



MASTER TECHNICIAN-FOOTWEAR DESIGN AND PRODUCT DEVELOPMENT

QP Code: MSME/LSS/Q1202

Version: 1.0

NSQF Level: 4

MSME TECHNOLOGY CENTRE ||
B-36 CHANDAKA INDUSTRIAL AREA || email:msmeexamcell@gmail.com



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MSME/LSS/Q1202: MASTER TECHNICIAN-FOOTWEAR DESIGN AND PRODUCT DEVELOPMENT

Brief Job Description

Program trains creative footwear designers to develop innovative, techno-commercially viable designs and products for the leather/footwear industry.

Personal Attributes

Program trains creative footwear designers to develop innovative, techno-commercially viable designs and products for the leather/footwear industry.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [MSME/LSS/N1227: Employability skills I](#)
2. [MSME/LSS/N1226: Quality Control and Standardization](#)
3. [MSME/LSS/N1224: Foot Comfort and Customer complaint](#)
4. [MSME/LSS/N1223: CAD and Pattern Engineering](#)
5. [MSME/LSS/N1222: CAD and Pattern Engineering](#)
6. [MSME/LSS/N1221: Lasting & Making Technology II](#)
7. [MSME/LSS/N1220: Lasting & Making Technology I](#)
8. [MSME/LSS/N1219: Closing Technology IV](#)
9. [MSME/LSS/N1218: Closing Technology](#)
10. [MSME/LSS/N1217: Clicking Technology VI](#)
11. [MSME/LSS/N1216: Clicking Technology V](#)
12. [MSME/LSS/N1215: Designing and Pattern Cutting](#)
13. [MSME/LSS/N1214: Designing and Pattern Cutting](#)
14. [MSME/LSS/N1213: Last Modelling II](#)
15. [MSME/LSS/N1212: Last Modelling I](#)
16. [MSME/LSS/N1225: Industrial Management and Safety](#)



Qualification Pack



17. [MSME/LSS/N1229: QJT 3](#)

18. [MSME/LSS/N1208: ART & SKETCHING](#)

Qualification Pack (QP) Parameters

Sector	Leather
Sub-Sector	
Occupation	Footwear Designing & Manufacturing 01
Country	India
NSQF Level	4
Credits	40
Aligned to NCO/ISCO/ISIC Code	3122.3100
Minimum Educational Qualification & Experience	8th grade pass with 2 years of NTC with 2 Years of experience OR 11th grade pass with NA of experience OR Previous relevant Qualification of NSQF Level (3.5) with NA of experience
Minimum Level of Education for Training in School	8th Class
Pre-Requisite License or Training	NA
Minimum Job Entry Age	17 Years
Last Reviewed On	NA
Next Review Date	NA
NSQC Approval Date	
Version	1.0



MSME/LSS/N1227: Employability skills I

Description

To understand of basic skills of Employability and concept of Entrepreneurship

Scope

The scope covers the following :

- To understand of basic skills of
- Employability and concept of
- Entrepreneurship

Elements and Performance Criteria

FDPD-111

To be competent, the user/individual on the job must be able to:

- PC1.** Explain the major applications of MS Office
- PC2.** Explain the different types of e-commerce
- PC3.** List the benefits of e-commerce for retailers and customers
- PC4.** Discuss how the Digital India campaign will help boost e-commerce in India
- PC5.** Write applications pertaining to various matters.
- PC6.** Explain power of positive attitude and Importance of commitment
- PC7.** Explain motivation and the Ways to motivate oneself and Personal goal setting
- PC8.** Explain the types of Business Communication
- PC9.** Explain the importance of Effective Communication
- PC10.** Explain the Effective & Level of Communication
- PC11.** Understand of Professional Communication
- PC12.** Explain communication and Significance of technical communication?
- PC13.** Explain the methods of listening Skills
- PC14.** Drafting of Effective Covering Letter
- PC15.** Explain Key points in CV
- PC16.** Explain the scope and importance of CV
- PC17.** Explain the differences between bio-data, CV and Resume
- PC18.** Explain verbal and non-verbal Communication
- PC19.** Explain how to face an interview
- PC20.** Explain team work, group work, team formation process
- PC21.** How to Minimize the team conflicts
- PC22.** Explain Ethics & values
- PC23.** Explain the concept of entrepreneurship, and entrepreneurship v/s Management
- PC24.** Explain the process of project report preparation for setting up a new business
- PC25.**
 - Explain the role of various schemes and institute for self- employment i.e MSME, DIC,
 - NSIC, SIDBI etc,



Qualification Pack



- PC26.** Role of financial institution to support startup
- PC27.** Discuss the importance of saving money
- PC28.** Discuss the main types of bank accounts
- PC29.** Discuss the banking functions
- PC30.** Differentiate between fixed and variable costs
- PC31.** Describe the different types of insurance products
- PC32.** Discuss the main types of electronic funds transfers



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>FDPD-111</i>	100	-	-	-
PC1. Explain the major applications of MS Office	-	-	-	-
PC2. Explain the different types of e-commerce	-	-	-	-
PC3. List the benefits of e-commerce for retailers and customers	-	-	-	-
PC4. Discuss how the Digital India campaign will help boost e-commerce in India	-	-	-	-
PC5. Write applications pertaining to various matters.	-	-	-	-
PC6. Explain power of positive attitude and Importance of commitment	-	-	-	-
PC7. Explain motivation and the Ways to motivate oneself and Personal goal setting	-	-	-	-
PC8. Explain the types of Business Communication	-	-	-	-
PC9. Explain the importance of Effective Communication	-	-	-	-
PC10. Explain the Effective & Level of Communication	-	-	-	-
PC11. Understand of Professional Communication	-	-	-	-
PC12. Explain communication and Significance of technical communication?	-	-	-	-
PC13. Explain the methods of listening Skills	-	-	-	-
PC14. Drafting of Effective Covering Letter	-	-	-	-
PC15. Explain Key points in CV	-	-	-	-
PC16. Explain the scope and importance of CV	-	-	-	-
PC17. Explain the differences between bio-data, CV and Resume	-	-	-	-



Qualification Pack



Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC18. Explain verbal and non-verbal Communication	-	-	-	-
PC19. Explain how to face an interview	-	-	-	-
PC20. Explain team work, group work, team formation process	-	-	-	-
PC21. How to Minimize the team conflicts	-	-	-	-
PC22. Explain Ethics & values	-	-	-	-
PC23. Explain the concept of entrepreneurship, and entrepreneurship v/s Management	-	-	-	-
PC24. Explain the process of project report preparation for setting up a new business	-	-	-	-
PC25. • Explain the role of various schemes and institute for self- employment i.e MSME, DIC, • NSIC, SIDBI etc,	-	-	-	-
PC26. Role of financial institution to support startup	-	-	-	-
PC27. Discuss the importance of saving money	-	-	-	-
PC28. Discuss the main types of bank accounts	-	-	-	-
PC29. Discuss the banking functions	-	-	-	-
PC30. Differentiate between fixed and variable costs	-	-	-	-
PC31. Describe the different types of insurance products	-	-	-	-
PC32. Discuss the main types of electronic funds transfers	-	-	-	-
NOS Total	100	-	-	-



Qualification Pack



National Occupational Standards (NOS) Parameters

NOS Code	MSME/LSS/N1227
NOS Name	Employability skills I
Sector	Leather
Sub-Sector	
Occupation	Footwear Designing & Manufacturing 01
NSQF Level	4
Credits	4
Version	1.0
Last Reviewed Date	08/05/2025
Next Review Date	08/05/2028
NSQC Clearance Date	08/05/2025



MSME/LSS/N1226: Quality Control and Standardization

Description

To understand the concept of Quality control and ensure quality assurance by reducing the nonconformance as per quality manual.

Scope

The scope covers the following :

- To understand the concept
- of Quality control and ensure quality assurance
- by reducing the nonconformance as per quality
- manual.

Elements and Performance Criteria

FDPD-110

To be competent, the user/individual on the job must be able to:

- PC1.** • Introduction of Quality Management :
- Learners study quality assurance, its dimensions, benefits, cost of quality, lean six sigma, Kaizen, QC tools, ISO 9001:2015, quality gurus, EMS, seven QC tools, and quality policy.



