none"> 1. Students will enable to gain knowledge about concept of Nutrition Science. 2. Students will learn role of macronutrients and micronutrients in Nutrition. 3. Students will able to understand nutrition for special population. 4. Students will gain knowledge about new horizons of nutrition. <p>OR</p> <ol style="list-style-type: none"> 1. Students will understand the functions and sources of nutrients, role of nutrients in maintenance of good health. Able to identify what foods are good sources for what nutrients. 2. Students will be familiar with factors affecting for the absorption of nutrients. 3. Students will gain knowledge about food pyramid, vegetarian diet, menu planning and nutritional needs during infancy to adolescents. 4. Students will come to know about the nutritional requirement of adults, nutritional needs during pregnancy and lactation, physiological changes and hormones involved during pregnancy and lactation, effects of ageing and life expectancy.

M.Sc. (FSN) I Semester I (NEP)	RM – 106 Research Methodology	<ol style="list-style-type: none"> 1. Students will be able to identify the overall process of designing a research study from its inception to its report-making. 2. Students will learn the characteristics of qualitative and quantitative research and will be able to identify a research problem stated in a study. 3. Students will understand advanced concepts of statistics and develop basic skills of data analysis.
M.Sc. (FSN) I Semester II (NEP)	MMT -201 Advances in Food Microbiology	<ol style="list-style-type: none"> 1. Students will understand the important pathogens and spoilage microorganisms in foods, the most likely sources of these organisms, and the conditions under which they grow, the role of beneficial microorganisms in foods and their use in fermentation processes. 2. Students will be able to use appropriate laboratory techniques to enumerate, isolate, and identify microorganisms in foods.
M.Sc. (FSN) I Semester II (NEP)	MMT -202 Processing of Cereals, Legumes and Oilseeds	<ol style="list-style-type: none"> 1. Students will be able to understand importance of cereal, legumes and oilseeds and also technology used in different milling industries. 2. Students will be able to understand technical knowledge of refining of oil. 3. Students will understand technology of cereals, legumes and oilseeds and their processed products and associated nutritional values
M.Sc. (FSN) I Semester II (NEP)	MMT- 204 Nutritional Biochemistry	<ol style="list-style-type: none"> 1. Students will gain knowledge of the metabolism of nutrients. 2. Students will enable students to learn the role of nutrients in foods and deficiency disorders. 3. Students will able to understand the regulation of metabolism.
M.Sc. (FSN) I Semester II (NEP)	MET -205 Dietetics and Diet Counselling OR Clinical Nutrition	<ol style="list-style-type: none"> 1. Students will able to learn the pathophysiology of different diseases. 2. Students will gain knowledge about the role of diet in disease management. 3. Students will able to understand diet counseling techniques. <p>OR</p> <ol style="list-style-type: none"> 1. Students will be able to understand principles of diet therapy, modification of normal diet for therapeutic purposes and the role of dietician. 2. Students will be able to demonstrate counselling techniques to facilitate behavior change. 3. Students can identify and describe the roles of others with whom the registered dietician collaborates in the delivery of food and nutrition services.

M.Sc. FSN II (NEP) Course Outcomes

Class	Course Code/ Course Name	Course Outcomes
M.Sc. (FSN) II Semester III (NEP)	MMT-301 Processing of Fruits and Vegetables	<ol style="list-style-type: none"> 1. Students will be able to know the application of food processing and preservation principles and technologies in the processing. 2. Students will be able to know preservation, extension of shelf life and value addition of fruit and vegetable products. 3. Students will gain knowledge and understanding of the basic post-harvest biological, chemical, physiological and metabolic processes and changes in fruits and vegetables.
M.Sc. (FSN) II Semester III (NEP)	MMT -302 Processing of Milk and Milk Products	<ol style="list-style-type: none"> 1. Students will be able to understand the technology behind the production of various dairy products. 2. Students impart skills in the application of biological, chemical, biochemical, physical and engineering sciences in processing and preservation of milk and milk products. 3. Students will get acquainted with techniques and technologies of testing and processing of milk by products
M.Sc. (FSN) II Semester III (NEP)	MMT -304 Food Additives, Contaminants and Toxicology	<ol style="list-style-type: none"> 1. Students will be able to understand that additives are relevant to processed food industry for shelf-life extension, processing aids and sensory appeal. 2. Students will get acquainted to develop an understanding of isolation of various biopolymers from food resources and their relevant application. 3. After completing the course students, a known – how on food additive legislation & understands the chemical & technological properties of the most relevant food additives used as food improvement agents.
M.Sc. (FSN) II Semester III (NEP)	MET- 305 Nutritional Epidemiology OR Diet Management for Sports and Fitness	<ol style="list-style-type: none"> 1. To make students focus on the promotion of good health through nutrition and the primary prevention of nutrition-related problems. 2. To enable students to deal with Nutritional Epidemiology. 3. To make students understand public policies relevant to nutrition. <p>OR</p> <ol style="list-style-type: none"> 1. Students will learn about physical activity, energy production and physical fitness. 2. Students will gain knowledge of sports nutrition applied for various athletes and their

		<p>RDA.</p> <ol style="list-style-type: none"> Students will gain knowledge on various supplements available in the market and its applications.
<p>M.Sc. (FSN) II Semester IV (NEP)</p>	<p>MMT-401 Processing of Animal Foods</p>	<ol style="list-style-type: none"> Student will be able to understand the importance of meat, preservation and processing into different products. Students provide insight into the functions and areas of responsibility of meat inspection. Students will get acquainted with an understanding of the technology for handling, processing, preservation and bi-product utilization of meat, poultry and fish products processing. Combination of theoretical & practical sessions consisting of the analysis of case studies, laboratory work, use of computer software & technical visits. .
<p>M.Sc. (FSN) II Semester IV (NEP)</p>	<p>MMT -402 Food Product Development and Packaging</p>	<ol style="list-style-type: none"> Student will be able to understand the need for packaging food, understand the various functions of food packages as influenced by their characteristics, understand the health implications of food-package interactions. Students will be able to understand different functions performed by packaging material. Students will be able to understand health implications of food-package interactions. Students learn about packaging requirement for fresh and processed food for local and international markets.
<p>M.Sc. (FSN) II Semester IV (NEP)</p>	<p>MET -404 Public Health Nutrition</p> <p>OR</p> <p>Ayurvedic Nutrition</p>	<p>OR</p> <ol style="list-style-type: none"> Students will focus on promotion of good health through nutrition and the primary prevention of nutrition related problems. Students will deal with nutritional epidemiology and also will understand public policies relevant to nutrition. <ol style="list-style-type: none"> Students will gain knowledge about Ayurvedic Nutrition in Disease Prevention and Treatment. Students will be able to understand Ayurvedic Concepts behind Diet and its relationship with health. Students will be able to study Ayurvedic Food Science and its role in the planning of diet.