



Model Curriculum

QP Name: Industrial Production Worker

QP Code: FIC/Q9005

QP Version: 3.0

NSQF Level: 2

Model Curriculum Version: 3.0

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Training Parameters

Sector	Food Processing
Sub-Sector	Multi-Sectorial
Occupation	Production
Country	India
NSQF Level	2
Aligned to NCO/ISCO/ISIC Code	NCO-2015/9312.0100
Minimum Educational Qualification and Experience	1. 5th Class Pass OR 2. Ability to read and write with 1 year of relevant experience
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 years
Last Reviewed On	30/09/2021
Next Review Date	29/09/2024
NSQC Approval Date	30/09/2021
QP Version	3.0
Model Curriculum Creation Date	15/07/2021
Model Curriculum Valid Upto Date	29/09/2024
Model Curriculum Version	3.0
Minimum Duration of the Course	270 Hours
Maximum Duration of the Course	270 Hours

Program Overview

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

Training Outcomes

At the end of the program, the participants will be able to:

- Perform a limited range of tasks such as stacking of equipment on production line, monitoring production, cleaning up etc.as per instructions and specifications provided.
- Understand and carry out safe working practice.
- Understand the importance of working safely in an industry.

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	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
FIC/N9020 Monitor the food production on a mechanized production line for processed food items NOS Version No.: 1.0 NSQF Level: 2	70:00 Hours	110:00 Hours	00:00 Hours	00:00 Hours	180:00 Hours
Module1: Introduction to The training program and overview of the food processing industry	04:00 Hours	00:00 Hours	00:00Hours	00:00Hours	04:00 Hours
Module 2: Organizational Standards and norms	06:00 Hours	10:00 Hours	00:00Hours	00:00Hours	16:00 Hours
Module 3: Prepare and maintain work area and process machineries for production	50:00 Hours	85:00 Hours	00:00Hours	00:00Hours	135:00 Hours
Module 4: Monitor the	10:00 Hours	15:00 Hours	00:00Hours	00:00Hours	25:00 Hours

mechanized production line for processed food items					
FIC/N9002 Use basic health and safety practices at a food processing workplace NOS Version No.: 1.0 NSQF Level: 2	10:00 Hours	20:00 Hours	00:00Hours	00:00Hours	30:00 Hours
Module 5: Use basic health and safety practices at a Food processing workplace	10:00 Hours	20:00 Hours	00:00Hours	00:00Hours	30:00 Hours
CSC/N1336 Work effectively with others NOS Version No.:1.0 NSQF Level: 3	10:00 Hours	20:00 Hours	00:00Hours	00:00Hours	30:00 Hours
Module 6: Work effectively with others	10:00 Hours	20:00 Hours	00:00Hours	00:00Hours	30:00 Hours
DGT/VSQ/N0101 Employability Skills NOS Version No.: 1.0 NSQF Level: 2	12:00 Hours	18:00 Hours	00:00Hours	00:00Hours	30:00 Hours
Module 7: Employability skills	12:00 Hours	18:00 Hours	00:00Hours	00:00Hours	30:00 Hours
Total Duration	102:00 Hours	168:00 Hours	00:00Hours	00:00Hours	270:00 Hours

Module Details

Module1: Introduction to the training program and overview of food processing industry Mapped to FIC/N9020 v1.0

Terminal Outcomes:

- Introduce to fellow participants and the trainer.
- Explain food processing and its sub-sectors
- Discuss the current market and future trends of food processing sector

Duration: 04:00	Duration: 00:00
Theory–Key Learning Outcomes	Practical–Key Learning Outcomes
<ul style="list-style-type: none"> • State the need for and importance of training program • Introduce each other and build rapport with fellow participants and the trainer. • Define food processing. • Describe the various sub sectors of food processing industry • Discuss the future trends in the food processing industry. 	
Classroom Aids:	
Whiteboard/Chart papers, marker	
Tools, Equipment and Other Requirements	
Nil	

Module 2: Organizational standards and norms

Mapped to FIC/N9020 v1.0

Terminal Outcomes:

- Discuss the roles and responsibilities of an industrial production worker
- Understand the workplace ethics
- Describe importance of personal hygiene and sanitation

Duration: 06:00	Duration: 10:00
Theory–Key Learning Outcomes	Practical–Key Learning Outcomes
<ul style="list-style-type: none"> • List the roles and responsibilities of the individual in the job. • Describe basic conduct to carry yourself at the workplace • Describe workplace ethics • Define basic knowledge and understanding of the organization • Explain the food safety hygiene standards to be followed in a work environment. • Explain personal hygiene guidelines for food handlers 	<ul style="list-style-type: none"> • Demonstrate how to conduct yourself at the workplace. • Apply relevant practices to follow the personal hygiene and sanitation guidelines at the workplace.
Classroom Aids:	
Laptop ,white board, marker, chart papers, projector, trainer’s guide and student handbook.	
Tools, Equipment and Other Requirements	
Protective gloves, head caps, aprons, safety goggles, safety boots, mouth masks, sanitizer, food safety manual.	

Module 3: Prepare and maintain work area and process machineries for production

Mapped to FIC/N9020 v1.0

Terminal Outcomes:

- Describe the major functions carried out related to sanitation and maintenance before starting production
- Describe pre-cleaning work area and machinery

Duration: 50:00	Duration: 85:00
Theory–Key Learning Outcomes	Practical–Key Learning Outcomes
<ul style="list-style-type: none"> • Describe the importance of cleanliness of the work area • Check if the work area is cleaned using approved sanitizers • Check if the equipment are washed with approved sanitizers • State the materials and equipment used in the cleaning and maintenance of the work area • State the common detergents and sanitizers used in cleaning work area and machineries • State the different types of maintenance procedures and their trouble shooting • Describe waste management procedure 	<ul style="list-style-type: none"> • Check if the work area is safe and hygienic for food production • Check if the disposal of waste material is as per SOP • Check the working and performance of all machineries and tools used • Conduct minor repairs and faults in process machineries • Prepare the machines and tools required for production
Classroom Aids:	
Laptop, white/black board, marker, chartpapers, projector, Trainer’s guide, Student manual.	
Tools, Equipment and Other Requirements	
Homogenizer, Separator, Pasteurizer, Churner, Paneer Hooves, Paneer cutter Packaging Machines, Protective Gloves, Head Caps, Lab Coat, Safety Goggles, Safety Boots ,Mouth Masks, Sanitizer, Food Safety Manual	

Module 4: Monitor the food production on a mechanized production line for processed food items

Mapped to FIC/N9020 v1.0

Terminal Outcomes:

- Discuss the steps to be followed to monitor the food production line
- Demonstrate the process as per SOP

Duration: 10:00	Duration: 15:00
Theory–Key Learning Outcomes	Practical–Key Learning Outcomes
<ul style="list-style-type: none"> • Describe how to identify and pick out unacceptable/distorted stacking or food carrying equipment from the conveyer belt to ensure quality maintenance. • Define how to conduct performance check of equipment to maintain effective operating condition. • Define how to monitor various food product pieces passing to confirm that all the items pass through the conveyor belt as per the allotted process. • Identify and report variation/technical issues in operating condition. • Identify anomalies/ variations in operating system and report the issue to the concerned authorised person immediately. • Identify the appropriate method to shut down the operating system following. • Identify and pick out non-conforming product pieces passing through the conveyer belt. 	<ul style="list-style-type: none"> • Demonstrate the use of appropriate personal protective equipment (PPE) against hazards associated with production as per occupational health and safety guidelines. • Demonstrate how to carry out preliminary safety & hygiene checks of the working area and related inputs for e.g. equipment, containers, utensils, hand tools, lifting aids, etc. • Demonstrate the procedure to clean the equipment for carrying the food items in various stages of processing properly. • Demonstrate the SOP to be carried out for monitoring various mechanized production lines • Demonstrate inspecting of machines pre and post production

Classroom Aids:	
Laptop, white board, marker, chart papers, projector, trainer's guide, business plan and student manual.	
Tools, Equipment and Other Requirements	
Coats and aprons; ear plugs or muffs; eye and facial protection; head-wear; lifting assistance; meshaprons; protective boot covers; protective hand and arm covering; protective head and hair covering; work uniforms; safety and waterproof footwear, containers, utensils, hand tools, lifting aids, stacking equipment, processing unit, conveyor and processing belts.	