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>FDPD-110</i>	100	-	-	-
PC1. • Introduction of Quality Management : • Learners study quality assurance, its dimensions, benefits, cost of quality, lean six sigma, Kaizen, QC tools, ISO 9001:2015, quality gurus, EMS, seven QC tools, and quality policy.	-	-	-	-
NOS Total	100	-	-	-



Qualification Pack



National Occupational Standards (NOS) Parameters

NOS Code	MSME/LSS/N1226
NOS Name	Quality Control and Standardization
Sector	Leather
Sub-Sector	
Occupation	Footwear Designing & Manufacturing 01
NSQF Level	4
Credits	1
Version	1.0
Last Reviewed Date	08/05/2025
Next Review Date	08/05/2028
NSQC Clearance Date	08/05/2025



MSME/LSS/N1224: Foot Comfort and Customer complaint

Description

To possess the knowledge in various foot comfort and customer complaints and preventive measures to control the issues.

Scope

The scope covers the following :

- To possess the knowledge
- in various foot comfort
- and customer complaints
- and preventive measures
- to control the issues.

Elements and Performance Criteria

FDPD-108

To be competent, the user/individual on the job must be able to:

- PC1.** • Physiology of the Foot and Shoe Construction :
 - Study foot anatomy, shape changes, abnormalities, encasement pressures, and their relationship with different shoe constructions, materials, and design requirements.
- PC2.** • Foot and Last Relationship for Comfort :
 - Understand foot and last shapes, heel height mechanics, weight distribution, and the influence of materials and fashion on comfort and long-term foot health.
- PC3.** • Physical Properties of Materials and Foot Comfort :
 - Analyze shoe materials, water vapor permeability, perspiration effects, friction, hose suitability, and materials that provide comfort, flexibility, and shock absorption.
- PC4.** • Materials Choice for Shoe Fitting and Comfort :
 - Select and apply materials for uppers, counters, linings, insoles, and inserts, considering durability, moisture effects, and foot contour adaptation for comfort.
- PC5.** • Shoe Fitting Fundamentals :
 - Learn foot measurement techniques, sizing systems, gauges, deformities, and methods to achieve correct fitting footwear while addressing common foot fitting problems.
- PC6.** • Shoe Faults, Quality, and Customer Expectations :
 - Identify shoe style and construction defects, understand buyer expectations, customer attitudes, complaints, and international quality requirements, including green/environmental compliance.
- PC7.** • Styles, Constructions, and Fault Avoidance :
 - Study shoe styles and construction types (cemented, welted, moulded, etc.), potential fault areas, and performance issues in sports, sandals, and other footwear categories.
- PC8.** • Upper Materials and Utilities :
 - Examine leather and fabric variations, poromeric and synthetic materials, defects, durability issues, and advanced materials like Gore-Tex for performance and comfort.
- PC9.** • Component Reliability :
 - Evaluate insoles, shanks, soling materials, adhesion methods, machine settings, and quality control measures to ensure reliable shoe performance and durability.



Qualification Pack



- PC10.** • Quality Standards, Inspection, and Defect Control :
- Apply defect checklists, component specifications, colour/shade matching, pattern checks, and 100% inspection techniques to maintain consistent quality in footwear production.



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>FDPD-108</i>	100	-	-	-
PC1. - Physiology of the Foot and Shoe Construction : - Study foot anatomy, shape changes, abnormalities, encasement pressures, and their relationship with different shoe constructions, materials, and design requirements.	-	-	-	-
PC2. - Foot and Last Relationship for Comfort : - Understand foot and last shapes, heel height mechanics, weight distribution, and the influence of materials and fashion on comfort and long-term foot health.	-	-	-	-
PC3. - Physical Properties of Materials and Foot Comfort : - Analyze shoe materials, water vapor permeability, perspiration effects, friction, hose suitability, and materials that provide comfort, flexibility, and shock absorption.	-	-	-	-
PC4. - Materials Choice for Shoe Fitting and Comfort : - Select and apply materials for uppers, counters, linings, insoles, and inserts, considering durability, moisture effects, and foot contour adaptation for comfort.	-	-	-	-
PC5. - Shoe Fitting Fundamentals : - Learn foot measurement techniques, sizing systems, gauges, deformities, and methods to achieve correct fitting footwear while addressing common foot fitting problems.	-	-	-	-
PC6. - Shoe Faults, Quality, and Customer Expectations : - Identify shoe style and construction defects, understand buyer expectations, customer attitudes, complaints, and international quality requirements, including green/environmental compliance.	-	-	-	-



Qualification Pack



Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC7. • Styles, Constructions, and Fault Avoidance : • Study shoe styles and construction types (cemented, welted, moulded, etc.), potential fault areas, and performance issues in sports, sandals, and other footwear categories.	-	-	-	-
PC8. • Upper Materials and Utilities : • Examine leather and fabric variations, poromeric and synthetic materials, defects, durability issues, and advanced materials like Gore-Tex for performance and comfort.	-	-	-	-
PC9. • Component Reliability : • Evaluate insoles, shanks, soling materials, adhesion methods, machine settings, and quality control measures to ensure reliable shoe performance and durability.	-	-	-	-
PC10. • Quality Standards, Inspection, and Defect Control : • Apply defect checklists, component specifications, colour/shade matching, pattern checks, and 100% inspection techniques to maintain consistent quality in footwear production.	-	-	-	-
NOS Total	100	-	-	-



Qualification Pack



National Occupational Standards (NOS) Parameters

NOS Code	MSME/LSS/N1224
NOS Name	Foot Comfort and Customer complaint
Sector	Leather
Sub-Sector	
Occupation	Footwear Designing & Manufacturing 01
NSQF Level	4
Credits	1
Version	1.0
Last Reviewed Date	08/05/2025
Next Review Date	08/05/2028
NSQC Clearance Date	08/05/2025



MSME/LSS/N1223: CAD and Pattern Engineering

Description

To possess knowledge and skills to work in SHOE CAD and pattern engineering.

Scope

The scope covers the following :

- To possess knowledge and
- skills to work in SHOE CAD
- and pattern engineering.

Elements and Performance Criteria

FDPD-107

To be competent, the user/individual on the job must be able to:

- PC1.** • Introduction to Hand and Machine Grading:
- Learners gain knowledge of hand grading fundamentals, factors influencing grading, and methods for insole, mean form, standard, upper, lining, design patterns, and different sizing systems.
- PC2.** • 2D CAD:
- Learners are introduced to 2D CAD for pattern engineering, data handling, digitization, and grading of standard, insole, upper, and lining patterns for men's and ladies' footwear.
- PC3.** • Demonstration of 2D pattern Engineering, Grading and output to Cutter:
- Learners practice transferring 3D to 2D CAD lines, using digitizers, commands, allowances, and rotations to create graded patterns with notches, information, and cutter outputs for uppers and linings.
- PC4.** • Spring Patterns:
- Learners understand the reasons and techniques for springing patterns, applying both manual and CAD-based methods for boots, high vamps, whole cuts, and economical designs.
- PC5.** • 3D CAD :
- Learners are introduced to 3D CAD, covering PC functions, peripherals, last digitization, scanning textures, 3D design and visualization, flattening forms, adding features, and generating outputs/images.
- PC6.** • Last development through Scanning:
- Learners develop skills in last selection, preparation, digitization, and data processing/modification for creating and working with 3D virtual lasts.
- PC7.** • Design development of Sole, Heel and materials through scanning:
- Learners acquire skills in selecting sole and heel files, modifying and designing them, and enhancing with color, texture, and additional features.
- PC8.** • Visualization of shoes design:
- Learners practice last digitization, modification, and design development, converting 3D images into 2D graded patterns, while creating individual projects with multiple shoe styles and master patterns.



