Model Curriculum

QP Name: Food Product Developer

QP Code: FIC/Q7604

Version: 2.0

NSQF Level: 5.0

Model Curriculum Version: 2.0

Food Industry Capacity & Skill Initiative || Shriram Bharatiya Kala kendra, 3rd floor, 1, Copernicus Marg, Mandi House, New Delhi
Delhi 110001 || email: admin@ficsi.in

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Training Parameters

Sector	Food Processing
Sub-Sector	Generic
Occupation	Research and Development
Country	India
NSQF Level	5
Aligned to NCO/ISCO/ISIC Code	NCO-2015/2131.1400
Minimum Educational Qualification and Experience	3 / 4 -year UG and 3-years of experience in food research and development UG in Science stream Diploma in relevant field and 4.5- years of experience in food research and development OR Previous relevant Qualification of NSQF Level 4 with 3 years of experience in food research and development OR Previous relevant Qualification of NSQF Level 4.5 with 1.5 years of experience in food research and development
Pre-Requisite License or Training	NA
Minimum Job Entry Age	21 Years
Last Reviewed On	18-02- 2025
Next Review Date	17-02-2028
NSQC Approval Date	18-02- 2025
QP Version	2.0
Model Curriculum Creation Date	20-12-2024
Model Curriculum Valid Up to Date	17-02-2028
Model Curriculum Version	2.0
Minimum Duration of the Course	510 Hours
Maximum Duration of the Course	510 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:

- Explain the process of ideation and innovation in developing new food products through market research.
- Discuss how recipe formulation contributes to the innovation of both new and existing food products.
- Describe methods for adjusting current food offerings based on market research findings.
- Discuss strategies for maintaining food safety and workplace health through hygiene protocols and safety regulations.
- Discuss the Employability and Entrepreneurship Skills.

Compulsory Modules

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

NOS and Module Details	Theory Duration (Hours)	Practical Duration (Hours)	On-the-Job Training Duration (Mandatory) (Hours)	On-the-Job Training Duration (Recommended) (Hours)	Total Duration (Hours)
FIC/N9301: Develop recipe formulations and product development SOPs **NOS Version No.: 2.0** **NSQF Level: 3.0**	**60:00**	**90:00**	**60:00**	**00:00**	**210:00**
Module 1: Introduction to the job role of a Food Product Developer	05:00	00:00	00:00	00:00	05:00
Module 2: Ideation, Innovation, and Market Research in Food Product Development	15:00	15:00	30:00	00:00	60:00
Module 3: Conceptualizing and Enhancing Food Product	15:00	15:00	15:00	00:00	45:00
Module 4: Product Processing, Testing, and Scale-Up	25:00	60:00	15:00	00:00	100:00
FIC/N9302: Undertake food product development Cycle **NOS Version No.: 2.0** **NSQF Level: 5.0**	**60:00**	**120:00**	**30:00**	**00:00**	**210:00**

Module 5: Food Product Analysis and Material Readiness	50:00	100:00	30:00	00:00	180:00
Module 6: Adherence to Packaged Food Product Regulations	10:00	20:00	00:00	00:00	30:00
FIC/N9904: Ensure food safety at the workplace NOS Version No.: 1.0 NSQF Level: 5	**10:00**	**20:00**	**00:00**	**00:00**	**30:00**
Module 7: Basic Food Safety Standards	10:00	20:00	00:00	00:00	30:00
DGT/VSQ/N0102: Employability Skills NOS Version- 1.0 NSQF Level- 4.0	**60:00**	**00:00**	**00:00**	**00:00**	**60:00**
Module 8: Employability Skills (60 Hours)	60:00	00:00	00:00	00:00	60:00
Total Duration	**210:00**	**210:00**	**90:00**	**00:00**	**510:00**

Module Details

Module 1: Introduction to the job role of a Food Product Developer

Mapped to FIC/N7606, v3.0

Terminal Outcomes:

- Explain the importance of Food Processing Industry.
- Discuss the roles and responsibilities of a Food Product Developer.

