



COMPETENCY STANDARD

FOR

FOOTWEAR AND LEATHER GOODS
DESIGN AND DEVELOPMENT WITH CAD CAM

(LEATHER GOODS AND FOOTWEAR SECTOR)

Skills for Industry Competitiveness and Innovation Program (SICIP)
Finance Division, Ministry of Finance

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The Competency Standards for Footwear and Leather Goods Design and Development with CAD CAM serve as a foundational document for the development of curricula, teaching materials, and assessment tools specifically tailored for the Leather Goods and Footwear sector. This document ensures that training activities align with industry requirements, enabling individuals who successfully meet the established standards through assessment to become qualified professionals in relevant roles within the sector.

Developed under the Skills for Industry Competitiveness and Innovation Program (SICIP), this document addresses the skills requirements critical for Footwear and Leather Goods Design and Development with CAD CAM. It is owned by the Finance Division of the Ministry of Finance of the People's Republic of Bangladesh.

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INTRODUCTION

The Skills for Industry Competitiveness and Innovation Program (SICIP) has the overall objective of developing a skilled workforce adept at handling new technologies, especially for emerging industries in Bangladesh. It will expand skills training and strengthen the development of the training ecosystem to address the skills requirements of the SICIP-selected industry sectors. The program aims to (i) increase the technology-oriented skilled workforce across emerging and priority sectors, (ii) promote inclusive skilling and upskilling opportunities for women and socially disadvantaged groups, (iii) incentivize industry-university partnerships to nurture innovation capacity and improve industry competitiveness, and (iv) foster skills for climate-resilient manufacturing processes and green technologies. The program is expected to benefit about 220,000 new and existing workers over a 6-year implementation period from 2024-2029.

The SICIP Program has, therefore, taken the initiative to enhance the employability and productivity of trainees by implementing market-responsive and job-focused training programs through public and private training providers. This will require the development of competency standards for each of the occupations/trades which will provide a structured framework in the Learning process to guide training providers, ensure consistent training quality, and create an alignment between the skills provided by the training institutes and the needs of the industry.

This competency standard is therefore developed to improve skills following the job roles and skill sets of the occupation and ensure that the required skills are aligned with industry requirements.

The Competency Standard also suggests integration of YouTube or similar digital platforms or downloaded clips into classroom practice to ensure simulated creation of the contents so that Learners are exposed to visual demonstrations before classroom instruction or practical session, which aligns with modern Learning preference and supports flipped classroom models.

The document details the format, sequencing, wording, and layout of the Competency Standard for an occupation which comprises Units of Competence and its corresponding Elements.

OVERVIEW:

A **Competency Standard** is a written specification of the knowledge, skills, and attitudes required for the performance of a job or occupation or trade corresponding to the standard of performance required in the workplace.

Competency standard:

- provides a consistent and reliable set of components for training, recognizing, and assessing people's skills, and may also have optional support materials.
- enables industry-recognized qualifications to be awarded through direct assessment of workplace competencies
- encourages the development and delivery of flexible training that suits individual and industry requirements
- encourages Learning and assessment in a work-related environment, which leads to verifiable workplace outcomes.

Competency Standard has been developed by a working group comprised of occupation-specific experts from the industry/institution and relevant consultants of SICIP.

Competency Standards describe the skills, knowledge, and attitude needed to perform effectively in the workplace. Competency Standards acknowledge that people can achieve vocational and technical competency in many ways by emphasizing what the Learner can do, not how or where they learned to do it.

With Competency Standards, assessment and training may be conducted at the workplace, at training organization, during regular work, or through work experience, work placement, work simulation or any combination of these.

A Unit of Competency describes a distinct work activity that would normally be undertaken by one person in accordance with industry standards.

Units of Competency are documented in a standard format that comprises:

- Reference to Industry Sector, Occupational Title and Occupational Description
- Unit code
- Unit title
- Unit descriptor
- Unit of Competency
- Elements and performance criteria
- Variables and range statement
- Evidence guides

Together all the parts of a Unit of Competency:

- Describe a work activity
- Guide the assessor in determining whether the candidate is competent.

Identification and validation of units of competency and elements for each occupation were made by experts from various Light Engineering companies in industry consultative workshops.

The ensuing sections of this document comprise a description of the respective occupation with all the key components of a Unit of Competence:

- An overview of all Units of Competence for the occupation and their corresponding duration required for completion of training.
- The Competency Standards that include the Unit of Competency, Unit Descriptor, Elements and Performance Criteria, Range of Variables, Curricular Content Guide, and Assessment Evidence Guide.