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>FDPD-107</i>	-	100	-	-
PC1. • Introduction to Hand and Machine Grading: • Learners gain knowledge of hand grading fundamentals, factors influencing grading, and methods for insole, mean form, standard, upper, lining, design patterns, and different sizing systems.	-	-	-	-
PC2. • 2D CAD: • Learners are introduced to 2D CAD for pattern engineering, data handling, digitization, and grading of standard, insole, upper, and lining patterns for men's and ladies' footwear.	-	-	-	-
PC3. • Demonstration of 2D pattern Engineering, Grading and output to Cutter: • Learners practice transferring 3D to 2D CAD lines, using digitizers, commands, allowances, and rotations to create graded patterns with notches, information, and cutter outputs for uppers and linings.	-	-	-	-
PC4. • Spring Patterns: • Learners understand the reasons and techniques for springing patterns, applying both manual and CAD-based methods for boots, high vamps, whole cuts, and economical designs.	-	-	-	-
PC5. • 3D CAD : • Learners are introduced to 3D CAD, covering PC functions, peripherals, last digitization, scanning textures, 3D design and visualization, flattening forms, adding features, and generating outputs/images.	-	-	-	-
PC6. • Last development through Scanning: • Learners develop skills in last selection, preparation, digitization, and data processing/modification for creating and working with 3D virtual lasts.	-	-	-	-



Qualification Pack



Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC7. - Design development of Sole, Heel and materials through scanning: - Learners acquire skills in selecting sole and heel files, modifying and designing them, and enhancing with color, texture, and additional features.	-	-	-	-
PC8. - Visualization of shoes design: - Learners practice last digitization, modification, and design development, converting 3D images into 2D graded patterns, while creating individual projects with multiple shoe styles and master patterns.	-	-	-	-
NOS Total	-	100	-	-



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National Occupational Standards (NOS) Parameters

NOS Code	MSME/LSS/N1223
NOS Name	CAD and Pattern Engineering
Sector	Leather
Sub-Sector	
Occupation	Footwear Designing & Manufacturing 01
NSQF Level	4
Credits	4
Version	1.0
Last Reviewed Date	08/05/2025
Next Review Date	08/05/2028
NSQC Clearance Date	08/05/2025



MSME/LSS/N1222: CAD and Pattern Engineering

Description

To possess knowledge and skills to work in SHOE CAD and pattern engineering.

Scope

The scope covers the following :

- To possess knowledge and
- skills to work in SHOE CAD
- and pattern engineering.

Elements and Performance Criteria

FDPD-107

To be competent, the user/individual on the job must be able to:

- PC1.** • Introduction to Hand and Machine Grading:
- Learners gain knowledge of hand grading fundamentals, factors influencing grading, and methods for insole, mean form, standard, upper, lining, design patterns, and different sizing systems.
- PC2.** • 2D CAD:
- Learners are introduced to 2D CAD for pattern engineering, data handling, digitization, and grading of standard, insole, upper, and lining patterns for men's and ladies' footwear.
- PC3.** • Demonstration of 2D pattern Engineering, Grading and output to Cutter:
- Learners practice transferring 3D to 2D CAD lines, using digitizers, commands, allowances, and rotations to create graded patterns with notches, information, and cutter outputs for uppers and linings.
- PC4.** • Spring Patterns:
- Learners understand the reasons and techniques for springing patterns, applying both manual and CAD-based methods for boots, high vamps, whole cuts, and economical designs.
- PC5.** • 3D CAD :
- Learners are introduced to 3D CAD, covering PC functions, peripherals, last digitization, scanning textures, 3D design and visualization, flattening forms, adding features, and generating outputs/images.
- PC6.** • Last development through Scanning:
- Learners develop skills in last selection, preparation, digitization, and data processing/modification for creating and working with 3D virtual lasts.
- PC7.** • Design development of Sole, Heel and materials through scanning:
- Learners acquire skills in selecting sole and heel files, modifying and designing them, and enhancing with color, texture, and additional features.
- PC8.** • Visualization of shoes design:
- Learners practice last digitization, modification, and design development, converting 3D images into 2D graded patterns, while creating individual projects with multiple shoe styles and master patterns.



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>FDPD-107</i>	100	-	-	-
PC1. • Introduction to Hand and Machine Grading: • Learners gain knowledge of hand grading fundamentals, factors influencing grading, and methods for insole, mean form, standard, upper, lining, design patterns, and different sizing systems.	-	-	-	-
PC2. • 2D CAD: • Learners are introduced to 2D CAD for pattern engineering, data handling, digitization, and grading of standard, insole, upper, and lining patterns for men's and ladies' footwear.	-	-	-	-
PC3. • Demonstration of 2D pattern Engineering, Grading and output to Cutter: • Learners practice transferring 3D to 2D CAD lines, using digitizers, commands, allowances, and rotations to create graded patterns with notches, information, and cutter outputs for uppers and linings.	-	-	-	-
PC4. • Spring Patterns: • Learners understand the reasons and techniques for springing patterns, applying both manual and CAD-based methods for boots, high vamps, whole cuts, and economical designs.	-	-	-	-
PC5. • 3D CAD : • Learners are introduced to 3D CAD, covering PC functions, peripherals, last digitization, scanning textures, 3D design and visualization, flattening forms, adding features, and generating outputs/images.	-	-	-	-
PC6. • Last development through Scanning: • Learners develop skills in last selection, preparation, digitization, and data processing/modification for creating and working with 3D virtual lasts.	-	-	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC7. - Design development of Sole, Heel and materials through scanning: - Learners acquire skills in selecting sole and heel files, modifying and designing them, and enhancing with color, texture, and additional features.	-	-	-	-
PC8. - Visualization of shoes design: - Learners practice last digitization, modification, and design development, converting 3D images into 2D graded patterns, while creating individual projects with multiple shoe styles and master patterns.	-	-	-	-
NOS Total	100	-	-	-



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National Occupational Standards (NOS) Parameters

NOS Code	MSME/LSS/N1222
NOS Name	CAD and Pattern Engineering
Sector	Leather
Sub-Sector	
Occupation	Footwear Designing & Manufacturing 01
NSQF Level	4
Credits	4
Version	1.0
Next Review Date	NA



MSME/LSS/N1221: Lasting & Making Technology II

Description

To supervise the production process of different construction in the lasting/bottom department using the latest technology.

Scope

The scope covers the following :

- To supervise the
- production process of
- different construction in the lasting/bottom
- department using the
- latest technology.

Elements and Performance Criteria

FDPD-106

To be competent, the user/individual on the job must be able to:

- PC1.** • Machinery and Equipments:
- Learners gain knowledge of hand tools, machines, and automatic/semi-automatic equipment for lasting, making, and finishing operations, along with conveyor and work transportation systems used in production.
- PC2.** • Theory classes:
- Learners study natural and synthetic materials, adhesives, grindery, cleaners, and new developments, along with testing methods, shoe construction types, attachment methods, lasting principles, and the complete sequence of operations from upper lasting to finishing.
- PC3.** • Lasting:
- Learners gain knowledge of toe-puffs, stiffeners, conditioning methods, lasting principles, bottoming systems, heel building, adhesives, transportation systems, head setting, fault identification, and the complete sequence of operations with job card documentation.
- PC4.** • Bottoming:
- Learners study the sequence of operations after lasting to sole attachment, techniques, materials, component preparation, cutting, assembly, storage, standardization, moulded units, work movement systems, departmental management, stock control, and fitting as per ticket requirements.
- PC5.** • Finishing:
- Learners understand soling and heeling processes, top-piecing methods, finishing objectives, machines and materials, fault effects, decorative treatments, system comparisons, and statutory safety requirements in footwear finishing.
- PC6.** • Shoe Rooming:
- Learners study shoe room functions and techniques, machine adjustments, fault diagnosis, decorative treatments, inspection, quality control, packing, storage, and statutory safety requirements for leather and non-leather footwear.



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>FDPD-106</i>	-	100	-	-
PC1. - Machinery and Equipments: - Learners gain knowledge of hand tools, machines, and automatic/semi-automatic equipment for lasting, making, and finishing operations, along with conveyor and work transportation systems used in production.	-	-	-	-
PC2. - Theory classes: - Learners study natural and synthetic materials, adhesives, grindery, cleaners, and new developments, along with testing methods, shoe construction types, attachment methods, lasting principles, and the complete sequence of operations from upper lasting to finishing.	-	-	-	-
PC3. - Lasting: - Learners gain knowledge of toe-puffs, stiffeners, conditioning methods, lasting principles, bottoming systems, heel building, adhesives, transportation systems, head setting, fault identification, and the complete sequence of operations with job card documentation.	-	-	-	-
PC4. - Bottoming: - Learners study the sequence of operations after lasting to sole attachment, techniques, materials, component preparation, cutting, assembly, storage, standardization, moulded units, work movement systems, departmental management, stock control, and fitting as per ticket requirements.	-	-	-	-
PC5. - Finishing: - Learners understand soling and heeling processes, top-piecing methods, finishing objectives, machines and materials, fault effects, decorative treatments, system comparisons, and statutory safety requirements in footwear finishing.	-	-	-	-



Qualification Pack



Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC6. • Shoe Rooming: • Learners study shoe room functions and techniques, machine adjustments, fault diagnosis, decorative treatments, inspection, quality control, packing, storage, and statutory safety requirements for leather and non-leather footwear.	-	-	-	-
NOS Total	-	100	-	-



Qualification Pack



National Occupational Standards (NOS) Parameters

NOS Code	MSME/LSS/N1221
NOS Name	Lasting & Making Technology II
Sector	Leather
Sub-Sector	
Occupation	Footwear Designing & Manufacturing 01
NSQF Level	4
Credits	3
Version	1.0
Last Reviewed Date	08/05/2025
Next Review Date	08/05/2028
NSQC Clearance Date	08/05/2025



MSME/LSS/N1220: Lasting & Making Technology I

Description

To supervise the production process of different construction in the lasting/bottom department using the latest technology.