Module 5: Use basic health and safety practices at a food processing workplace

Mapped to FIC/N9002 v1.0

Terminal Outcomes:

- Define methods of accident prevention in the work environment of the job role
- Demonstrate handling all food and related materials 'safely using correct procedures
- Demonstrate rescue techniques applied during hazard

Duration: 10:00	Duration: 20:00
Theory–Key Learning Outcomes	Practical–Key Learning Outcomes
<ul style="list-style-type: none"> • Define workplace safety procedures • Describe types of safety measures • Define methods of accident prevention in the work environment • Discuss how to participate in emergency procedures. • Describe various rescue techniques • State basic first aid methods • Explain managing hazards at different food industries 	<ul style="list-style-type: none"> • Identify job-site hazardous work and state possible causes of risk or accident in the workplace. • Carry out safe working practices while dealing with hazards to ensure the safety of self and others. • Demonstrate working safely in and around trenches, elevated places and confined areas. • Demonstrate handling all food and related materials safely using correct procedures. • Demonstrate application of good housekeeping practices at all times. • Demonstrate rescue techniques applied during fire hazard. • Demonstrate how to administer

	<p>appropriate first aid to victims were required e.g. in case of bleeding, burns, , etc.</p> <ul style="list-style-type: none"> • Demonstrate basic techniques of bandaging. • Demonstrate how to respond promptly and appropriately to an accident situation or medical emergency in real or simulated environments.
Classroom Aids:	
Laptop, whiteboard , marker, chart papers, projector, trainer’s guide, business plan and student handbook.	
Tools, Equipment and Other Requirements	
Coats and aprons; ear plugs or muffs; eye and facial protection; head-wear; lifting assistance; mesh aprons; protective boot covers; protective hand and arm covering; protective head and hair covering; work uniforms; safety and water proof foot wear, containers, utensils, hand tools, lifting aids, stacking equipment, processing unit, conveyor and processing belts.	

Module 6: Work effectively with others

Mapped to CSC/N1336 v1.0

Terminal Outcomes:

- Display helpful behavior by assisting others in performing tasks in a positive manner ,where required and possible
- Demonstrate how to consult with and assist others to maximize effectiveness and efficiency in carrying out tasks

Duration: 10:00	Duration: 20:00
Theory–Key Learning Outcomes	Practical–Key Learning Outcomes
<ul style="list-style-type: none"> • Describe the process of receiving information accurately and instructions from the supervisor and fellow workers, getting clarification where required. • Discuss about passing on information accurately to authorized persons who require it and within agreed time scale and confirm its receipt. • Discuss about giving information to others clearly, at a pace and in a manner that helps them to understand. • Discuss about the use of appropriate tone, pitch and language to convey politeness, assertiveness, care and professionalism. • Describe how to escalate grievances and problems to appropriate authority as per procedure to resolve them and avoid conflict. 	<ul style="list-style-type: none"> • Display helpful behaviour by assisting others in performing tasks in a positive manner, where required and possible. • Demonstrate how to consult with and assist others to maximize effectiveness and efficiency in carrying out tasks. • Display appropriate communication etiquette while working • Display active listening skills while interacting with others at work. • Demonstrate responsible and disciplined behaviours at the workplace
Classroom Aids:	
Laptop, white board, marker, chart papers, projector, business plan, trainer’s guide and student manual.	
Tools, Equipment and Other Requirements	

Coats and aprons; ear plugs or muffs; eye and facial protection; head-wear; lifting assistance; meshaprons; protective boot covers; protective hand and arm covering; protective head and hair covering; work uniforms; safety and waterproof footwear, containers, utensils, hand tools, lifting aids, stacking equipment, processing unit, conveyor and processing belts.