Units & Elements at a Glance:

Generic Competencies (30 hrs.)

Code	Unit of Competency	Elements of Competency	Duration (Hours)
SICIP-LGF-FLGD-01-G	Demonstrate Interpersonal and Communication Skills	1. Apply interpersonal skills at the workplace 2. Understand and communicate information and ideas 3. Prepare and present reports and workplace documents	10
SICIP-LGF-FLGD-02-G	Apply Occupational Health and Safety (OHS) Practices at Workplace	1. Identify, control and report OHS hazards 2. Conduct work safely 3. Follow emergency response procedures 4. Maintain and improve health and safety in the workplace	10
SICIP-LGF-FLGD-03-G	Apply Basic IT Skills	1. Identify and use basic IT tools 2. Perform basic computer operation 3. Use office application 4. Email and browse internet	10
Total Hour			30

Sector Specific Competencies (20 hrs.)

Code	Unit of Competency	Elements of Competency	Duration (Hours)
SICIP-LGF-FLGD-01-S	Work in the Leather Goods and Footwear Industry	1. Identify basic workflow 2. Identify materials 3. Identify prime local and export markets	05
SICIP-LGF-FLGD-02-S	Apply Quality Systems and Procedures	1. Work within quality system 2. Apply and monitor quality system improvement in the workplace 3. Hold responsible for work quality 4. Apply standard procedures for each job	05
SICIP-LGF-FLGD-03-S	Apply Green Practices in Leather Goods and Footwear Sector	1. Interpret green concepts 2. Minimize resource use in the workplace 3. Implement waste management practices	10
Total Hour			20

Occupation Specific Competencies (250 hrs.)

Code	Unit of Competency	Elements of Competency	Duration (hours)
SICIP-LGF-FLGD-01-O	Interpret Leather Products and CAD CAM Operation	1. Identify footwear and shoe last 2. Identify Leather goods 3. Identify CAD CAM operation	15
SICIP-LGF-FLGD-02-O	Perform Manual Pattern Making for Footwear	1. Prepare for work 2. Prepare mean form 3. Make standard/shell 4. Prepare sectional pattern 5. Clean and maintain the workplace	60
SICIP-LGF-FLGD-03-O	Perform Manual Pattern Making for Leather Goods	1. Prepare for work 2. Make basic pattern 3. Make cutting pattern 4. Clean and maintain workplace	75
SICIP-LGF-FLGD-04-O	Carry Out Pattern Making using CAD CAM	1. Prepare for work 2. Carry out pattern digitize or scan 3. Prepare sectional pattern 4. Cut piece pattern 5. Clean and maintain workplace	75
SICIP-LGF-FLGD-05-O	Perform Pattern Grading for Footwear using CAD CAM	1. Prepare for work 2. Carry out grading parameters 3. Carry out grading 4. Check and cut graded patterns 5. Clean and maintain workplace	25
Total Hour			250

**COMPETENCY STANDARD: FOOTWEAR AND LEATHER GOODS
DESIGN AND DEVELOPMENT WITH CAD CAM**

The Generic Competencies

Unit of Competency: DEMONSTRATE INTERPERSONAL AND COMMUNICATION SKILLS	Nominal Duration: 10 hrs.	Unit Code: SICIP-LGF-FLGD-01-G
Unit Descriptor: This unit covers the knowledge, skills and attitudes required to demonstrate interpersonal and communication skills. It specifically includes the tasks of applying interpersonal skills at the workplace, understanding and communicating information and ideas, and preparing and presenting reports and workplace documents.		

Elements and Performance Criteria:

(Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables).

Elements of Competency	Performance Criteria
1. Apply interpersonal skills at the workplace	1.1 <u>Interpersonal skills</u> are interpreted. 1.2 The impacts of interpersonal skills are described. 1.3 Interpersonal skills are performed in accordance with workplace procedures. 1.4 <u>Ways of improving interpersonal skills</u> are identified and followed.
2. Understand and communicate information and ideas	2.1 <u>Communication tools and equipment</u> are operated, and faults are identified and reported. 2.2 Consultative processes are used to collect and convey information. 2.3 Information systems is used to store, retrieve and update information. 2.4 Information data and information are analyzed and interpreted. 2.5 Information is communicated with individuals and groups.
3. Prepare and present reports and workplace documents	3.1 <u>Workplace documents</u> are interpreted. 3.2 Appropriate format for document is used to meet workplace requirements. 3.3 Document is drafted in accordance with workplace procedures. 3.4 Document is edited and presented in a final version appropriate to task.