Duration (in hours): **05:00**	**Duration (in hours)**: **00:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Define food processing. • Describe the various sub-sectors of food processing industry. • Discuss the scope of employment in the food processing industry. • Describe the roles & responsibilities of a Food Product Developer. • List the terminology used in the quality analysis process.	
Classroom Aids	
Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
Nil	

Module 2: Ideation, Innovation, and Market Research in Food Product Development

Mapped to FIC/N9301, v2.0

Terminal Outcomes:

- Explain the role of ideation and innovation in developing new food products.
- Discuss the methods for conducting effective market research in the food industry.

Duration (in hours): 15:00	Duration (in hours): 15:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the standards, policies, and procedures relevant to food safety and food quality that must be adhered to during product development. • Elucidate how market trends and consumer preferences influence the ideation of new food products. • Explain the various food processing methods, such as cooking, roasting, freezing, drying, and baking, and their impact on product quality. • Describe the importance of sensory tests and scales in evaluating specific food products. • Discuss the methods for conducting comprehensive market research to identify consumer tastes, preferences, and emerging trends. • Explain how to analyze the data gathered from market research to determine market demand and potential opportunities for new or improved food products. • Explain how to assess and interpret research findings to make informed decisions about product development and innovation.	• Demonstrate how to generate creative ideas for new food products based on market trends and consumer preferences. • Show how to identify and implement improvements to existing food offerings to enhance quality, taste, and consumer appeal. • Demonstrate the process of conducting comprehensive market research to identify consumer tastes, preferences, and emerging trends. • Show how to analyze data to determine market demand and potential opportunities for new or improved food products. • Demonstrate the utilization of various market research methods, including surveys, focus groups, and competitive analysis, to gather relevant insights. • Show how to assess and interpret research findings to make informed decisions about product development and innovation.
Classroom Aids	
Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	

Safety Gloves, Face Mask, Safety Shoes, Safety Hat, Apron, Sample Documents, Sample Recipes, Food Packaging Material, Sample Ingredients, Food Packaging Material, Sample BOM, Sample Ingredients SAP, MS Office Software

Module 3: Conceptualizing and Enhancing Food Product

Mapped to FIC/N9301, v2.0

Terminal Outcomes:

- Describe the process of conceptualizing new food products from initial ideas to final concepts.
- Elucidate how to optimize and enhance existing food products for better quality or market appeal.

Duration (in hours): 15:00	**Duration (in hours): 15:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the significance of food science, nutrition, microbiology, and chemistry in the development of safe and high-quality food products. • Discuss various food processing techniques and their impact on product development, particularly in terms of flavor, texture, and shelf life. • Elucidate the process of developing new food product concepts, recipes, and formulations based on market research and consumer insights. • Determine the feasibility of product concepts by assessing cost, resource availability, and market potential. • Describe the methods for identifying and sourcing raw materials and ingredients necessary for new product development. • Explain how to create and test new recipes while ensuring compliance with organizational and FSSAI-prescribed quality and safety standards. • Discuss the importance of documenting recipes and bills of materials in the product development process. • Discuss how to analyze current food products to identify areas for improvement based on consumer feedback and market trends. • Elucidate how to implement modifications to recipes and formulations to enhance quality, taste, and nutritional value.	• Demonstrate how to develop new food product concepts, recipes, and formulations based on market research and consumer insights. • Show how to evaluate the feasibility of product concepts in terms of cost, resources, and market potential. • Demonstrate the process of identifying and sourcing raw materials and ingredients needed for new product development. • Show how to create and test new recipes to ensure they meet applicable organizational and FSSAI-prescribed quality and safety standards. • Demonstrate how to document recipes and bill of materials accurately. • Show how to analyze current food products to identify areas for improvement based on consumer feedback and market trends. • Demonstrate the implementation of modifications to recipes and formulations to enhance quality, taste, and nutritional value. • Show how to test and evaluate revised products to ensure they meet organizational and regulatory standards. • Demonstrate how to assess the impact of changes on production processes, cost, and overall product performance.

