Model Curriculum

QP Name: Sports Good Factory Manager

QP Code: SPF/Q8106

QP Version: 1.0

NSQF Level: 6

Model Curriculum Version: 1.0

Sports, Physical Education, Fitness and Leisure Sector Skill Council
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Training Parameters

Sector	Sports
Sub-Sector	Sports Manufacturing
Occupation	Sports Goods Factory Manager
Country	India
NSQF Level	6
Aligned to NCO/ISCO/ISIC Code	NCO-2015/3423.0200
Minimum Educational Qualification and Experience	12th grade Pass with 4 Years of relevant experience OR Certificate-NSQF (Level 5- Sports Goods Production Supervisor) with 3 Years of relevant experience OR Pursuing first year of 2-year PG program after completing 3-year UG degree OR Pursuing 1-year PG diploma after 3-year UG degree OR Completed 4th year UG (in case of 4-year UG) OR Pursuing 4th year UG (in case of 4-year UG) and continuing education OR Completed 3-Year UG Degree with 1 year of relevant experience
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 years
Last Reviewed On	23/06/2023
Next Review Date	23/06/2026
NSQC Approval Date	23/06/2023
QP Version	1.0
Model Curriculum Creation Date	23/06/2023
Model Curriculum Valid Up to Date	23/06/2026
Model Curriculum Version	1.0

Minimum Duration of the Course	660 Hours
Maximum Duration of the Course	660 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 learner will be able to:

- Develop a production plan for manufacturing processes
- Create an effective maintenance schedule
- Apply lean management approach to enhance productivity
- Ensure new product development and sustainability
- Plan process systems for manufacturing
- Create management and value systems for manufacturing
- Plan for logistics
- Develop safety measures at manufacturing processes
- Compulsory Modules

The table lists the modules, their duration and mode of delivery.

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
SPF/N8115: Plan for Production of Sports Goods **NOS Version No. 1.0** **NSQF Level: 6**	***30:00***	***45:00***	***15:00***	***00:00***	***90:00***
Bridge Module Module 1: Introduction to the job role of sports good factory manager	*05:00*	*10:00*	*00:00*	*00:00*	*15:00*
Module 2: Plan the production unit	*25:00*	*35:00*	*15:00*	*00:00*	*75:00*
SPF/N8116: Develop Manufacturing systems and Processes **NOS Version No. 1.0** **NSQF Level: 6**	***50:00***	***85:00***	***45:00***	***00:00***	***180:00***
Module 3: Create effective	*50:00*	*85:00*	*45:00*	*00:00*	*180:00*

manufacturing systems and processes					
SPF/N8117: Manage Supply Chain of the Factory NOS Version No. 1.0 NSQF Level: 6	***45:00***	***120:00***	***45:00***	***00:00***	***210:00***
Module 4: Establish effective supply and chain at factory	*45:00*	*120:00*	*45:00*	*00:00*	*210:00*
SPF/N8114: Maintain Health and Safety at Workplace NOS Version No. 1.0 NSQF Level: 5	***15:00***	***30:00***	***15:00***	***00:00***	***60:00***
Module 5: Ensure personal and equipment safety measures	*15:00*	*30:00*	*15:00*	*00:00*	*60:00*
SPF/N1169: Improve workplace resource usage NOS Version No. 1.0 NSQF Level: 3	***10:00***	***20:00***	***00:00***	***00:00***	***30:00***
Module 6: Build an environmental friendly workplace	*10:00*	*20:00*	*00:00*	*00:00*	*30:00*
DGT/VSQ/N0103: Employability skills (90 Hours) NOS Version No. 1.0 NSQF Level: 5	***45:00***	***45:00***	***00:00***	***00:00***	***90:00***
Module 7: Employability skills	*45:00*	*45:00*	*00:00*	*00:00*	*90:00*
Total Duration	**195:00**	**345:00**	**120:00**	**00:00**	**660:00**

Module Details

Module 1: Introduction to the job role of sports goods factory manager

Bridge Module

Mapped to SPF/N8115, v1.0

Terminal Outcomes:

- Describe the role and career opportunities of a sports goods production manager

Duration: *05:00*	**Duration**: *10:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• State the role and responsibilities of a sports goods factory manager • Discuss the qualities of a sports goods factory manager	• Role-play to highlight the skills and qualities of a manager • Create a career progression chart of a sports goods factory manager
Classroom Aids:	
Laptop, whiteboard, marker, projector, chart paper, clipboards	
Tools, Equipment, and Other Requirements	
NA	

Module 2: Plan the production unit
Mapped to SPF/N8115, v1.0

Terminal Outcomes:

- Develop a production plan for manufacturing processes
- Create an effective maintenance schedule
- Ensure new product development and sustainability