Range of Variables

Variable	Range
1. Interpersonal skills	May include but not limited to: 1.1 Effective communication

	1.2 Cooperation 1.3 Giving and receiving feedback, feed-forward and professional criticism 1.4 Pressure handling 1.5 Time management 1.6 Acceptance of diversity 1.7 Supporting and encouraging others 1.8 Inclusiveness 1.9 Problem solving 1.10 Negotiation 1.11 Conflict management
2. Ways of improving interpersonal skills	2.1 Cultivate a positive outlook 2.2 Ask trusted friends or colleagues for constructive criticism 2.3 Control emotions 2.4 Observe other positive interpersonal interactions 2.5 Practice active listening 2.6 Seek out opportunities to build relationships 2.7 Practice empathy
3. Communication tools and equipment	3.1 Telephone 3.2 Internet 3.3 Mobile Phone 3.4 Fax machines 3.5 Two-way radio
4. Workplace documents	4.1 Business letters 4.2 Business reports 4.3 Transactional documents 4.4 Memos 4.5 Forms 4.5.1 Memorandum 4.5.2 Requisitioning form 4.5.3 Personnel form 4.6 Safety report form

Curricular Content Guide:

1. Underpinning Knowledge	1.1 Interpersonal skills 1.2 Impacts of interpersonal skills 1.3 Consultative processes 1.4 Workplace documents
2. Underpinning Skills	1.1 Demonstrating interpersonal skills 1.2 Identifying and applying ways of improving interpersonal skills 1.3 Collecting workplace information 1.4 Analyzing information and ideas 1.5 Preparing workplace documents 1.6 Presenting workplace documents
3. Underpinning Attitudes	3.1 Commitment to occupational health and safety

	3.2 Promptness in carrying out activities 3.3 Sincerity and honesty to duties 3.4 Environmental concerns 3.5 Eagerness to learn 3.6 Tidiness and timeliness 3.7 Respect for rights of peers and seniors in the workplace 3.8 Good relationships with peers, sub-ordinates and seniors in the workplace
4. Resource Implications	The following resources must be provided: 4.1 Workplace (simulated or actual) 4.2 Workplace procedure 4.3 Materials relevant to the activity 4.4 All tools, equipment, materials and documentation required 4.5 Relevant specifications or work instructions

Assessment Evidence Guide:

1. Critical Aspects of Competency	Assessment required evidence that the candidate: 1.1 interpreted interpersonal skills 1.2 demonstrated interpersonal skills at the workplace 1.3 communicated information and ideas 1.4 prepared and presented reports and workplace documents
2. Methods of Assessment	Methods of assessment may include but not limited to: 2.1 Written test 2.2 Practical demonstration 2.3 Oral question 2.4 Portfolio (optional)
3. Context of Assessment	3.1 Competency assessment must be done in an assessment/training center or in an actual or simulated work place after completion of the training 3.2 Assessment should be done by a certified assessor or occupation-specific industry expert.

Unit of Competency: APPLY Occupational Health and Safety (OHS) PRACTICES at WORKPLACE	Nominal Duration: 10 hrs.	Unit Code: SICIP-LGF-FLGD-02-G
Unit Descriptor: This unit covers the knowledge, skills and attitudes required to apply occupational health and safety (OHS) practices at workplace. It specifically includes the tasks of identifying, controlling and reporting OHS hazards, conducting work safely, following emergency response procedures, and maintaining and improving health and safety in the workplace.		

Elements and Performance Criteria:

(Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables).

Elements of Competency	Performance Criteria
1. Identify, control and report OHS hazards	1.1 Work area is routinely checked for Occupational Health and Safety (OHS) hazards prior to commencing and during work. 1.2 <u>Hazards</u> are identified and corrective action is taken within the level of responsibility. 1.3 OHS hazards and incidents are reported to appropriate personnel according to workplace procedures. 1.4 <u>Safety signs and symbols</u> are identified and followed. 1.5 <u>Preventive control measures</u> are identified in accordance with OHS work standards.
2. Conduct work safely	1.6 OHS practices are applied in the workplace. 1.7 <u>Personal protective equipment (PPE)</u> is used.
3. Follow emergency response procedures	1.8 Emergency situations are identified and reported according to workplace requirements. 1.9 Emergency procedures are followed as appropriate to the nature of the emergency and according to workplace procedures. 1.10 <u>Workplace procedures</u> for dealing with accidents, fires and emergencies are followed whenever necessary within scope of responsibilities.
4. Maintain and improve health and safety in the workplace	1.11 Risks are identified and appropriate control measures are implemented in the workplace. 1.12 Recommendations arising from risk assessments are implemented within level of responsibility. 1.13 Safety records are maintained according to <u>company policies</u> .

