Model Curriculum

QP Name: Fundamentals of Nutrition & Diet.

QP Code: FIC/MCr0001

Version: 1.0

NSQF Level: 3

Model Curriculam Version: 1.0

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Training Parameters

Sector	Food Processing
Sub-Sector	Multi-sectorial
Occupation	Dieticians and Nutritionists
Country	India
NSQF Level	4
Aligned to NCO/ISCO/ISIC Code	NC0/2015-2265.0100
Minimum Educational Qualification and Experience	1. 10th Grade pass or Equivalent OR 2. 8th Grade pass with 3 years of relevant experience in Food Processing OR 3. Previous relevant Qualification of NSQF Level 2.5 with 1.5 years experience in Food Processing OR 4. Previous relevant Qualification of NSQF Level 2 with 3 years experience in Food Processing
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	03-04-2025
Next Review Date	17/02/2028
NSQC Approval Date	18/02/2025
MCr Version	1.0
Model Curriculum Creation Date	10/01/2025
Model Curriculum Valid Up to Date	17/02/2028
Model Curriculum Version	1.0
Minimum Duration of the Course	30 Hours
Maximum Duration of the Course	30 Hours

Program Overview

This section summarises the end objectives of the program along with its duration.

Training Outcomes

At the end of the program, the learner should have acquired the listed knowledge and skills to:

- Develop nutrition plans for diverse populations across life stages.
- Assess nutritional status and address deficiencies in women and children.
- Promote healthy eating using public health and community nutrition strategies.
- Ensure food safety, hygiene, and compliance in food processing.

Compulsory Modules

The table lists the modules and their duration corresponding to the Compulsory NOS of the QP.

NOS and Module Details	Theory Duration	Practical Duration	Total Duration
Module 1: Introduction to nutrition and diet planning	06:00	01:00	07:00
Module 2: Public health and community nutrition	16:00	02:00	18:00
Module 3: Apply food safety Practices	05:00	00:00	05:00
Total Duration	**27:00**	**03:00**	**30:00**

Module Details

Module 1: Introduction to nutrition and diet planning

Terminal Outcomes:

- Apply nutrition principles and nutrient roles to make dietary plans for diverse populations.
- Assess nutritional status using anthropometric data and design tailored meal plans for various life stages.
- Develop and implement various nutrition strategies to promote healthy eating practices across diverse demographic groups.

Duration: 06:00	**Duration: 01:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the basic principles of nutrition. • Classify nutrients and describe their essential roles in maintaining health. • Explain how to utilise available food resources effectively. • Explain the concept of Recommended Dietary Allowances (RDA). • Explain the use of the food exchange list in meal planning. • List the equipment needed for measuring nutritional status indicators. • Outline the "My Plate My Nutrition" model. • Describe the components of a balanced diet. • Summarise the principles for meal planning tailored to adults, pregnant women, lactating women, infants, preschoolers, and the elderly. • Discuss strategies to address emotional eating, food cravings, or unhealthy eating patterns (e.g., binge eating). • State the importance of adequate hydration based on individual needs.	• Analyze anthropometric data such as height, weight, BMI, waist-to-hip ratio, Broca's index (BI), and accurate age assessment to evaluate the nutritional status of adults. • Assess the nutritional status of infants and children using anthropometric measurements like mid-arm circumference, subcutaneous body fat, and age-related growth indicators.Conduct nutritional analyses of food products to determine their macronutrients (proteins, fats, carbohydrates) and micronutrients (vitamins, minerals). • Use RDA calculations to formulate nutrition programs aimed at addressing malnutrition or deficiencies within populations, such as fortification of foods (e.g., iodized salt or iron-fortified cereals). • Demonstrate how "My Plate My Nutrition" can be used to educate individuals on balanced meals. • Design a balanced diet chart for individuals considering the nutritional needs for growth, development, and overall health. • Design special diets for specific health conditions, such as low-sodium diets for individuals with hypertension, gluten-free diets for celiac disease patients, or anti-inflammatory diets for autoimmune

	conditions.
Classroom Aids	
Training Kit (Trainer's Handbook and Student's Handbook), Whiteboard, Marker, Projector or large screen, Laptop with internet connectivity, PowerPoint Presentation, External Speakers, Multimedia materials, etc.	
Tools, Equipment and Other Requirements	
NA	

Module 2: Public health and community nutrition

Terminal Outcomes:

- Explain the basic concepts of public health, community nutrition, and their interrelationship.
- Identify and explain deficiency disorders in women and children, including PEM, vitamin and mineral deficiency diseases.
- Evaluate the effectiveness of various nutraceuticals and functional foods in enhancing health.