Duration: *25:00*	**Duration**: *35:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the components of a master production schedule • Discuss production requirement with unit supervisors and set production goals. • Discuss way to ensure goods and services are produced safely, cost effectively and on time and that they meet the required quality standards • Explain maintenance reports, Reliability reports, and budget variance reports. • Discuss housekeeping methods and importance of safe disposal methods for waste • Identify different types of tools and manufacturing equipment • Identify Different types of measuring equipment and techniques • Discuss statutory provisions under relevant safety laws, environmental laws, production laws and rules prescribed by relevant authorities • Discuss Factories Act and regulations • Discuss Standards Act and regulations, Environmental Management Act and regulations • Competition and Consumer Protection Act and regulations • Discuss various types of machines and maintenance used in the organisation • Explain maintenance engineering roles and responsibilities • Discuss the barriers to meet the production plan and how to take and corrective steps • Explain Total Quality Management to highlight the importance of quality and waste management • Explain the ways to improve process quality and productivity • Explain Value Analysis (VA) and Value Engineering (VE) principles to promote innovations. •	• Prepare Master production schedule for the unit. • Design a clear production plan that is clearly communicated to the team members. • Design a plan that ensures usage rates are calculated, recorded, and communicated to team members to monitor progress. • Develop and implement production plan for shifts. • Design products with reference to available equipment/capacity and monitor the production processes • Design a maintenance schedule to ensure equipment availability and implement it according to the production plan • Create a clear platform for linkage of maintenance types to the production process efficiency • Design a preventive maintenance program • Maintain fundamental requirements of effective preventive maintenance • Discuss with production workers' need to be conversant with the maintenance schedule and its specific activities • Design plant/equipment maintainability and availability through reliability and maintenance modelling • Research productivity rates and product standards and implement quality systems management • Use different quality control tools such as Pareto Chart, SPC, Cause and Effect, Scatter diagram • Facilitate fire precautions such as fire drills • Identify necessary process deviations, record them, analyse, and take appropriate action
Classroom Aids:	

Laptop, whiteboard, marker, projector, chart paper, clipboards, height & weight chart
Tools, Equipment and Other Requirements
Gloves, safety goggles, radio, whistle, stopwatch, forklift, first-aid box

Module 3: Create effective manufacturing systems and processes

Mapped to SPF/N8116, v1.0

Terminal Outcomes:

- Design essentials of manufacturing systems
- Plan process systems for manufacturing
- Create management and value systems for manufacturing
- Manage automation systems for manufacturing
- Manage information/ social systems for manufacturing
- Work effectively with others

Duration: *50:00*	**Duration**: *85:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the fundamentals of manufacturing systems • Discuss how material and technological information flows in manufacturing systems • Discuss ways to analyse quality and productivity information and communicate to team members to monitor progress and identify areas of improvement • Explain the use of production control and quality engineering tools such as JIT and Quality Function Deployment (QFD) to improve systems performance • Discuss profit planning and break-even analysis and capital investment analysis for manufacturing • Discuss the advantages of using automation in a production factory • Explain automation though Automatic machine tools for mass production, Numerically Controlled (NC), Computer-controlled manufacturing systems, Flexible Manufacturing System (FMS), Automated assembly, Automatic inspection and testing Computer-integrated automation system – unmanned factory • Discuss production processes, issues, and areas for improvement with co-workers and staff • Discuss the importance of inclusive workforce	• Create integrated manufacturing and manufacturing systems designs • Create a clear platform for linkage of maintenance types to the production process efficiency • Design an ergonomic layout to enable manufacturing optimization • Create maintenance engineering roles and responsibilities • Create an aggregate production plan with a long-term multiple objective. • Build teams that use production scheduling tools such PERT and CPM • Design multiple product inventory management systems approach • Prepare value and cost flows in manufacturing systems to monitor value creation over time • Create manufacturing cost and product cost structure to avoid production technologies that lead to product innovation failures • Create evaluation methods for capital investment to monitor and ensure growth in the organization • Develop long term plans through facilities, location, and layout design • Use industrial systems like Computer Integrated Manufacture (CIM) and Computer Aided Design (CAD) to enhance efficiency in the manufacturing processes • Create modes of production and product diversification
Classroom Aids:	
Laptop, whiteboard, marker, projector, chart paper, clipboards	
Tools, Equipment and Other Requirements	
Automation software, CAD, gloves, safety goggles, radio, whistle, stopwatch, forklift, first-aid box	

Module 4: Establish effective supply and chain at factory

Mapped to SPF/N8117, v1.0

Terminal Outcomes:

- Plan for logistics
- Take procurement and inventory decisions
- Manage warehousing and storage
- Manage Freight transport