Range of Variables

Variable	Range
	May include but not limited to:

1. Hazards	1.1 OHS incidents include near misses, injuries, illnesses and property damage, noise, handling hazardous substances 1.2 Biological hazards- bacteria, viruses, plants, parasites, mites, molds, fungi, insects 1.3 Chemical hazards – dusts, fibers, mists, fumes, smoke, gasses, vapors 1.4 Ergonomics hazards 1.5 Physiological factors – monotony, personal relationship, work out cycle 1.6 Safety hazards (unsafe workplace condition) – confined space, excavations, falling objects, gas leakage, electrical, poor storage of materials and waste, spillage, waste and debris 1.7 Unsafe workers' act (smoking in off-limited areas, substance and alcohol abuse at work) 1.8 Working with and near moving equipment/load shifting equipment 1.9 Broken or damaged equipment or materials
2. Safety signs and symbols	2.1 Direction signs (exit, emergency exit, etc.) 2.2 First aid signs 2.3 Danger tags 2.4 Hazard signs 2.5 Safety tags 2.6 Warning signs
3. Personal Protective Equipment (PPE)	3.1 Apron 3.2 Safety helmet 3.3 Goggles 3.4 Ear muffs 3.5 Ear plugs 3.6 Gloves 3.7 Clothing 3.8 Safety boots 3.9 Face protection (mask & shield) 3.10 Scarf 3.11 Hair net/cap/bonnet 3.12 Hard hat
4. Preventive control measures	4.1 Eliminate the hazard (i.e., get rid of the dangerous machine) 4.2 Isolate the hazard (i.e., keep the machine in a closed room and operate it remotely; barricade an unsafe area off) 4.3 Substitute the hazard with a safer alternative (i.e., replace the machine with a safer one) 4.4 Use administrative controls to reduce the risk (i.e., give trainings on how to use equipment safely; OHS-related topics, issue warning)

	signages, rotation/shifting work schedule) 4.5 Use engineering controls to reduce the risk (i.e., use safety guards to machine 4.6 Use personal protective equipment 4.7 Safety, health and work environment evaluation 4.8 Periodic and/or special medical examinations of workers
5. Workplace Procedures	5.1 Fire fighting 5.2 Medical and first aid 5.3 Evacuation 5.4 Material safety data sheets (MSDSs) and manufacturers' advice
6. Company policies	6.1 Job related Standard Operating Procedures (SOPs). 6.2 Occupational Health and Safety (OHS) specific procedures 6.3 Examples of OHS procedures include – consultation and participation, emergency response to specific hazards, incident investigation, risk assessment, reporting arrangement and issue resolution procedures

Curricular Content Guide:

1. Underpinning Knowledge	1.1 OHS workplace policies and procedures 1.2 Work safety procedures 1.3 Fire and emergency procedures 1.4 Types of Hazards (Biological, Chemical and Physical) and their effects 1.5 PPE types and uses 1.6 Personal hygiene practices 1.7 OHS awareness 1.8 Steps for hazard identification 1.9 Principles of hazards control 1.10 Employer's role 1.11 Supervisor's responsibilities
2. Underpinning Skills	2.1 Identifying OHS policies and procedures 2.2 Applying personal work safety practices 2.3 Reporting hazards and risks 2.4 Responding to emergency procedures 2.5 Maintaining physical well-being in the workplace 2.6 Identify tools and equipment related to OHS 2.7 Improving OHS performance
3. Underpinning Attitudes	3.1 Commitment to occupational health and safety 3.2 Promptness in carrying out activities 3.3 Sincerity and honesty to duties 3.4 Environmental concerns 3.5 Eagerness to learn 3.6 Tidiness and timeliness

	3.7 Respect for rights of peers and seniors in the workplace 3.8 Good relationships with peers, sub-ordinates and seniors in the workplace
4. Resource Implications	The following resources must be provided: 4.1 Workplace (simulated or actual) 4.2 Tools, equipment and physical facilities appropriate to perform activities 4.3 Materials, consumables to perform activities 4.4 Personal protective equipment (PPE) 4.5 Emergency response manual 4.6 Relevant specifications or work instructions