• Discuss the testing and evaluation processes for revised products to ensure compliance with organizational and regulatory standards. • Explain how to assess the impact of changes on production processes, cost, and overall product performance. • Describe the importance of documenting modifications and updates to ensure consistency and maintain product integrity. • Discuss the collaborative efforts with quality assurance teams to verify that enhanced products meet safety and quality requirements.	• Show how to document modifications and updates to ensure consistency and maintain product integrity. • Demonstrate collaboration with quality assurance teams to verify that enhanced products meet safety and quality requirements.
Classroom Aids	
Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
Safety Gloves, Face Mask, Safety Shoes, Safety Hat, Apron, Sample Documents, Sample Recipes, Food Packaging Material, Sample Ingredients, Food Packaging Material, Sample BOM, Sample Ingredients SAP, MS Office Software	

Module 4: Product Processing, Testing, and Scale-Up

Mapped to FIC/ N9301, v2.0

Terminal Outcomes:

- Discuss the procedures involved in product processing and testing to ensure quality and safety.
- Explain the steps required to scale up the production process for new food products.
- Describe the importance of developing new SOPs for food product development and safety.
- Evaluate the common food safety concerns that must be addressed during product development.
- Discuss the methods for conducting cost analysis and benchmarking in food product development.

Duration (in hours): 50:00	**Duration (in hours): 100:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the challenges associated with scaling up operations in food production. • Explain the process of costing and sizing ingredients and products in a food manufacturing context. • Elucidate the importance of ingredient standardization and its impact on product consistency. • Describe the types of product packaging suitable for various food products. • Discuss the quality parameters and management tools used, such as process flow charts and check sheets. • Explain the principles of the Hazard Analysis and Critical Control Points (HACCP) management system. • Describe allergen management strategies and the risks associated with cross-contamination in food production. • Discuss the significance of halal and haram ingredients and processes in product development. • Elucidate the steps involved in recipe formulation for new and existing food products. • Discuss effective methods for planning production schedules and timelines.	• Demonstrate how to implement recipes and create product prototypes to ensure accurate replication of intended formulations and evaluate product durability and stability through shelf-life testing. • Show how to conduct process testing and evaluate product quality and development processes based on testing results and feedback. • Demonstrate how to perform consumer testing and gather insights on product acceptance and preference. • Show how to conduct nutritional evaluations and document testing procedures to support product development and regulatory compliance. • Demonstrate how to develop the product on a larger scale after finalizing the prototype and determine whether the production process is optimized for scale-up. • Show how to define acceptable ingredient specifications and standards, ensuring compliance with FSSAI regulations. • Demonstrate how to write new SOPs to ensure consistent quality across the organization and set parameters for testing the quality of new products.

• Describe the key aspects of resource management, vendor management, and project management skills in food production.	• Show how to avoid mixing permitted and non-permitted ingredients according to FSSAI guidelines and adhere to maximum permitted limits for food additives. • Demonstrate how to identify and address food safety concerns during product formulation, ensuring all safety measures are documented. • Show how to select products for benchmarking and identify key performance metrics for analyzing product effectiveness and cost. • Demonstrate how to analyze benchmarking data to identify opportunities for product development and refine the product development process.
Classroom Aids	
Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
Safety Gloves, Face Mask, Safety Shoes, Safety Hat, Apron, Sample Documents, Sample Recipes, Food Packaging Material, Sample Ingredients, Food Packaging Material, Sample BOM, Sample Ingredients SAP, MS Office Software	

Module 5: Food Product Analysis and Material Readiness

Mapped to FIC/N9302, v2.0

Terminal Outcomes:

- Discuss the process involved in analyzing food products.
- Explain how to ensure material availability for production.