Duration: *45:00*	**Duration**: *90:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the fundamentals of a logistics and distribution system • Discuss the trends that affect logistics and distribution • Discuss the economic implications of outsourcing goods and services • Discuss the best practices in distribution management such lean systems thinking and its impact on production processes • Explain logistics planning framework to address the demands of the logistics processes • Explain different inventory requirements in the supply chain • List problems associated with the traditional approaches to inventory planning • Discuss effective warehousing and storage principles • Discuss ways to Rotate raw materials and stock to minimise old and outdated inventory • Discuss ways to Evaluate internal/external, local/global environments for threats or opportunities • Explain the hazards and safety aspects involved, and duties of relevant personal involved in distribution of goods • Discuss the working principles of warehouse equipment and goods vehicles • Discuss the procedures for handling dangerous goods • Explain Motor Vehicle Act and regulations • Explain competition and Consumer Protection Act and regulations	• Prepare sketches and diagrams for a distribution management system framework • Create an integrated logistics network plan within the logistics management and organisation structure • Design logistics planning networks through logistics modelling • Differentiate between inventory planning for manufacturing and inventory planning for retailing • Create warehouse operations, packaging and unit loads • Design order picking and replenishment plans • Use information and communication technology in the supply chain • Create Performance monitoring in warehouse management and information • Demonstrate costs/benefits of utilising local, national and/or international markets • Carry out packing, crating, warehousing, and storage duties in preparation for site specific program and shipment • Prepare a comparative analysis of in-house versus contracted- out operations
Classroom Aids:	
Laptop, whiteboard, marker, projector, chart paper, clipboards	
Tools, Equipment and Other Requirements	
Automation software, CAD, Motor vehicles act book, gloves, safety goggles, radio, whistle, stopwatch, forklift, first-aid box	

Module 5: Ensure personal and equipment safety measures

Mapped to SPF/N8114

Terminal Outcomes:

- Ensure health and safety measures at workplace

Duration: *15:00*	**Duration**: *60:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the importance of Personal Protective Equipment • Discuss the common workplace hazards that one might encounter inside workplace • Explain the nature of the workplace accidents and its route cause • Recognize the environment-friendly materials available to replace conventional materials. • Discuss ways of disposing non-recyclable waste appropriately. • Explain common sources of pollution and ways to minimize them.	• Analyze why safety is most important for workplace operations • Identify the common workplace hazards that one might encounter • Demonstrate the necessary precautionary care to be taken to prevent workplace hazards • Maintain proper records on accidents and incidents taking place inside workplace • Prepare statutory documents relevant to safety and hygiene. • Demonstrate the methods of disposing non-recyclable waste. • Report malfunctioning. (fumes/sparks/emission/vibration/noise) and lapse in maintenance of equipment.
Classroom Aids:	
Laptop, whiteboard, marker, projector, chart paper, clipboards	
Tools, Equipment and Other Requirements	
Gloves, safety goggles, radio, whistle, stopwatch, forklift, ladder, first-aid box, PPE Kit, sanitizing agents, disinfectants, fire extinguisher, stretcher	

Module 6: Build an environmental friendly workplace

Mapped to SPF/N1169, v1.0

Terminal Outcomes:

- Identify effective waste management techniques in the workplace
- Ways to make the workplace environmentally sustainable

Duration: *10:00*	**Duration**: *20:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Identify the environment-friendly materials available to replace conventional materials. • Explain ways of disposing non-recyclable waste appropriately. • Discuss common sources of pollution and ways to minimize them.	• Prepare statutory documents relevant to safety and hygiene. • Exhibit the methods of disposing non-recyclable waste. • Report malfunctioning. (fumes/sparks/emission/vibration/noise) and lapse in maintenance of equipment.
Classroom Aids:	
Laptop, whiteboard, marker, projector, chart paper, clipboards	
Tools, Equipment and Other Requirements	
Gloves, safety goggles, ladder	

Module 7: Employability Skills

Mapped to DGT/VSQ/N0103, v1.0

Terminal Outcomes:

- Understand Employability skills along with communication skills and constitutional values
- Able to set a goal and create a career plan, along with knowledge financial and legal knowledge

Duration: 45:00	**Duration: 45:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the Employability Skills required for jobs in various industries. • 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 • Describe the role of digital technology in today's life • Explain entrepreneurship and opportunities available • Identify different types of customers and their needs • Explain skills required to become a 21st century professional • Teach to read and write basic English • Explain effective communication skills • Teach basic financial and legal knowledge	• Create a career plan • Implement Self-awareness, time management, critical thinking, problem solving • Create sample word documents, excel sheets and presentations using basic features, utilize virtual collaboration tools to work effectively wherever necessary • Implement communication skills while handling different customers •Use appropriate basic English sentences/phrases while speaking. Differentiate between types of customers. • Create a biodata. • Use various sources to search and apply for jobs.
Classroom Aids:	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Duster	
Tools, Equipment and Other Requirements	
Computer (PC) with latest configurations, Computer Tables, Computer Chairs, UPS, Scanner cum Printer	