Assessment Evidence Guide:

2. Critical Aspects of Competency	Assessment required evidence that the candidate: 1.1 identified, controlled and reported OHS hazards 1.2 used personal protective equipment (PPE) 1.3 took corrective actions against different hazards 1.4 conducted work safety 1.5 took corrective action for emergency procedure 1.6 maintained and improved health and safety in the workplace
4. Methods of Assessment	Methods of assessment may include but not limited to: 2.5 Written test 2.6 Practical demonstration 2.7 Oral question 2.8 Portfolio (optional)
5. Context of Assessment	3.3 Competency assessment must be done in an assessment/training center or in an actual or simulated work place after completion of the training 3.4 Assessment should be done by a certified assessor or occupation-specific industry expert.

Unit of Competency: APPLY BASIC IT SKILLS	Nominal Duration: 10 hrs.	Unit Code: SICIP-LGF-FLGD-03-G
Unit Descriptor: This unit covers the knowledge, skills and attitudes required to apply basic IT skills. It specifically includes the tasks of identifying and using basic IT tools, performing basic computer operation, using office application and emailing and browsing internet.		

Elements and Performance Criteria:

(Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables).

Elements of Competency	Performance Criteria
1. Identify & use basic IT tools	1.1 Concept on Information Technology (IT) is interpreted. 1.2 Purpose of using IT is determined considering work place requirement. 1.3 Commonly used <u>IT tools</u> are identified and described.
2. Perform basic computer operation	1.4 <u>Computer peripheral devices</u> are identified. 1.5 Power of computer and other peripheral devices are connected and switched on. 1.6 Opened application programs are logged out in accordance with standard application procedure. 1.7 Opened files/documents are closed. 1.8 Computer and other peripherals are switched off and unplugged.
3. Use office application	1.9 Appropriate <u>office application software</u> is selected and opened. 1.10 Word documents are created as per requirement. 1.11 Paragraph and Page settings are formatted. 1.12 Word documents are saved. 1.13 Worksheets are created using spreadsheet program. 1.14 <u>Data manipulation techniques</u> are applied in spreadsheet. 1.15 Spreadsheet documents are saved. 1.16 Presentation is created using PowerPoint. 1.17 Presentations are formatted and animated. 1.18 Presentation documents are saved.
4. Email & browse internet	4.1 Email application is interpreted. 4.2 Email message is sent. 4.3 Email messages are replied and forwarded. 4.4 Attachment is included, opened and saved. 4.5 <u>Internet browser</u> is opened 4.6 <u>Search engine</u> is located and selected 4.7 Search engine is used to search for information.

Range of Variables

Variable	Range
	May Include but not limited to:
1. IT tools	1.1 Android phone 1.2 Tablets 1.3 Computers 1.4 Laptops 1.5 Notebooks 1.6 Internet 1.7 Software
2. Computer peripheral devices	1.8 Input Devices 1.8.1 keyboard, 1.8.2 mouse 1.8.3 touch screen 1.8.4 pen tablet 1.8.5 joystick 1.8.6 scanner 1.8.7 digital camera 1.8.8 video camera 1.8.9 microphone 1.9 Output Devices 1.9.1 monitor 1.9.2 projector 1.9.3 TV screen 1.9.4 printer 1.9.5 plotter 1.9.6 speakers
3. Office application software	1.10 MS Word 1.11 MS Excel 1.12 MS PowerPoint
4. Data manipulation techniques	1.13 Mathematics 1.14 Logical 1.15 Simple Statistical
5. Internet browser	1.16 Microsoft Internet 1.17 Mozilla Firefox 1.18 Google chrome 1.19 Microsoft Edge 1.20 Opera
6. Search engine	1.21 Google 1.22 Bing 1.23 Yahoo search 1.24 DuckDuckGo

Curricular Content Guide:

1. Underpinning Knowledge	1.1 Concept on information technology (IT) 1.2 Methods and procedure of checking input electrical
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	parameters 1.3 Methods and procedure in switching on and off the computer and other peripherals 1.4 Creating and opening documents 1.5 Formatting, inserting tables and images, saving, printing and closing documents 1.6 Data inputting techniques in accordance with standard typing procedure and office application 1.7 Using email 1.8 Browsing and searching techniques
2. Underpinning Skills	2.1 Checking input electrical parameters of the device in accordance with peripheral device specification 2.2 Switching on/off power of computer and other peripheral devices 2.3 Opening files/documents 2.4 Arranging, customizing and manipulating PC desktop environment/graphical user interface (GUI) settings 2.5 Selecting, opening and closing desktop icons to access application programs 2.6 Entering data into the desired office application in accordance with work requirements 2.7 Sending & receiving email with attachment 2.8 Using Internet browser and search engine
3. Underpinning Attitudes	3.1 Commitment to occupational health and safety 3.2 Promptness in carrying out activities 3.3 Sincerity and honesty to duties 3.4 Environmental concerns 3.5 Eagerness to learn 3.6 Tidiness and timeliness 3.7 Respect for rights of peers and seniors in the workplace 3.8 Good relationships with peers, sub-ordinates and seniors in the workplace
4. Resource Implications	The following resources must be provided: 4.1 Workplace (simulated or actual) 4.2 Office application software 4.3 IT Tools, 4.4 Computer/laptop 4.5 Internet connection 4.6 Relevant equipment and facilities needed to perform the activities 4.7 Required Learning materials

Assessment Evidence Guide:

1. Critical Aspects of Competency	Assessment required evidence that the candidate: 1.1 identified and used basic IT tools 1.2 performed basic computer operation 1.3 switched on/off power of computer and other peripheral
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	devices 1.4 used office application 1.5 entered data into the desired office application in accordance with work requirements 1.6 interpreted and used email 1.7 Used and organized browser and search engine for user and organization requirement
2. Methods of Assessment	Methods of assessment may include but not limited to: 2.1 Written test 2.2 Practical demonstration 2.3 Oral questioning 2.4 Portfolio (optional)
3. Context of Assessment	3.1 Competency assessment must be done in an assessment/training center or in an actual or simulated work place after completion of the training 3.2 Assessment should be done by a certified assessor or occupation-specific industry expert

The Sector Specific Competencies

Unit of Competency: WORK IN THE LEATHER GOODS AND FOOTWEAR INDUSTRY	Nominal Duration: 05 hrs.	Unit Code: SICIP-LGF-FLGD-01-S
Unit Descriptor: This unit covers the knowledge, skills and attitudes required to work in the Leather goods and footwear industry. It specifically includes the tasks of identifying basic workflow, identifying materials, and identifying prime local and export markets.		

Elements and Performance Criteria:

(Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables).

Elements of Competency	Performance Criteria
1. Identify basic workflow	1.1 <u>Leather goods workflow process</u> is identified and described. 1.2 <u>Footwear workflow process</u> is identified and described.
2. Identify materials	2.1 <u>Raw materials</u> commonly used in industry are identified. 2.2 <u>Leather goods materials</u> are identified. 2.3 <u>Footwear materials</u> are identified.
3. Identify prime local and export markets	3.1 Prime <u>local markets</u> and <u>export markets</u> are identified. 3.2 Local and export markets are listed.

Range of Variables

Variable	Range
	May Include but not limited to:
1. Leather goods workflow process	1.1 Designing 1.2 Pattern making 1.3 Cutting 1.4 Setting and assembly 1.5 Finishing 1.6 Quality control 1.7 Packaging
2. Footwear workflow process	2.1 Designing 2.2 Pattern making 2.3 Cutting 2.4 Preparation and setting 2.5 Sewing/upper closing 2.6 Lasting and making 2.7 Finishing 2.8 Quality control 2.9 Packaging
3. Raw materials	3.1 Cow hides 3.2 Buffalo hides 3.3 Goat skins

	3.4 Sheep skins
4. Leather goods materials	4.1 Upper 4.2 Lining 4.3 Interlining 4.4 Reinforcement 4.5 Accessories 4.6 Adhesives 4.7 Threads
5. Footwear materials	5.1 Upper 5.2 Lining 5.3 Interlining 5.4 Reinforcement 5.5 Accessories 5.6 Adhesives 5.7 Threads 5.8 Insole 5.9 Soling
6. Local markets	6.1 Garments 6.2 Wholesale 6.3 Retail
7. Export markets	7.1 Europe 7.2 United States 7.3 Australia

Curricular Content Guide:

1. Underpinning Knowledge	1.1 Workflow processes (for Leather goods & footwear) 1.2 Raw materials 1.3 Leather goods materials 1.4 Footwear materials 1.5 Local and export markets
2. Underpinning Skills	2.1 Identifying Leather goods workflow process 2.2 Identifying footwear workflow process 2.3 Identifying raw materials 2.4 Identifying Leather goods and footwear materials 2.5 Identifying prime local and export markets
3. Underpinning Attitudes	3.1 Commitment to occupational health and safety 3.2 Promptness in carrying out activities 3.3 Sincerity and honesty to duties 3.4 Environmental concerns 3.5 Eagerness to learn 3.6 Tidiness and timeliness 3.7 Respect for rights of peers and seniors in the workplace 3.8 Good relationships with peers, sub-ordinates and seniors in the workplace
4. Resource Implications	The following resources must be provided: 4.1 Workplace (simulated or actual) 4.2 Internet