Scope

The scope covers the following :

- To supervise the
- production process of
- different construction in the lasting/bottom
- department using the
- latest technology.

Elements and Performance Criteria

FDPD-106

To be competent, the user/individual on the job must be able to:

- PC1.** • Machinery and Equipments:
- Learners gain knowledge of hand tools, machines, and automatic/semi-automatic equipment for lasting, making, and finishing operations, along with conveyor and work transportation systems used in production.
- PC2.** • Theory classes:
- Learners study natural and synthetic materials, adhesives, grindery, cleaners, and new developments, along with testing methods, shoe construction types, attachment methods, lasting principles, and the complete sequence of operations from upper lasting to finishing.
- PC3.** • Lasting:
- Learners gain knowledge of toe-puffs, stiffeners, conditioning methods, lasting principles, bottoming systems, heel building, adhesives, transportation systems, head setting, fault identification, and the complete sequence of operations with job card documentation.
- PC4.** • Bottoming:
- Learners study the sequence of operations after lasting to sole attachment, techniques, materials, component preparation, cutting, assembly, storage, standardization, moulded units, work movement systems, departmental management, stock control, and fitting as per ticket requirements.
- PC5.** • Finishing:
- Learners understand soling and heeling processes, top-piecing methods, finishing objectives, machines and materials, fault effects, decorative treatments, system comparisons, and statutory safety requirements in footwear finishing.
- PC6.** • Shoe Rooming:
- Learners study shoe room functions and techniques, machine adjustments, fault diagnosis, decorative treatments, inspection, quality control, packing, storage, and statutory safety requirements for leather and non-leather footwear.



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>FDPD-106</i>	100	-	-	-
PC1. - Machinery and Equipments: - Learners gain knowledge of hand tools, machines, and automatic/semi-automatic equipment for lasting, making, and finishing operations, along with conveyor and work transportation systems used in production.	-	-	-	-
PC2. - Theory classes: - Learners study natural and synthetic materials, adhesives, grindery, cleaners, and new developments, along with testing methods, shoe construction types, attachment methods, lasting principles, and the complete sequence of operations from upper lasting to finishing.	-	-	-	-
PC3. - Lasting: - Learners gain knowledge of toe-puffs, stiffeners, conditioning methods, lasting principles, bottoming systems, heel building, adhesives, transportation systems, head setting, fault identification, and the complete sequence of operations with job card documentation.	-	-	-	-
PC4. - Bottoming: - Learners study the sequence of operations after lasting to sole attachment, techniques, materials, component preparation, cutting, assembly, storage, standardization, moulded units, work movement systems, departmental management, stock control, and fitting as per ticket requirements.	-	-	-	-
PC5. - Finishing: - Learners understand soling and heeling processes, top-piecing methods, finishing objectives, machines and materials, fault effects, decorative treatments, system comparisons, and statutory safety requirements in footwear finishing.	-	-	-	-



Qualification Pack



Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC6. • Shoe Rooming: • Learners study shoe room functions and techniques, machine adjustments, fault diagnosis, decorative treatments, inspection, quality control, packing, storage, and statutory safety requirements for leather and non-leather footwear.	-	-	-	-
NOS Total	100	-	-	-



Qualification Pack



National Occupational Standards (NOS) Parameters

NOS Code	MSME/LSS/N1220
NOS Name	Lasting & Making Technology I
Sector	Leather
Sub-Sector	
Occupation	Footwear Designing & Manufacturing 01
NSQF Level	4
Credits	3
Version	1.0
Last Reviewed Date	08/05/2025
Next Review Date	08/05/2028
NSQC Clearance Date	08/05/2025



MSME/LSS/N1219: Closing Technology IV

Description

To supervise the production process in the closing department and knowledge about different constructions and latest machines.

Scope

The scope covers the following :

- To supervise the
- production process in the
- closing department and
- knowledge about different
- constructions and latest
- machines.

Elements and Performance Criteria

FDPD-105

To be competent, the user/individual on the job must be able to:

- PC1.** • Machinery and Equipments:
- Learners gain knowledge of hand tools, stitching machines, and advanced equipment for upper treatments, including skiving, backing, stitch marking, perforation, folding, stamping, eyeleting, and related machinery, along with automatic and semi-automatic processing systems.
- PC2.** • Theory classes:
- Learners understand shoe styles and upper presentation, operations for upper preparation (skiving, stitching, seams, reinforcements, decorative and welding treatments), use of needles, threads, jigs, adhesives, forming equipment, and transporter systems, along with sequence of operations, departmental management, quality control, inspections, and documentation through charts and job cards.
- PC3.** • Closing Practical:
- Students will learn stitching and unstitching machines, handcraft techniques, and machine operations for upper preparation, including skiving, edge treatments, seams, punching, perforation, and eyeleting. They will practice sequence-based upper construction for different footwear styles, develop speed and efficiency for bulk production, and understand how finishing impacts product quality, appearance, and value through exercises and practical training in the closing room.



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>FDPD-105</i>	-	100	-	-
PC1. • Machinery and Equipments: • Learners gain knowledge of hand tools, stitching machines, and advanced equipment for upper treatments, including skiving, backing, stitch marking, perforation, folding, stamping, eyeleting, and related machinery, along with automatic and semi-automatic processing systems.	-	-	-	-
PC2. • Theory classes: • Learners understand shoe styles and upper presentation, operations for upper preparation (skiving, stitching, seams, reinforcements, decorative and welding treatments), use of needles, threads, jigs, adhesives, forming equipment, and transporter systems, along with sequence of operations, departmental management, quality control, inspections, and documentation through charts and job cards.	-	-	-	-
PC3. • Closing Practical: • Students will learn stitching and unstitching machines, handcraft techniques, and machine operations for upper preparation, including skiving, edge treatments, seams, punching, perforation, and eyeleting. They will practice sequence-based upper construction for different footwear styles, develop speed and efficiency for bulk production, and understand how finishing impacts product quality, appearance, and value through exercises and practical training in the closing room.	-	-	-	-
NOS Total	-	100	-	-



Qualification Pack



National Occupational Standards (NOS) Parameters

NOS Code	MSME/LSS/N1219
NOS Name	Closing Technology IV
Sector	Leather
Sub-Sector	
Occupation	Footwear Designing & Manufacturing 01
NSQF Level	4
Credits	3
Version	1.0
Last Reviewed Date	08/05/2025
Next Review Date	08/05/2028
NSQC Clearance Date	08/05/2025



MSME/LSS/N1218: Closing Technology

Description

To supervise the production process in the closing department and knowledge about different constructions and latest machines.

Scope

The scope covers the following :

- To supervise the
- production process in the
- closing department and
- knowledge about different
- constructions and latest
- machines.

Elements and Performance Criteria

FDPD-105

To be competent, the user/individual on the job must be able to:

- PC1.** • Machinery and Equipments:
- Learners gain knowledge of hand tools, stitching machines, and advanced equipment for upper treatments, including skiving, backing, stitch marking, perforation, folding, stamping, eyeleting, and related machinery, along with automatic and semi-automatic processing systems.
- PC2.** • Theory classes:
- Learners understand shoe styles and upper presentation, operations for upper preparation (skiving, stitching, seams, reinforcements, decorative and welding treatments), use of needles, threads, jigs, adhesives, forming equipment, and transporter systems, along with sequence of operations, departmental management, quality control, inspections, and documentation through charts and job cards.
- PC3.** • Closing Practical:
- Students will learn stitching and unstitching machines, handcraft techniques, and machine operations for upper preparation, including skiving, edge treatments, seams, punching, perforation, and eyeleting. They will practice sequence-based upper construction for different footwear styles, develop speed and efficiency for bulk production, and understand how finishing impacts product quality, appearance, and value through exercises and practical training in the closing room.