Duration (in hours): 30:00	**Duration (in hours): 60:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Describe the temperature, relative humidity, and hygiene requirements necessary for conducting a shelf-life study. • Discuss the types of tests conducted to assess the shelf stability of food products, including microbial, physical, and chemical evaluations. • Explain the parameters for sensory evaluation, such as lighting and temperature, that ensure reliable test results. • Elucidate the different sensory tests available, including difference testing, preference testing, and descriptive analysis. • Discuss the tests performed for nutritional analysis, focusing on macro-nutrient and micro-nutrient content. • Describe the process of proximate and ultimate analysis in determining moisture, ash, fat, protein, and carbohydrate content. • Discuss the inventory tracking, material handling, and procurement protocols relevant to food production. • Explain the importance of selecting appropriate food-grade packaging materials to ensure compatibility with product characteristics and shelf-life requirements.	• Demonstrate how to list and manage all steps in product formulation. • Show how to prepare the work area for food shelf-life studies per SOPs. • Demonstrate the process for evaluating food product shelf life. • Show how to conduct chemical and nutritional tests for compliance. • Demonstrate sequential SOP-based product processes. • Show how to train and use a sensory panel for product evaluation. • Demonstrate supervising plant trials for product readiness. • Show how to arrange NABL-accredited lab testing for regulatory compliance. • Demonstrate how to prepare a list of materials for current and future trials to ensure uninterrupted development. • Show how to maintain documents related to the bill of materials following organizational guidelines for transparency and cost-tracking. • Demonstrate how to ensure the availability of materials for product development to prevent disruptions in the production process.

• Discuss how to conduct tests for nutritional analysis	
Classroom Aids	
Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
pH Meter, Microbial Testing Kits, Food Processors, Refrigerators/Freezers, Inventory Management Software, Quality Control Software, Barcoding Systems, Environmental Monitoring Equipment	

Module 6: Adherence to Packaged Food Product Regulations

Mapped to FIC/N9302, v2.0

Terminal Outcomes:

- Explain how to comply with regulations for packaged food products.

Duration (in hours): 10:00	**Duration (in hours): 20:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the standards, policies, and procedures relevant to food safety and quality. • Explain how to handle plant trials, including the processes involved, equipment used, and monitoring of trial outcomes. • Describe the different food-grade packaging materials suitable for various food product types, ensuring compliance with regulatory standards.	• Demonstrate how to ensure the calorific value of all food items is clearly stated on the packaging label, in accordance with FSSAI regulations. • Show how to follow FSSAI guidelines for using color-coded labels to indicate high fat, salt, and sugar content for consumer awareness. • Demonstrate how to label products using metric units (kg, litre, meter, etc.) to comply with legal packaging requirements. • Show how to inspect packaging to ensure food cans are free from dents, rust, perforations, and seam distortions. • Demonstrate how to dispose of expired materials according to FSSAI guidelines to manage food safety risks. • Show how to maintain accurate and organized records of finished products for traceability and quality assurance, as per organizational guidelines.
Classroom Aids	
Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
Quality Control Testing Kits, Food Safety Management Software, Inventory Management Systems, Analytical Balances	

Module 7: Basic Food Safety Standards

Mapped to FIC/ N9904, v1.0

Terminal Outcomes:

- Explain the various food safety standards to be followed during the production process
- Prepare sample reports regarding food safety regulations, inspections, faults observation, etc.

Duration (in hours): 10:00	**Duration (in hours): 20:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• List the types of biological, chemical and physical hazards present in the food processing industry. • Discuss various types of food contaminations, their causes, and ways to prevent them. • Discuss the importance of following the standard procedures for ensuring food safety). • State the importance of ensuring that the materials (such as raw materials, processed materials, finished goods, etc.) are adequately isolated to prevent them from contamination. • Outline the standard regulations to be followed for ensuring food safety as listed in 'The Food Safety and Standards Act, 2006 that need to be followed during production. • Discuss the role of HACCP, VACCP and TACCP as well as procedures to implement these in the food industry. • Discuss about product information and consumer awareness, product recall and withdrawal, and traceability. • Explain the procedure to conduct workplace food safety audits. • Discuss various types of allergens and their management at the workplace. • Discuss the corrective measures to be applied to ensure food safety. • List various issues that can arise during food production and other processes.	• Apply appropriate practices to identify various biological, chemical, and physical hazards at various stages (procurement of raw material; production, manufacturing, distribution, delivery of finished product, etc.) of food processing. • Employ appropriate practices to implement food safety procedures and regulatory policies at the workplace. • Employ appropriate practices to establish and follow Good Manufacturing Practices (GMPs) related to ergonomics, cleaning and sanitation, equipment and containers, pest control, facilities, food storage, transportation, distribution etc. • Demonstrate the procedure followed for allergen management and handling and storage of raw materials. • Apply appropriate practices to establish and follow monitoring systems, like Hazard Analysis Critical Control Point (HACCP). • Apply relevant practices to take appropriate action in instances such as VACCP (Vulnerability Assessment Critical Control Points) and TACCP (Threat Assessment Critical Control Points). • Apply appropriate practices to plan and execute an audit on food safety address the non-conformance with Root Cause Analysis (RCA) and take Corrective and Preventive Action (CAPA). • Role play a situation on how to address issues pertaining to food safety and quality reported by the team members.