	4.3 Materials (samples) 4.4 Projector 4.5 Learning manual/work book 4.6 Workplace tools/equipment
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Assessment Evidence Guide:

1. Critical Aspects of Competency	Assessment required evidence that the candidate: 1.1 identified basic workflow processes (for Leather goods & footwear) 1.2 identified raw materials commonly used in LGF industry 1.3 identified Leather goods and footwear materials 1.4 identified prime local and export markets
2. Methods of Assessment	Methods of assessment may include but not limited to: 2.1 Written test 2.2 Practical demonstration 2.3 Oral questioning 2.4 Portfolio (optional)
3. Context of Assessment	3.1 Competency assessment must be done in an assessment/training center or in an actual or simulated work place after completion of the training 3.2 Assessment should be done by a certified assessor or occupation-specific industry expert

Unit of Competency: APPLY QUALITY SYSTEMS AND PROCEDURES	Nominal Duration: 05 hrs.	Unit Code: SICIP-LGF-FLGD-02-S
Unit Descriptor: This unit covers the knowledge, skills and attitudes required to apply quality systems and procedures. It specifically includes the tasks of working within quality system, applying and monitoring quality system improvement in the workplace, holding responsible for work quality and applying standard procedures for each job.		

Elements and Performance Criteria:

(Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables).

Elements of Competency	Performance Criteria
1. Work within quality system	1.1 Instructions and procedures are followed strictly and duties are performed in accordance with demand of <u>quality improvement system</u> . 1.2 Conformance with specifications is ensured. 1.3 Defects are detected and reported to authority according to standard operating procedures. 1.4 Customer's satisfaction is ensured in performing an operation or quality of product or services.
2. Apply and monitor quality system improvement in the workplace	2.1 Performance measurement systems are identified. 2.2 Performance is assessed at regular interval. 2.3 Specifications and standard operating procedures are established and identified. 2.4 Defects are detected and reported according to standard operating procedures. 2.5 Process improvement procedures are applied. 2.6 Quality of product is checked and verified.
3. Hold responsible for work quality	3.1 Concept of supplying product or service to meet the <u>customer quality requirements</u> is understood and accordingly applied. 3.2 Responsibility is taken for quality work.
4. Apply standard procedures for each job	4.1 <u>Quality control and quality assurance</u> system procedures for each job are followed. 4.2 Conformance to specification is ensured in every case at all situations.

Range of Variables

Variable	Range
	May include but not limited to:
1. Quality	1.1 Quality inspection

improvement system	1.2 Quality control 1.3 Quality improvement 1.4 Quality assurance
2. Customer quality requirements	2.1 Appropriateness of product 2.2 Appearance 2.3 Durability. 2.4 Grade or quality design 2.5 Usability life span 2.6 Conformance to Quality 2.7 Reliability 2.8 Maintainability
3. Quality control and quality assurance	3.1 Quality control 3.2 Product 3.3 Reactive 3.4 Line function 3.5 Find the defects 3.6 Walk through 3.7 Testing 3.8 Inspection 3.9 Checkpoint Review 3.10 Quality Assurance 3.11 Process 3.12 Pro-active 3.13 Staff function 3.14 Prevent the defects 3.15 Quality audit 3.16 Defining process 3.17 Selection of tools 3.18 Training

Curricular Content Guide

1. Underpinning Knowledge	1.1 The reasons why good quality should be maintained and poor quality should be eliminated 1.2 Meaning of the key terms - quality, quality assurance, quality control, quality inspection, quality improvement and total quality control 1.3 Process and procedures for improving and maintaining quality
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	1.4 Procedures for addressing defects 1.5 Record keeping within the quality improvement system in workplace 1.6 Factors, which affect successful implementation of the quality systems and procedures
2. Underpinning Skills	2.1 Maintaining good quality 2.2 Eliminating poor quality 2.3 Improving and maintaining quality 2.4 Addressing defects and procedures 2.5 Recording within the quality improvement system in workplace 2.6 Implementing quality systems and procedures
3. Underpinning Attitudes	3.1 Commitment to occupational health and safety 3.2 Promptness in carrying out activities 3.3 Sincerity and honesty to duties 3.4 Environmental concerns 3.5 Eagerness to learn 3.6 Tidiness and timeliness 3.7 Respect for rights of peers and seniors in the workplace 3.8 Good relationships with peers, sub-ordinates and seniors in the workplace
4. Resource Implications	The following resources must be provided: 4.1 Workplace (simulated or actual) 4.2 Learning manuals 4.3 Tools and equipment appropriate to maintain workplace 4.4 Materials relevant to the activity 4.5 Relevant drawings, codes, standards and reference materials