Duration: 16:00	**Duration: 02:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the basic concepts of public health and community nutrition, emphasising their interrelationship and impact on population health. • Discuss deficiency disorders in women and children, including protein-energy malnutrition (Marasmus, Kwashiorkor, Marasmic Kwashiorkor), iron deficiency (anemia), iodine deficiency disorders (IDD), zinc deficiency, and vitamin deficiencies such as Vitamin A deficiency, Vitamin D deficiency (Osteomalacia), and Vitamin C deficiency (Scurvy), as well as other conditions like goiter and fluorosis. • Discuss about Moderate Acute Malnutrition (MAM) and Severe Acute Malnutrition (SAM), including their definitions, causes, and implications for health. • Explain the important supplements (such as vitamin D for deficiency, omega-3 for heart health, protein for athletes), while ensuring they don't interfere with medications or medical conditions. • Elucidate lifestyle disorders such as diabetes, cardiovascular diseases, and obesity, including their causes, risk factors, and impact on overall health.Identify and explain the roles of international and national agencies and organizations working to combat malnutrition, such as `the World Health Organization (WHO), United Nations International Children's Emergency Fund (UNICEF), Food and Agriculture Organization (FAO), National Institute of Nutrition (NIN), and Integrated Child Development Services (ICDS). • Analyse different nutraceuticals, functional	• Participate in community health initiatives, campaigns, or workshops to educate the public on proper nutrition. • Conduct diet and nutrition surveys to identify vulnerable and risk groups, including breastfeeding and weaning practices in specific populations. • Perform a market survey to analyse the availability and potential benefits of locally available functional foods. • Provide personalized dietary advice to individuals or groups based on their specific needs, health conditions, or goals. • Develop and deliver nutrition education programs for schools, communities, and workplaces.

foods, and health supplements. • Evaluate their availability, roles, and impact on health. • Outline the concepts of health and community health. • Define the factors affecting community health, particularly maternal and child mortality, and identify their causes. • Discuss the role of health workers in improving maternal and child health outcomes, focusing on education and support strategies. • Explain the importance of immunisation and describe the immunisation schedule for children and adults. • Develop strategies to enhance local food production and assess their potential impact on nutrition at the community level. • Discuss the Nutrition Garden model to promote food security and sustainability within communities. • List Social and Behavior Change Communication (SBCC) methods to effectively communicate the role of nutrition through interpersonal communication, community approaches, and digital platforms.	
Classroom Aids	
Training Kit (Trainer's Handbook and Student's Handbook), Whiteboard, Marker, Projector or large screen, Laptop with internet connectivity, PowerPoint Presentation, External Speakers, Multimedia materials, etc.	
Tools, Equipment and Other Requirements	
Survey forms for diet and nutrition assessments, Measuring tools (scales, measuring cups), and Food handling safety kits (gloves, sanitisers).	

Module 3: Apply food safety Practices

Terminal Outcomes:

- Explain food safety and quality standards, identifying hazards, risks, and workplace safety protocols.
- Apply GMP, HACCP, and Schedule IV to maintain hygiene, prevent contamination, and ensure compliance in food processing.
- Implement health and safety policies, including FSSAI DART for food adulteration and workplace safety measures.

Duration: 05:00	**Duration: 00:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Classify different types of food. • Identify conditions related to food such as food intolerance, food allergy, food infection, food intoxication, or poisoning, and highlight their causes, symptoms, and effects on health. • Define food safety, food quality, and related terminologies involved in implementing food safety standards at the workplace. • Explain food standards and laws, including the Prevention of Food Adulteration (PFA), Food and Drug Administration (FDA) regulations, Meat Products Order (MPO), and other relevant legislation, detailing their significance in ensuring food safety and quality. • Identify hazards and risks in the food industry and classify their different types. • Explain food safety management systems. • Discuss Schedule IV requirements such as personal hygiene, Good Manufacturing Practices (GMP), pest control, allergen management, and Hazard Analysis and Critical Control Points (HACCP). • Discuss organizational health and safety policies, including fire safety, health safety, regular health check-ups, and accident management procedures. • Analyse food labels accurately to determine the nutritional content of the products. • Evaluate the potential risks associated with food ingredients, additives, or processing methods. • Elucidate the methods for preventing product contamination and cross-contamination in food	

handling and processing. • Describe the role of FSSAI DART and explain its significance in ensuring food safety standards.	
Classroom Aids	
Training Kit (Trainer's Handbook and Student's Handbook), Whiteboard, Marker, Projector or large screen, Laptop with internet connectivity, PowerPoint Presentation, External Speakers, Multimedia materials, etc.	
Tools, Equipment and Other Requirements	
Personal protective equipment (gloves, masks, aprons), Measuring tools for hygiene and safety checks (thermometers, pH meters)	

Annexure

Trainer Requirements

Trainer Pre-requisites						
Minimum Educational Qualification	**Specialisation**	**Relevant Industry Experience**		**Training Experience**		**Remarks**
		Years	***Specialisation***	***Years***	***Specialisation***	
B.Sc. or graduate / B.Tech / BE	Food technology or food engineering	5	Nutrition and Food Safety	2	Nutrition and Food Safety	NA
M.Sc. / M.Tech / ME	Food technology or food engineering	3	Nutrition and Food Safety	1	Nutrition and Food Safety	NA