• Discuss the procedure of performing root cause analysis and taking corrective and preventive actions against workplace problems. • State the significance of training the team members regarding various food safety procedures such as GMP, HACCP, etc. • List the information to be recorded in the work process	• Prepare sample reports for food safety regulations followed, inspections done, faults observed, etc. • Dramatize a situation on how to organize training and workshops on food safety aspects such as Good Manufacturing Practices (GMP), HACCP, VACCP, TACCP, etc.
Classroom Aids	
Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
Sample pictures of various biological, chemical, and physical hazards, Sample pictures of Contaminants, samples of potential allergens, process flow chart and HACCP plan.	

Module 8: Employability Skills (60 Hours)

Mapped to DGT/VSQ/N0102, v1.0

Duration (in hours): 60:00

Key Learning Outcomes

After completing this programme, participants will be able to:

Introduction to Employability Skills Duration: 1.5 Hours

1. Discuss the Employability Skills required for jobs in various industries
2. List different learning and employability related GOI and private portals and their usage

Constitutional values - Citizenship Duration: 1.5 Hours

3. Explain the constitutional values, including civic rights and duties, citizenship, responsibility towards society and personal values and ethics such as honesty, integrity, caring and respecting others that are required to become a responsible citizen
4. Show how to practice different environmentally sustainable practices.

Becoming a Professional in the 21st Century Duration: 2.5 Hours

5. Discuss the importance of relevant 21st-century skills.
6. Exhibit 21st-century skills like Self-Awareness, Behavior Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn etc. in personal or professional life.
7. Describe the benefits of continuous learning.

Basic English Skills Duration: 10 Hours

8. Show how to use basic English sentences for everyday conversation in different contexts, in person and over the telephone
9. Read and interpret text written in basic English
10. Write a short note/paragraph / letter/e -mail using basic English

Career Development & Goal Setting Duration: 2 Hours

11. Create a career development plan with well-defined short- and long-term goals

Communication Skills Duration: 5 Hours

12. Demonstrate how to communicate effectively using verbal and nonverbal communication etiquette.
13. Explain the importance of active listening for effective communication
14. Discuss the significance of working collaboratively with others in a team

Diversity & Inclusion Duration: 2.5 Hours

15. Demonstrate how to behave, communicate, and conduct oneself appropriately with all genders and PwD
16. Discuss the significance of escalating sexual harassment issues as per POSH act.

Financial and Legal Literacy Duration: 5 Hours

17. Outline the importance of selecting the right financial institution, product, and service

18. Demonstrate how to carry out offline and online financial transactions, safely and securely
19. List the common components of salary and compute income, expenditure, taxes, investments etc.
20. Discuss the legal rights, laws, and aids

Essential Digital Skills Duration: 10 Hours

21. Describe the role of digital technology in today's life
22. Demonstrate how to operate digital devices and use the associated applications and features, safely and securely
23. Discuss the significance of displaying responsible online behavior while browsing, using various social media platforms, e-mails, etc., safely and securely
24. Create sample word documents, excel sheets and presentations using basic features
25. utilize virtual collaboration tools to work effectively

Entrepreneurship Duration: 7 Hours

26. Explain the types of entrepreneurship and enterprises
27. Discuss how to identify opportunities for potential business, sources of funding and associated financial and legal risks with its mitigation plan
28. Describe the 4Ps of Marketing-Product, Price, Place and Promotion and apply them as per requirement
29. Create a sample business plan, for the selected business opportunity

Customer Service Duration: 5 Hours

30. Describe the significance of analyzing different types and needs of customers
31. Explain the significance of identifying customer needs and responding to them in a professional manner.
32. Discuss the significance of maintaining hygiene and dressing appropriately