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>FDPD-105</i>	100	-	-	-
PC1. • Machinery and Equipments: • Learners gain knowledge of hand tools, stitching machines, and advanced equipment for upper treatments, including skiving, backing, stitch marking, perforation, folding, stamping, eyeleting, and related machinery, along with automatic and semi-automatic processing systems.	-	-	-	-
PC2. • Theory classes: • Learners understand shoe styles and upper presentation, operations for upper preparation (skiving, stitching, seams, reinforcements, decorative and welding treatments), use of needles, threads, jigs, adhesives, forming equipment, and transporter systems, along with sequence of operations, departmental management, quality control, inspections, and documentation through charts and job cards.	-	-	-	-
PC3. • Closing Practical: • Students will learn stitching and unstitching machines, handcraft techniques, and machine operations for upper preparation, including skiving, edge treatments, seams, punching, perforation, and eyeleting. They will practice sequence-based upper construction for different footwear styles, develop speed and efficiency for bulk production, and understand how finishing impacts product quality, appearance, and value through exercises and practical training in the closing room.	-	-	-	-
NOS Total	100	-	-	-



Qualification Pack



National Occupational Standards (NOS) Parameters

NOS Code	MSME/LSS/N1218
NOS Name	Closing Technology
Sector	Leather
Sub-Sector	
Occupation	Footwear Designing & Manufacturing 01
NSQF Level	4
Credits	3
Version	1.0
Last Reviewed Date	08/05/2025
Next Review Date	08/05/2028
NSQC Clearance Date	08/05/2025



MSME/LSS/N1217: Clicking Technology VI

Description

To possess knowledge about different materials used in clicking section and concepts of clicking with the use of latest technology

Scope

The scope covers the following :

- To possess knowledge
- about different materials
- used in clicking section
- and concepts of clicking
- with the use of latest
- technology

Elements and Performance Criteria

FDPD-104

To be competent, the user/individual on the job must be able to:

- PC1.** • Clicking Technology:
- Students will learn about upper components, materials like leather and synthetics, cutting techniques (hand and machine), pattern layout, leather characteristics, grading, sorting, and storage. The course covers defect marking, quality requirements, economic cutting, safety, and quality control in upper clicking for efficient and cost-effective production.
- PC2.** • Clicking Department Procedure:
- This course emphasizes practical clicking room management, covering hand and press cutting techniques, leather and fabric handling, equipment maintenance, safety, job cards, and material evaluation. Students will practice hand cutting, pattern layout, and use of cutting tools, while learning about leather qualities, tanning effects, fabric use, and modern cutting methods like laser and water jet.
- PC3.** • Basic Clicking Costing:
- a. Cutting allowances.
 - b. Clickers costing sheets
- PC4.** • components:
- Students will gain an overview of leather production and finishing, textile and synthetic material classifications, and leather substitutes. The course covers upper materials, coated fabrics, and bottom stock components like toe puffs, stiffeners, and insoles. It also includes insole constructions (two-piece, sandwich, molded) and various sole types such as leather, EVA, rubber, and crepe, emphasizing material properties and manufacturing relevance.



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
FDPD-104	-	100	-	-
PC1. - Clicking Technology: - Students will learn about upper components, materials like leather and synthetics, cutting techniques (hand and machine), pattern layout, leather characteristics, grading, sorting, and storage. The course covers defect marking, quality requirements, economic cutting, safety, and quality control in upper clicking for efficient and cost-effective production.	-	-	-	-
PC2. - Clicking Department Procedure: - This course emphasizes practical clicking room management, covering hand and press cutting techniques, leather and fabric handling, equipment maintenance, safety, job cards, and material evaluation. Students will practice hand cutting, pattern layout, and use of cutting tools, while learning about leather qualities, tanning effects, fabric use, and modern cutting methods like laser and water jet.	-	-	-	-
PC3. - Basic Clicking Costing: a. Cutting allowances. b. Clickers costing sheets	-	-	-	-
PC4. - components: - Students will gain an overview of leather production and finishing, textile and synthetic material classifications, and leather substitutes. The course covers upper materials, coated fabrics, and bottom stock components like toe puffs, stiffeners, and insoles. It also includes insole constructions (two-piece, sandwich, molded) and various sole types such as leather, EVA, rubber, and crepe, emphasizing material properties and manufacturing relevance.	-	-	-	-
NOS Total	-	100	-	-



Qualification Pack



National Occupational Standards (NOS) Parameters

NOS Code	MSME/LSS/N1217
NOS Name	Clicking Technology VI
Sector	Leather
Sub-Sector	
Occupation	Footwear Designing & Manufacturing 01
NSQF Level	4
Credits	3
Version	1.0
Last Reviewed Date	08/05/2025
Next Review Date	08/05/2028
NSQC Clearance Date	08/05/2025



MSME/LSS/N1216: Clicking Technology V

Description

To possess knowledge about different materials used in clicking section and concepts of clicking with the use of latest technology

Scope

The scope covers the following :

- To possess knowledge
- about different materials
- used in clicking section
- and concepts of clicking
- with the use of latest
- technology

Elements and Performance Criteria

FDPD-104

To be competent, the user/individual on the job must be able to:

- PC1.** • Clicking Technology:
- Students will learn about upper components, materials like leather and synthetics, cutting techniques (hand and machine), pattern layout, leather characteristics, grading, sorting, and storage. The course covers defect marking, quality requirements, economic cutting, safety, and quality control in upper clicking for efficient and cost-effective production.
- PC2.** • Clicking Department Procedure:
- This course emphasizes practical clicking room management, covering hand and press cutting techniques, leather and fabric handling, equipment maintenance, safety, job cards, and material evaluation. Students will practice hand cutting, pattern layout, and use of cutting tools, while learning about leather qualities, tanning effects, fabric use, and modern cutting methods like laser and water jet.
- PC3.** • Basic Clicking Costing:
- a. Cutting allowances.
 - b. Clickers costing sheets
- PC4.** • components:
- Students will gain an overview of leather production and finishing, textile and synthetic material classifications, and leather substitutes. The course covers upper materials, coated fabrics, and bottom stock components like toe puffs, stiffeners, and insoles. It also includes insole constructions (two-piece, sandwich, molded) and various sole types such as leather, EVA, rubber, and crepe, emphasizing material properties and manufacturing relevance.



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>FDPD-104</i>	100	-	-	-
PC1. - Clicking Technology: - Students will learn about upper components, materials like leather and synthetics, cutting techniques (hand and machine), pattern layout, leather characteristics, grading, sorting, and storage. The course covers defect marking, quality requirements, economic cutting, safety, and quality control in upper clicking for efficient and cost-effective production.	-	-	-	-
PC2. - Clicking Department Procedure: - This course emphasizes practical clicking room management, covering hand and press cutting techniques, leather and fabric handling, equipment maintenance, safety, job cards, and material evaluation. Students will practice hand cutting, pattern layout, and use of cutting tools, while learning about leather qualities, tanning effects, fabric use, and modern cutting methods like laser and water jet.	-	-	-	-
PC3. - Basic Clicking Costing: a. Cutting allowances. b. Clickers costing sheets	-	-	-	-
PC4. - components: - Students will gain an overview of leather production and finishing, textile and synthetic material classifications, and leather substitutes. The course covers upper materials, coated fabrics, and bottom stock components like toe puffs, stiffeners, and insoles. It also includes insole constructions (two-piece, sandwich, molded) and various sole types such as leather, EVA, rubber, and crepe, emphasizing material properties and manufacturing relevance.	-	-	-	-
NOS Total	100	-	-	-



Qualification Pack



National Occupational Standards (NOS) Parameters

NOS Code	MSME/LSS/N1216
NOS Name	Clicking Technology V
Sector	Leather
Sub-Sector	
Occupation	Footwear Designing & Manufacturing 01
NSQF Level	4
Credits	3
Version	1.0
Last Reviewed Date	08/05/2025
Next Review Date	08/05/2028
NSQC Clearance Date	08/05/2025



MSME/LSS/N1215: Designing and Pattern Cutting

Description

Identify customers requirements and create Conceptual footwear Designs and cut the patterns accordingly

Scope

The scope covers the following :

- Identify customers
- requirements and create
- Conceptual footwear
- Designs and cut the
- patterns accordingly

Elements and Performance Criteria

FDPD-103

To be competent, the user/individual on the job must be able to:

- PC1.** • Introduction to Footwear and Foot Anatomy:
• Covers the definition, historical background, basic styles of footwear, and parts of a shoe, along with detailed understanding of foot anatomy including bones, joints, ligaments, muscles, skin, arches, foot functions, growth changes, and common foot problems.
- PC2.** • Foot Measurement and Size Systems:
• Includes measurement techniques for bespoke footwear, changes in foot shape, size and fitting systems, size conversions, and foot care essentials to ensure proper fit and comfort in footwear design.
- PC3.** • Lasts and Last Manufacturing:
• Focuses on the introduction and classification of lasts (by material, construction, bottom plate), understanding of last terms, last-foot relationship, toe spring, heel pitch, last manufacturing process, checking methods, and bottom edge considerations.
- PC4.** • Machinery, Equipment & CAD Tools:
• Covers the suitability and usage of machines, equipment, and CAD in footwear design, pattern making, and grading. Also includes knowledge of foot measuring devices and their role in design accuracy.
- PC5.** • Fashion and Design Considerations:
• Explains fashion market requirements (wholesale, mass production, e-commerce, etc.), seasonal influences, and covers a wide variety of styles, components, and lasts across men's, women's, and children's footwear.
- PC6.** • Graphic Presentation and Illustration Techniques:
• Teaches students how to create and present footwear designs using sketching, illustrations, media techniques, blueprint diagrams, and visual communication tools that convey processes, textures, finishes, and construction constraints.
- PC7.** • Footwear Design and Pattern Development:
• Includes understanding design elements like shoe construction, comfort, geometry, materials, pattern cutting procedures, costing, and styling effects on pattern making—from Forme cutting to final working patterns.



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- PC8.**
- Practical Pattern Cutting Techniques:
 - Focuses on hands-on skills including last covering, Forme making methods (mean, tapped, vacuum), upper, lining, and bottom pattern development for men's, women's, and children's footwear styles using modern production techniques.
- PC9.**
- Specialized and Construction-Based Pattern Cutting:
 - Covers bottom stock pattern development, special techniques (springing, deadening), pattern interlock for aesthetics, and pattern development for specific constructions like string lasting, stitch-down, driving shoes, and more.
- PC10.**
- Prototype Production, Grading & Consumption Calculations:
 - Includes pull-over/prototype production to test design and fit, design/style specifications, pattern grading (manual and CAD), and average calculations for raw material consumption using various methods, especially graphical.



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>FDPD-103</i>	-	100	-	-
PC1. • Introduction to Footwear and Foot Anatomy: • Covers the definition, historical background, basic styles of footwear, and parts of a shoe, along with detailed understanding of foot anatomy including bones, joints, ligaments, muscles, skin, arches, foot functions, growth changes, and common foot problems.	-	-	-	-
PC2. • Foot Measurement and Size Systems: • Includes measurement techniques for bespoke footwear, changes in foot shape, size and fitting systems, size conversions, and foot care essentials to ensure proper fit and comfort in footwear design.	-	-	-	-
PC3. • Lasts and Last Manufacturing: • Focuses on the introduction and classification of lasts (by material, construction, bottom plate), understanding of last terms, last-foot relationship, toe spring, heel pitch, last manufacturing process, checking methods, and bottom edge considerations.	-	-	-	-
PC4. • Machinery, Equipment & CAD Tools: • Covers the suitability and usage of machines, equipment, and CAD in footwear design, pattern making, and grading. Also includes knowledge of foot measuring devices and their role in design accuracy.	-	-	-	-
PC5. • Fashion and Design Considerations: • Explains fashion market requirements (wholesale, mass production, e-commerce, etc.), seasonal influences, and covers a wide variety of styles, components, and lasts across men's, women's, and children's footwear.	-	-	-	-
PC6. • Graphic Presentation and Illustration Techniques: • Teaches students how to create and present footwear designs using sketching, illustrations, media techniques, blueprint diagrams, and visual communication tools that convey processes, textures, finishes, and construction constraints.	-	-	-	-



Qualification Pack



Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC7. - Footwear Design and Pattern Development: - Includes understanding design elements like shoe construction, comfort, geometry, materials, pattern cutting procedures, costing, and styling effects on pattern making—from Forme cutting to final working patterns.	-	-	-	-
PC8. - Practical Pattern Cutting Techniques: - Focuses on hands-on skills including last covering, Forme making methods (mean, tapped, vacuum), upper, lining, and bottom pattern development for men's, women's, and children's footwear styles using modern production techniques.	-	-	-	-
PC9. - Specialized and Construction-Based Pattern Cutting: - Covers bottom stock pattern development, special techniques (springing, deadening), pattern interlock for aesthetics, and pattern development for specific constructions like string lasting, stitch-down, driving shoes, and more.	-	-	-	-
PC10. - Prototype Production, Grading & Consumption Calculations: - Includes pull-over/prototype production to test design and fit, design/style specifications, pattern grading (manual and CAD), and average calculations for raw material consumption using various methods, especially graphical.	-	-	-	-
NOS Total	-	100	-	-



Qualification Pack



National Occupational Standards (NOS) Parameters

NOS Code	MSME/LSS/N1215
NOS Name	Designing and Pattern Cutting
Sector	Leather
Sub-Sector	
Occupation	Footwear Designing & Manufacturing 01
NSQF Level	4
Credits	4
Version	1.0
Last Reviewed Date	08/05/2025
Next Review Date	08/05/2028
NSQC Clearance Date	08/05/2025



MSME/LSS/N1214: Designing and Pattern Cutting

Description

Identify customers requirements and create Conceptual footwear Designs and cut the patterns accordingly

Scope

The scope covers the following :

- Identify customers
- requirements and create
- Conceptual footwear
- Designs and cut the
- patterns accordingly

Elements and Performance Criteria

FDPD-103

To be competent, the user/individual on the job must be able to:

- PC1.**
- Introduction to Footwear and Foot Anatomy:
 - Covers the definition, historical background, basic styles of footwear, and parts of a shoe, along with detailed understanding of foot anatomy including bones, joints, ligaments, muscles, skin, arches, foot functions, growth changes, and common foot problems.
- PC2.**
- Foot Measurement and Size Systems:
 - Includes measurement techniques for bespoke footwear, changes in foot shape, size and fitting systems, size conversions, and foot care essentials to ensure proper fit and comfort in footwear design.
- PC3.**
- Lasts and Last Manufacturing:
 - Focuses on the introduction and classification of lasts (by material, construction, bottom plate), understanding of last terms, last-foot relationship, toe spring, heel pitch, last manufacturing process, checking methods, and bottom edge considerations.
- PC4.**
- Machinery, Equipment & CAD Tools:
 - Covers the suitability and usage of machines, equipment, and CAD in footwear design, pattern making, and grading. Also includes knowledge of foot measuring devices and their role in design accuracy.
- PC5.**
- Fashion and Design Considerations:
 - Explains fashion market requirements (wholesale, mass production, e-commerce, etc.), seasonal influences, and covers a wide variety of styles, components, and lasts across men's, women's, and children's footwear.
- PC6.**
- Graphic Presentation and Illustration Techniques:
 - Teaches students how to create and present footwear designs using sketching, illustrations, media techniques, blueprint diagrams, and visual communication tools that convey processes, textures, finishes, and construction constraints.
- PC7.**
- Footwear Design and Pattern Development:
 - Includes understanding design elements like shoe construction, comfort, geometry, materials, pattern cutting procedures, costing, and styling effects on pattern making—from Forme cutting to final working patterns.



Qualification Pack



- PC8.**
- Practical Pattern Cutting Techniques:
 - Focuses on hands-on skills including last covering, Forme making methods (mean, tapped, vacuum), upper, lining, and bottom pattern development for men's, women's, and children's footwear styles using modern production techniques.
- PC9.**
- Specialized and Construction-Based Pattern Cutting:
 - Covers bottom stock pattern development, special techniques (springing, deadening), pattern interlock for aesthetics, and pattern development for specific constructions like string lasting, stitch-down, driving shoes, and more.
- PC10.**
- Prototype Production, Grading & Consumption Calculations:
 - Includes pull-over/prototype production to test design and fit, design/style specifications, pattern grading (manual and CAD), and average calculations for raw material consumption using various methods, especially graphical.