On-the-Job Training

Mapped to Sports Goods Factory Manager

Mandatory Duration: *120:00*	**Recommended Duration:** *00:00*
Location: On-Site	
Terminal Outcomes • Develop a production plan for manufacturing processes • Create an effective maintenance schedule • Apply lean management approach to enhance productivity • Ensure new product development and sustainability • Plan process systems for manufacturing • Create management and value systems for manufacturing • Plan for logistics • Develop safety measures at manufacturing processes • Compulsory Modules	

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training Experience**		**Remarks**
		Years	***Specialization***	***Years***	***Specialization***	
12th Class	Sports goods factory manager	Minimum of 1 year	Must have worked as a Sports goods factory manager	Minimum of 1 year	Sports goods factory manager	All empanelled Assessors would have to undergo **"Train the Trainer"** Program conducted by SPEFL SC for each job role time to time

Trainer Certification	
Domain Certification	**Platform Certification**
Certified ToT for job "Sports Goods Factory Manager" mapped to QP: "SPF/Q8106, v1.0" Minimum accepted score is 80%	Recommended that the trainer is certified for the Job-Role "Trainer" mapped to the QP: Master Trainer (VET and skills) MEP/Q2601, v2.0" Minimum accepted score is 80%

Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training/Assessment Experience**		**Remarks**
		Years	***Specialization***	***Years***	***Specialization***	
Graduation	Sports Goods factory manager	Minimum of 2 year	Must have worked as a Sports factory manager	Minimum of 1 year	Sports Goods Factory manager	All empanelled Assessors would have to undergo **"Train the Assessor"** Program conducted by SPEFL SC for each job role time to time

Assessor Certification	
Domain Certification	**Platform Certification**
Certified ToA for job "Sports Goods Factory Manager" mapped to QP: "SPF/Q8106, v1.0" Minimum accepted score is 80%	Recommended that the assessor is certified for the Job-Role "Assessor" mapped to the QP: Assessor (VET and skills) MEP/Q2701, v2.0" Minimum accepted score is 80%

Assessment Strategy

Assessment Guidelines

1. Criteria for assessment for each Qualification Pack will be created by the SPEFL - Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down the proportion of marks for Theory and Skills Practical for each PC.

2. The assessment for the theory part will be based on the knowledge bank of questions created by the SSC.

3. Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/option NOS/set of NOS.

4. Individual assessment agencies will create unique question papers for the theory part for each candidate at each examination/training centre as per assessment criteria below.

5. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training centre based on these criteria.

6. To pass the Qualification Pack assessment, every trainee should score a minimum of 70% of % aggregate marks to successfully clear the assessment.

7. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack.

Recommended Pass % aggregate for QP: 70

Each NOS in the Qualification Pack (QP) will be assigned a relative weightage for assessment based on the criticality of the NOS. Therein each Performance Criteria in the NOS will be assigned marks for or practical based on relative importance, criticality of function and training infrastructure.

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

1. **Practical Assessment:** This will comprise of a creation of mock environment in the skill lab which is equipped with all equipment's required for the qualification pack.
   Candidate's soft skills, communication, aptitude, safety consciousness, quality consciousness etc. will be ascertained by observation and will be marked in observation checklist. The product will be measured against the specified dimensions and standards to gauge the level of his skill achievements.

2. **Viva/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. It will also include questions on safety, quality, environment, and equipment, etc.

3. **Written Test:** Under this test few key items which cannot be assessed practically will be assessed. The written assessment will comprise of:
   i. True / False Statements
   ii Multiple Choice Questions
   iii Matching Type Questions.
   iv Fill in the blanks

Accreditation of Assessing Body:

The SPEFL SC's Accreditation process is divided into two steps:

1. **Pre-accreditation process:**
   - Apply for Accreditation: Application form with desired documents in prescribed format to be sent.
   - Document Compliance: to be done for ensuring the compliance and adherence of applied assessing body according to criteria laid down by SPEFL SC.
   - Presentation on Quality Assurance: to be given by Assessing body highlighting the quality assurance process laid down by Assessing body at the process points.
   - Once the assessing body clears the due diligence process, the accreditation is given along with terms and conditions.

2. **Post-accreditation process:** Post accreditation, the accredited assessing bodies needs to fulfil following minimum eligibility criteria or requisites for implementation:
   - All Empanelled Assessors would have to undergo **"Train the Assessor"** Program conducted by SPEFL SC for each job role time to time.
   - Accredited Assessing Body would have to abide with requisite timelines, policies and regulations declared by SPEFL sector skill council.
   - Accredited Assessing Body with times would have to contribute to expansion of the questionnaire.

References

Glossary

Term	Description
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
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