Getting Ready for apprenticeship & Jobs Duration: 8 Hours

33. Create a professional Curriculum Vitae (CV)
34. Use various offline and online job search sources such as employment exchanges, recruitment agencies, and job portals respectively
35. Discuss the significance of maintaining hygiene and confidence during an interview
36. Perform a mock interview
37. List the steps for searching and registering for apprenticeship opportunities

Module 9: On-the-Job Training

Mapped to Food Product Developer

Mandatory Duration: 90:00	Recommended Duration: 00:00
Location: On-Site	

Terminal Outcomes

- Demonstrate the role of ideation and innovation in developing new food products.
- Show how to conduct effective market research in the food industry.
- Demonstrate the process of conceptualizing new food products from initial ideas to final concepts.
- Show how to optimize and enhance existing food products for better quality or market appeal.
- Demonstrate the procedures involved in product processing and testing to ensure quality and safety.
- Show how to scale up the production process for new food products.
- Demonstrate the importance of developing new SOPs for food product development and safety.
- Show how to evaluate common food safety concerns that must be addressed during product development.
- Demonstrate methods for conducting cost analysis and benchmarking in food product development.
- Demonstrate the necessary post-production activities, such as cleaning equipment, maintaining hygiene standards, and documenting production details.

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	**Specialisation**	**Relevant Industry Experience**		**Training Experience**		**Remarks**
		Years	***Specialization***	***Years***	***Specialization***	
Graduate/B. Sc	Food Safety and Quality Management/ Food Science/ Food Technology/ Food Processing	4	Food Science/Home Science/ Food Processing/ Quality Analysis	1	Training of Food Product Developer	
B.Tech	Food Science/ Nutrition/ Food Engineering/ Food Technology	3	Food Science/Home Science/ Food Processing/ Quality Analysis	1	Training of Food Product Developer	
M.Sc	Food Safety and Quality Management/ Food Science/ Food Technology/ Food Processing	2	Food Science/ Home Science/ Food Processing/ Quality Analysis	1	Training of Food Product Developer	
MBA	Food Safety and Quality Management	2	Food Science/ Home Science/ Food Processing/ Quality Analysis	1	Training of Food Product Developer	
M.Tech	Food Processing/ Food Technology	2	Food Science/ Home Science/ Food Processing/ Quality Analysis	1	Training of Food Product Developer	

Trainer Certification	
Domain Certification	**Platform Certification**
Certified for Job Role: "Food Product Developer" mapped to QP: "FIC/Q7604, v3.0". Minimum accepted score is 80%.	Recommended that the Trainer is certified for the Job Role: "Trainer (VET and Skills)", mapped to the Qualification Pack: "MEP/Q2601, v2.0". The minimum accepted score as per MEPSC guidelines is 80%.

Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training/Assessment Experience**		**Remarks**
		Years	***Specialization***	***Years***	***Specialization***	
Graduate/ B.Sc	Food Safety and Quality Management/ Food Science/ Food Technology/ Food Processing	4	Food Science/Home Science/ Food Processing/ Quality Analysis	1	Assessment of Food Product Developer	
B.Tech	Food Science/ Nutrition/ Food Engineering/ Food Technology	3	Food Science/Home Science/ Food Processing/ Quality Analysis	1	Assessment of Food Product Developer	
M.Sc	Food Safety and Quality Management/ Food Science/ Food Technology/ Food Processing	2	Food Science/ Home Science/ Food Processing/ Quality Analysis	1	Assessment of Food Product Developer	
MBA	Food Safety and Quality Management	2	Food Science/ Home Science/ Food Processing/ Quality Analysis	1	Assessment of Food Product Developer	
M.Tech	Food Processing/ Food Technology	2	Food Science/ Home Science/ Food Processing/ Quality Analysis	1	Assessment of Food Product Developer	

Assessor Certification	
Domain Certification	**Platform Certification**
Certified for Job Role: "Food Product Developer" mapped to QP: "FIC/Q7604, v3.0". Minimum accepted score is 80%.	Certified for the Job Role: "Assessor (VET and Skills)", mapped to the Qualification Pack: "MEP/Q2701, v2.0", with a minimum score of 80%.