Trainer Certification	
Domain Certification	**Platform Certification**
"Fundamentals of Nutrition and Diet", "FIC/MCr0001, v1.0", Minimum accepted score is 80%	"Trainer", "MEP/Q2601, v1.0" with a scoring of minimum 80%

Assessor Requirements

Assessor Pre-requisites						
Minimum Educational Qualification	**Specialisation**	**Relevant Industry Experience**		**Training / Assessment Experience**		**Remarks**
		Years	***Specialisation***	***Years***	***Specialisation***	
B.Sc. or graduate / B.Tech / BE	Food technology or food engineering	2	Nutrition and Food Safety	1	Nutrition and Food Safety	NA
M.Sc. / M.Tech / ME	Food Technology / Home Science	4	Nutrition and Food Safety	2	Nutrition and Food Safety	NA

Assessor Certification	
Domain Certification	**Platform Certification**
"Fundamentals of Nutrition and Diet", "FIC/MCr0001, v1.0", Minimum accepted score is 80%	"Assessor", "MEP/Q2701, v1.0" with the scoring of minimum 80%

Assessment Strategy

This section includes the processes involved in identifying, gathering, and interpreting information to evaluate the learner's required competencies in the program.

1. Assessment System Overview:
    - Batches assigned to the assessment agencies for conducting the assessment on SDSM/SIP or email
    - Assessment agencies send the assessment confirmation to VTP/TC looping SSC
    - Assessment agency deploys the ToA certified assessor to execute the assessment
    - SSC monitors the assessment process & records
    - If the batch size is more than 30, then there should be 2 Assessors.
2. Testing Environment: Assessor must:
    - Confirm that the centre is available at the same address as mentioned on SDMS or SIP
    - Check the duration of the training.
    - Check the Assessment Start and End time to be as 10 a.m. and 5 p.m.
    - Check that the allotted time to the candidates to complete the Theory & Practical Assessment is correct.
    - Check the mode of assessment—Online (TAB/Computer) or Offline (OMR/PP).
    - Confirm the number of TABs on the ground are correct to execute the assessment smoothly.
    - Check the availability of the Lab Equipment for the particular Job Role.
3. Assessment Quality Assurance levels / Framework:
    - Question papers created by the Subject Matter Experts (SME)
    - Question papers created by the SME should be verified by the other subject Matter Experts along with the approval required from SSC
    - Questions are mapped with NOS and PC
    - Question papers are prepared considering that levels 1 to 3 are for unskilled and semi-skilled individuals, and levels 4 and above are for skilled, supervisory, and higher management individuals.
    - Assessor must be ToA certified.
    - The assessment agency must follow the assessment guidelines to conduct the assessment
4. Types of evidence or evidence-gathering protocol:
    - Time-stamped & geotagged reporting of the assessor from the assessment location
    - Centre photographs with signboards and scheme-specific branding
    - Biometric or manual attendance sheet (stamped by TP) of the trainees during the training period
    - Time-stamped & geotagged assessment (Theory + Viva + Practical) photographs & videos
5. Method of verification or validation:

- Surprise visit to the assessment location
- Random audit of the batch
- Random audit of any candidate

6. Method for assessment documentation, archiving, and access
    - Hard copies of the documents are stored
    - Soft copies of the documents & photographs of the assessment are uploaded/accessed from Cloud Storage and are stored in the Hard Drives.

References

Glossary

Term	Description
Declarative Knowledge	Declarative knowledge refers to facts, concepts and principles that need to be known and/or understood to accomplish a task or solve a problem.
Key Learning Outcome	A key learning outcome is a statement of what a learner needs to know, understand and be able to do in order to achieve the terminal outcomes. Aset of key learning outcomes will make up the training outcomes. Training outcome is specified in terms of knowledge, understanding (theory) and skills (practical application).
OJT (M)	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on-site
OJT (R)	On-the-job training (Recommended); trainees are recommended the specified hours of training on-site.
Procedural Knowledge	Procedural knowledge addresses how to do something or how to perform atask. It is the ability to work or produce a tangible work output by applying cognitive, affective or psychomotor skills.
Training Outcome	Training outcome is a statement of what a learner will know, understandand be able to do upon the completion of the training.
Terminal Outcome	The terminal outcome is a statement of what a learner will know, understand and be able to do upon completing a module. A set of terminal outcomes helps to achieve the training outcome.
CCP	Critical Control Point (CCP) is a critical control point in the food production process where hazards can be prevented, eliminated, or reduced to acceptable levels.
HACCP	Hazard Analysis Critical Control Point (HACCP) is a systematic preventive approach to food safety that identifies, assesses, and controls critical control points (CCPs) to ensure the safe production of Food.

Acronyms and Abbreviations

Term	Description
NOS	National Occupational Standard (s)
NSQF	National Skills Qualifications Framework
OJT	On-the-job Training
QP	Qualifications Pack
PwD	People with Disability
PPE	Personal Protective Equipment