Module 7: Employability skills

Mapped to DGT/VSQ/N0101, v 1.0

Terminal Outcomes:

- Describe the traits of individual at work place
- Demonstrate employability and entrepreneurship skills at work place

Duration: 12:00	Duration: 18:00
Theory–Key Learning Outcomes	Practical–Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss own strengths and weaknesses and analyse the gaps to ensure continuous improvement. • Discuss the measures to be undertaken to utilise time effectively thereby achieving maximum productivity. • List the characteristics of innovative individuals • List the levels of Maslow Hierarchy of needs • List the traits of effective team • Discuss tips for stress management • Discuss the importance of good work ethics • Discuss how to manage an enterprise • Describe how to plan effective strategies for solving problems and improving work culture within the team. • List the various types of digital marketing techniques. • Discuss the types and importance of e-commerce in promoting businesses. • List the various types of online banking services being used widely. • Discuss the procedure to apply for bank finances • List the elements of a proposal to attract future business opportunities and prospective clients. • Explain programs to identify business 	<ul style="list-style-type: none"> • Show how to analyse a situation to identify gaps for improving the work process. • Demonstrate the procedure to plan the time taken to perform various tasks effectively. • Describe how market research is carried out • Role play the characteristics of an effective entrepreneur and leader • Demonstrate on how to identify new business opportunities • Prepare a sample plan to solve problems and improve productivity at the workplace. • Demonstrate the procedure to operate a computer for digital marketing, e-commerce, branding, etc. • Show how to use services such as NEFT, IMPS, UPI, RTGS for online banking.

<p>opportunities , generate employment and increase clientele.</p> <ul style="list-style-type: none"> • Understand the make in India campaign • Discuss the importance of Swachh Bharat Abhiyan • Understand the importance of entrepreneurship • Describe the traits of successful entrepreneur • List the types of enterprises • Understand the importance of effective speaking and listening • Discuss the importance of problem solving • Discuss how to deal with failures • Describe the core keys of marketing • Discuss ways to manage risks at work place 	
Classroom Aids:	
Computer, Projection Equipment, Power Point Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Nil	

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
B. Sc or graduate/B. Tech/BE	Food technology or food engineering	3	Food processing	1	Food processing	
M.Sc/M.Tech/ME	Food technology or food engineering	2	Food processing	1	Food processing	
Diploma /certificate course	(Food Technology / Food Engineering /packaging/Home science, or allied sector	4	Food processing	1	Food processing	

Trainer Certification	
Domain Certification	Platform Certification
Certified for Job Role: “Industrial Production Worker” mapped to QP: “FIC/Q9005, v3.0”. Minimum accepted score is 80%.	Recommended that the Trainer is certified for the Job Role: “Trainer”, mapped to the Qualification Pack: “MEP/Q0102”. Minimum accepted SCORE IS 80 % as per FICSI guidelines.

Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training/Assessment Experience		Remarks
		Years	Specialization	Years	Specialization	
M. Sc/M. Tech/ME	Food technology or food engineering	2	Food processing	1	Food processing	
B. Sc or graduate/B. Tech/BE	Food technology/ Home Science	3	Food processing	2	Food processing	
Diploma	Hotel management/ Food Science/ Home Science	4	Food processing	2	Food processing	

Assessor Certification	
Domain Certification	Platform Certification
Certified for Job Role: "Industrial Production Worker" mapped to QP: "FIC/Q9005, v3.0". Minimum accepted score is 80%.	Recommended that the Trainer is certified for The Job Role: "Trainer", mapped to the Qualification Pack: "MEP/Q0102". Minimum Accepted SCORE IS 80% as per FICSI guidelines.

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 behavioral aspects as regards the job role and the specific task at hand.

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 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
QP	Qualification Pack
NSQF	National Skills Qualification Framework
NSQC	National Skills Qualification Committee
NOS	National Occupational Standards
HACCP	Hazard Analysis and Critical Control Points
GMP	Good Manufacturing Practices
GHP	Good Hygiene Practices