Assessment Strategy

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

Assessment will be based on the concept of Independent Assessors empanelled with Assessment Agencies, identified, selected, trained and certified on Assessment techniques. These Assessors would be aligned to assess as per the laid down criteria.

Assessment Agency would conduct assessment only at the training centres of Training Partner or designated testing centers authorized by FICSI.

Ideally, the assessment will be a continuous process comprising of three distinct steps:

A. Mid-term assessment
B. Term/Final Assessment

Each National Occupational Standard (NOS) in the respective QPs will be assigned weightage. There in each Performance Criteria in the NOS will be assigned marks for theory and/or practical based on relative importance and criticality of function.

This will facilitate preparation of question bank / paper sets for each of the QPs. Each of these papers sets/question banks created by the Assessment Agency will be validated by the industry subject matter experts through FICSI, especially with regard to the practical test and the defined tolerances, finish, accuracy etc.

The following tools are proposed to be used for final assessment:

i. Written Test: This will comprise of (i)True/False Statements, (ii)Multiple Choice Questions, (iii)Matching Type Questions. Online system for this will be preferred.
ii. Practical Test: This will comprise a test job to be prepared as per project briefing following appropriate working steps, using necessary tools, equipment and instruments. Through observation it will be possible to ascertain candidate's aptitude, attention to details, quality consciousness etc. The end product will be measured against the pre-decided MCQ filled by the Assessor to gauge the level of his skill achievements.
iii. Structured Interview: This tool will be used to assess the conceptual understanding and the behavioural aspects as regards the job role and the specific task at hand.

On the Job:

1. Each module (which covers the job profile of Food Product Developer) will be assessed separately.

2. The candidate must score 50% in each module to successfully complete the OJT.

3. Tools of Assessment that will be used for assessing whether the candidate is having desired skills and etiquette of dealing with customers, understanding needs & requirements, assessing the customer and perform Soft Skills effectively:

- Videos of Trainees during OJT
- Answer Sheets of Question Banks
- Assessing the Logbook entries of Trainees at Employer location
- Employer Performance Feedback.

4. Assessment of each Module will ensure that the candidate is able to:

- Carry out production of fortified food
- Work effectively and efficiently as per schedules and timelines.
- Escalate the problem to appropriate authority.
- Implement safety practices.
- Optimize the use of resources to ensure less wastage and maximum conservation.

References

Glossary

Term	Description
Declarative Knowledge	Declarative knowledge refers to facts, concepts and principles that need to be known and/or understood in order to accomplish a task or to solve a problem.
Key Learning Outcome	Key learning outcome is the statement of what a learner needs to know, understand and be able to do in order to achieve the terminal outcomes. A set 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 a task. 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, understand and be able to do it upon the completion of the training.
Terminal Outcome	Terminal outcome is a statement of what a learner will know, understand and be able to do upon the completion of a module. A set of terminal outcomes help to achieve the training outcome.

Acronyms and Abbreviations

Term	Description
NCVET	National Council for Vocational Education and Training
FICSI	Food Industry Capacity & Skill Initiative
QP	Qualification Pack
MC	Model Curriculum
NSQF	National Skills Qualification Framework
NSQC	National Skills Qualification Committee
NOS	National Occupational Standards
NCO	National Classification of Occupations
ES	Employability Skills
SOP	Standard Operating Procedures
FSSAI	Food Safety and Standards Authority of India
FSMS	Food Safety Management System
KRAs	Key Result Areas
GMP	Good Manufacturing Practices
ERP	Enterprise Resource Planning
PLCs	Programmable Logic Controllers
HMIs	Human-Machine Interfaces
SCADA	Supervisory Control and Data Acquisition
HACCP	Hazard Analysis Critical Control Points
VACCP	Vulnerability Assessment Critical Control Points
TACCP	Threat Assessment Critical Control Points
RCA	Root Cause Analysis
CAPA	Corrective and Preventive Actions
PPE	Personal Protective Equipment
GHP	Good Hygiene Practices
CPR	Cardiopulmonary Resuscitation