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>FDPD-103</i>	100	-	-	-
PC1. • Introduction to Footwear and Foot Anatomy: • Covers the definition, historical background, basic styles of footwear, and parts of a shoe, along with detailed understanding of foot anatomy including bones, joints, ligaments, muscles, skin, arches, foot functions, growth changes, and common foot problems.	-	-	-	-
PC2. • Foot Measurement and Size Systems: • Includes measurement techniques for bespoke footwear, changes in foot shape, size and fitting systems, size conversions, and foot care essentials to ensure proper fit and comfort in footwear design.	-	-	-	-
PC3. • Lasts and Last Manufacturing: • Focuses on the introduction and classification of lasts (by material, construction, bottom plate), understanding of last terms, last-foot relationship, toe spring, heel pitch, last manufacturing process, checking methods, and bottom edge considerations.	-	-	-	-
PC4. • Machinery, Equipment & CAD Tools: • Covers the suitability and usage of machines, equipment, and CAD in footwear design, pattern making, and grading. Also includes knowledge of foot measuring devices and their role in design accuracy.	-	-	-	-
PC5. • Fashion and Design Considerations: • Explains fashion market requirements (wholesale, mass production, e-commerce, etc.), seasonal influences, and covers a wide variety of styles, components, and lasts across men's, women's, and children's footwear.	-	-	-	-
PC6. • Graphic Presentation and Illustration Techniques: • Teaches students how to create and present footwear designs using sketching, illustrations, media techniques, blueprint diagrams, and visual communication tools that convey processes, textures, finishes, and construction constraints.	-	-	-	-



Qualification Pack



Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC7. - Footwear Design and Pattern Development: - Includes understanding design elements like shoe construction, comfort, geometry, materials, pattern cutting procedures, costing, and styling effects on pattern making—from Forme cutting to final working patterns.	-	-	-	-
PC8. - Practical Pattern Cutting Techniques: - Focuses on hands-on skills including last covering, Forme making methods (mean, tapped, vacuum), upper, lining, and bottom pattern development for men's, women's, and children's footwear styles using modern production techniques.	-	-	-	-
PC9. - Specialized and Construction-Based Pattern Cutting: - Covers bottom stock pattern development, special techniques (springing, deadening), pattern interlock for aesthetics, and pattern development for specific constructions like string lasting, stitch-down, driving shoes, and more.	-	-	-	-
PC10. - Prototype Production, Grading & Consumption Calculations: - Includes pull-over/prototype production to test design and fit, design/style specifications, pattern grading (manual and CAD), and average calculations for raw material consumption using various methods, especially graphical.	-	-	-	-
NOS Total	100	-	-	-



Qualification Pack



National Occupational Standards (NOS) Parameters

NOS Code	MSME/LSS/N1214
NOS Name	Designing and Pattern Cutting
Sector	Leather
Sub-Sector	
Occupation	Footwear Designing & Manufacturing 01
NSQF Level	4
Credits	4
Version	1.0
Last Reviewed Date	08/05/2025
Next Review Date	08/05/2028
NSQC Clearance Date	08/05/2025



MSME/LSS/N1213: Last Modelling II

Description

Identify various last dimensions and parameter as per the latest trained and customer requirement design and modify and manufacture last by choosing a suitable manufacturing technique

Scope

The scope covers the following :

- After completing the course, students will be able to explain the classification of footwear lasts, understand manufacturing techniques and their uses, describe the solid modeling process of lasts, understand its key elements, and apply solid modeling in footwear design and production.

Elements and Performance Criteria

FDPD -102

To be competent, the user/individual on the job must be able to:

- PC1.** • Classification of shoe last:
 - Students will understand the classification of shoe lasts based on material, heel height, and other criteria, along with size systems, parts of the last, and key last parameters, and will be able to define last design using these parameters.
- PC2.** • Design and manufacturing of Last:
 - Students will be able to demonstrate last manufacturing processes, select suitable methods based on materials, operate and maintain relevant machines, and identify defects and ensure precision in the manufacturing process.
- PC3.** • Elements of Solid Modeling:
 - Students will understand the elements and processes of modeling and be able to define key terms such as solid geometry and boundary representation.
- PC4.** • Solid Modeling of the last:
 - Students will be able to understand and demonstrate different modeling techniques, recognize the importance of various modeling software, and effectively use them to work on a range of modeling projects.
- PC5.** • Application of modeling:
 - Students will be able to demonstrate operations like prototype development, mould design, sketching, and styling, and create a flow diagram of the last manufacturing process.



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>FDPD -102</i>	-	100	-	-
PC1. - Classification of shoe last: - Students will understand the classification of shoe lasts based on material, heel height, and other criteria, along with size systems, parts of the last, and key last parameters, and will be able to define last design using these parameters.	-	-	-	-
PC2. - Design and manufacturing of Last: - Students will be able to demonstrate last manufacturing processes, select suitable methods based on materials, operate and maintain relevant machines, and identify defects and ensure precision in the manufacturing process.	-	-	-	-
PC3. - Elements of Solid Modeling: - Students will understand the elements and processes of modeling and be able to define key terms such as solid geometry and boundary representation.	-	-	-	-
PC4. - Solid Modeling of the last: - Students will be able to understand and demonstrate different modeling techniques, recognize the importance of various modeling software, and effectively use them to work on a range of modeling projects.	-	-	-	-
PC5. - Application of modeling: - Students will be able to demonstrate operations like prototype development, mould design, sketching, and styling, and create a flow diagram of the last manufacturing process.	-	-	-	-
NOS Total	-	100	-	-



Qualification Pack



National Occupational Standards (NOS) Parameters

NOS Code	MSME/LSS/N1213
NOS Name	Last Modelling II
Sector	Leather
Sub-Sector	
Occupation	Footwear Designing & Manufacturing 01
NSQF Level	4
Credits	1
Version	1.0
Last Reviewed Date	08/05/2025
Next Review Date	08/05/2028
NSQC Clearance Date	08/05/2025



MSME/LSS/N1212: Last Modelling I

Description

Identify various last dimensions and parameter as per the latest trained and customer requirement design and modify and manufacture last by choosing a suitable manufacturing technique

Scope

The scope covers the following :

- After completing the course, students will be able to explain the classification of footwear lasts, understand manufacturing techniques and their uses, describe the solid modeling process of lasts, understand its key elements, and apply solid modeling in footwear design and production.

Elements and Performance Criteria

FDPD -102

To be competent, the user/individual on the job must be able to:

- PC1.** • Classification of shoe last:
- Students will understand the classification of shoe lasts based on material, heel height, and other criteria, along with size systems, parts of the last, and key last parameters, and will be able to define last design using these parameters.
- PC2.** • Design and manufacturing of Last:
- Students will be able to demonstrate last manufacturing processes, select suitable methods based on materials, operate and maintain relevant machines, and identify defects and ensure precision in the manufacturing process.
- PC3.** • Elements of Solid Modeling:
- Students will understand the elements and processes of modeling and be able to define key terms such as solid geometry and boundary representation.
- PC4.** • Solid Modeling of the last:
- Students will be able to understand and demonstrate different modeling techniques, recognize the importance of various modeling software, and effectively use them to work on a range of modeling projects.
- PC5.** • Application of modeling:
- Students will be able to demonstrate operations like prototype development, mould design, sketching, and styling, and create a flow diagram of the last manufacturing process.



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>FDPD -102</i>	100	-	-	-
PC1. - Classification of shoe last: - Students will understand the classification of shoe lasts based on material, heel height, and other criteria, along with size systems, parts of the last, and key last parameters, and will be able to define last design using these parameters.	-	-	-	-
PC2. - Design and manufacturing of Last: - Students will be able to demonstrate last manufacturing processes, select suitable methods based on materials, operate and maintain relevant machines, and identify defects and ensure precision in the manufacturing process.	-	-	-	-
PC3. - Elements of Solid Modeling: - Students will understand the elements and processes of modeling and be able to define key terms such as solid geometry and boundary representation.	-	-	-	-
PC4. - Solid Modeling of the last: - Students will be able to understand and demonstrate different modeling techniques, recognize the importance of various modeling software, and effectively use them to work on a range of modeling projects.	-	-	-	-
PC5. - Application of modeling: - Students will be able to demonstrate operations like prototype development, mould design, sketching, and styling, and create a flow diagram of the last manufacturing process.	-	-	-	-
NOS Total	100	-	-	-



Qualification Pack



National Occupational Standards (NOS) Parameters

NOS Code	MSME/LSS/N1212
NOS Name	Last Modelling I
Sector	Leather
Sub-Sector	
Occupation	Footwear Designing & Manufacturing 01
NSQF Level	4
Credits	1
Version	1.0
Last Reviewed Date	08/05/2025
Next Review Date	08/05/2028
NSQC Clearance Date	08/05/2025



MSME/LSS/N1225: Industrial Management and Safety

Description

To understand the principles of Management and application of the management techniques in footwear units and safety procedures

Scope

The scope covers the following :

- To understand the
- principles of Management
- and application of the
- management techniques in
- footwear units and safety
- procedures

Elements and Performance Criteria

FDPD-109

To be competent, the user/individual on the job must be able to:

- PC1.** • Introduction of Management:
- 1- Discuss the definition of Management, Functions of Management, Management Hierarchy. Principles of Management Theories.
 - 2- Discuss about leadership, Organization Structure
- PC2.** • Production Planning and Control and Work Study :
- Learners study production systems, productivity factors, inventory, work and method study, work measurement, and the significance of industrial safety, covering hazards, protective techniques, accidents, and fire safety.



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>FDPD-109</i>	100	-	-	-
PC1. • Introduction of Management: • 1- Discuss the definition of Management, Functions of Management, Management Hierarchy. Principles of Management Theories. • 2- Discuss about leadership, Organization Structure	-	-	-	-
PC2. • Production Planning and Control and Work Study : • Learners study production systems, productivity factors, inventory, work and method study, work measurement, and the significance of industrial safety, covering hazards, protective techniques, accidents, and fire safety.	-	-	-	-
NOS Total	100	-	-	-



Qualification Pack



National Occupational Standards (NOS) Parameters

NOS Code	MSME/LSS/N1225
NOS Name	Industrial Management and Safety
Sector	Leather
Sub-Sector	
Occupation	Footwear Designing & Manufacturing 01
NSQF Level	4
Credits	2
Version	1.0
Last Reviewed Date	08/05/2025
Next Review Date	08/05/2028
NSQC Clearance Date	08/05/2025



MSME/LSS/N1229: OJT 3

Description

The On-the-Job Training (OJT) under NOS provides learners with practical workplace exposure, enabling them to apply theoretical knowledge in real situations. It helps trainees develop hands-on skills, understand industry practices, follow safety and quality standards, and build confidence to perform effectively in their chosen job role.

Scope

The scope covers the following :

- The On-the-Job Training (OJT) under NOS provides learners with practical workplace exposure, enabling them to apply theoretical knowledge in real situations. It helps trainees develop hands-on skills, understand industry practices, follow safety and quality standards, and build confidence to perform effectively in their chosen job role.

Elements and Performance Criteria

MSME/ACFDPD/204

To be competent, the user/individual on the job must be able to:

PC1. VIVA VOCE

MSME/ACFDPD/205

To be competent, the user/individual on the job must be able to:

PC2. VIVA VOCE



Qualification Pack



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/ACFDPD/204</i>	-	-	-	100
PC1. VIVA VOCE	-	-	-	-
<i>MSME/ACFDPD/205</i>	-	-	-	100
PC2. VIVA VOCE	-	-	-	-
NOS Total	-	-	-	200



National Occupational Standards (NOS) Parameters

NOS Code	MSME/LSS/N1229
NOS Name	OJT 3
Sector	Leather
Sub-Sector	
Occupation	Footwear Designing & Manufacturing 01
NSQF Level	4
Credits	12
Version	1.0
Next Review Date	NA



MSME/LSS/N1208: ART & SKETCHING

Description

Develop knowledge and skills in footwear sketching/Art and Sketching

Scope

The scope covers the following :

- The course outcomes enable learners to understand the concept of footwear sketching, draw two-dimensional and three-dimensional footwear designs, and apply knowledge of foot anatomy in design. Students will learn to implement the principles of color and texture, create sketches with proper proportion and balance of upper and bottom parts, and develop footwear sketches based on ideas and feedback. They will also be equipped to design, develop, and create footwear styles catering to different age groups.

Elements and Performance Criteria

FDPD -101

To be competent, the user/individual on the job must be able to:

- PC1.** • Preparation for Sketching:
- Students will learn foot-last relations, heel height effects, and differences in lasts for various footwear. Training covers freehand sketching, proportions, color psychology, and texture's impact on design and durability.
- PC2.** • Sketching of Different Models:
- Students learn fashion, market needs, and seasonal trends to create footwear designs. Training covers color, texture, sketching lasts, styles (Derby, Oxford, Monk, sandals, boots), design details, and footwear materials.
- PC3.** • Design development on Vacuum form:
- Students will demonstrate the development of different Styling/designs of men's, ladies and children's shoes, boots and sandals in vacuum form as per market trend.
- PC4.** • Design book preparation:
- Students develop presentation skills using magazines, research, and illustrations, and prepare design projects showcasing men's, women's, and children's footwear styles.



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>FDPD -101</i>	-	100	-	-
PC1. - Preparation for Sketching: - Students will learn foot-last relations, heel height effects, and differences in lasts for various footwear. Training covers freehand sketching, proportions, color psychology, and texture's impact on design and durability.	-	-	-	-
PC2. - Sketching of Different Models: - Students learn fashion, market needs, and seasonal trends to create footwear designs. Training covers color, texture, sketching lasts, styles (Derby, Oxford, Monk, sandals, boots), design details, and footwear materials.	-	-	-	-
PC3. - Design development on Vacuum form: - Students will demonstrate the development of different Styling/designs of men's, ladies and children's shoes, boots and sandals in vacuum form as per market trend.	-	-	-	-
PC4. - Design book preparation: - Students develop presentation skills using magazines, research, and illustrations, and prepare design projects showcasing men's, women's, and children's footwear styles.	-	-	-	-
NOS Total	-	100	-	-



Qualification Pack



National Occupational Standards (NOS) Parameters

NOS Code	MSME/LSS/N1208
NOS Name	ART & SKETCHING
Sector	Leather
Sub-Sector	
Occupation	Footwear Designing & Manufacturing 01
NSQF Level	4
Credits	2
Version	1.0
Last Reviewed Date	08/05/2025
Next Review Date	08/05/2028
NSQC Clearance Date	08/05/2025

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

AS PER QP

Minimum Aggregate Passing % at QP Level : 40

(Please note: Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

Assessment Weightage

Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
MSME/LSS/N1227.Employability skills I	100	-	-	-	100	6



Qualification Pack



National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
MSME/LSS/N1226.Quality Control and Standardization	100	-	-	-	100	6
MSME/LSS/N1224.Foot Comfort and Customer complaint	100	-	-	-	100	6
MSME/LSS/N1223.CAD and Pattern Engineering	-	100	-	-	100	6
MSME/LSS/N1222.CAD and Pattern Engineering	100	-	-	-	100	6
MSME/LSS/N1221.Lasting & Making Technology II	-	100	-	-	100	6
MSME/LSS/N1220.Lasting & Making Technology I	100	-	-	-	100	6
MSME/LSS/N1219.Closing Technology IV	-	100	-	-	100	6
MSME/LSS/N1218.Closing Technology	100	-	-	-	100	6
MSME/LSS/N1217.Clicking Technology VI	-	100	-	-	100	6
MSME/LSS/N1216.Clicking Technology V	100	-	-	-	100	5
MSME/LSS/N1215.Designing and Pattern Cutting	-	100	-	-	100	5
MSME/LSS/N1214.Designing and Pattern Cutting	100	-	-	-	100	5
MSME/LSS/N1213.Last Modelling II	-	100	-	-	100	5
MSME/LSS/N1212.Last Modelling I	100	-	-	-	100	5
MSME/LSS/N1225.Industrial Management and Safety	100	-	-	-	100	5
MSME/LSS/N1229.OJT 3	-	-	-	200	200	5
MSME/LSS/N1208.ART & SKETCHING	-	100	-	-	100	5



Qualification Pack



National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
Total	1000	700	-	200	1900	100



Acronyms

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training



Glossary

Sector	Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Occupation	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria (PC)	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards (NOS)	NOS are occupational standards which apply uniquely in the Indian context.
Qualifications Pack (QP)	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
Unit Code	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
Unit Title	Unit title gives a clear overall statement about what the incumbent should be able to do.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
Scope	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.
Knowledge and Understanding (KU)	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.



Qualification Pack



Organisational Context	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills/ Generic Skills (GS)	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
Electives	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
Options	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.