Assessment Evidence Guide

1. Critical Aspects of Competency	Assessment required evidence that the candidate: 1.1 performed duties in accordance with demand of quality system 1.2 applied and monitored quality system improvement in the workplace 1.3 understood concept of supplying product or service to meet the customer quality requirements 1.4 held responsible for quality work 1.5 followed quality assurance system and applied standard procedures for each job
2. Methods of	Competency should be assessed by:

Assessment	2.1 Written test 2.2 Practical demonstration 2.3 Oral questioning 2.4 Portfolio (optional)
3. Context of Assessment	3.1 Competency assessment must be done in an assessment/training center or in an actual or simulated work place after completion of the training. 3.2 Assessment should be done by a nationally certified assessor or occupation-specific industry expert.

Unit of Competency: APPLY GREEN PRACTICES IN LEATHER GOODS AND FOOTWEAR (LGF) SECTOR	Nominal Duration: 10 hrs.	Unit Code: SICIP-LGF-FLGD-03-S
Unit Descriptor: This unit covers the knowledge, skills and attitudes required to apply green practices in Leather goods and footwear sector. It specifically includes the tasks of interpreting green concepts, minimizing resource use in the workplace and implementing waste management practices.		

Elements and Performance Criteria:

(Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables).

Elements of Competency	Performance Criteria
1. Interpret green concepts	1.1 <u>Principles of green practices in LGF (Leather Goods and Footwear)</u> manufacturing are explained. 1.2 Key terms and symbols in LGF production processes are identified. 1.3 <u>Sources of environmental impacts</u> during LGF manufacturing activities are identified. 1.4 LGF manufacturing activities are explained. 1.5 <u>Ways of mitigating environmental impacts</u> in LGF manufacturing are explained.
2. Minimize resource use in the workplace	2.1 Water, energy, and raw material consumption in LGF manufacturing are documented. 2.2 <u>Recyclable and non-recyclable items</u> in LGF production processes are identified. 2.3 Procedures to reduce resource consumption in LGF manufacturing are implemented. 2.4 Sustainable alternatives in LGF manufacturing are explored and applied.
3. Implement waste management practices	3.1 <u>Different types of waste in LGF manufacturing</u> are identified. 3.2 Hazardous waste in LGF production is disposed of according to environmental regulations. 3.3 Green habits to reduce waste in personal and professional life are practiced.

Range of Variables

Variable	Range
	May include but not limited to:
1. Principles of green practices in LGF	1.1 Reducing energy consumption in LGF manufacturing processes 1.2 6R for waste management in LGF production: 1.2.1 Refuse unnecessary materials and processes

	1.2.2 Reduce resource consumption and waste generation 1.2.3 Reuse materials within the production process 1.2.4 Recycle materials for future use in LGF manufacturing 1.2.5 Recover usable resources from waste 1.2.6 Repair damaged products or materials instead of discarding them 1.3 Use of sustainable materials in LGF production with low environmental impact 1.4 Recycling of materials used in the LGF manufacturing process 1.5 Sustainable transportation methods for moving goods and materials within the LGF sector
2. Sources of environmental impacts	2.1 Air pollution in LGF manufacturing 2.2 Water pollution in LGF manufacturing 2.3 Soil degradation in LGF manufacturing 2.4 Noise pollution in LGF manufacturing 2.5 Waste generation in LGF manufacturing 2.6 Resource depletion in LGF manufacturing
3. Ways of mitigating environmental impacts	3.1 Utilizing energy-efficient equipment in LGF production processes 3.2 Adopting renewable energy sources for LGF manufacturing operations 3.3 Implementing site protection measures to prevent pollution and reduce environmental 3.4 Using reusable materials in production processes 3.5 Choosing sustainable materials with low environmental impact for LGF production 3.6 Using noise-reducing equipment and scheduling production work 3.7 Optimizing logistics and delivery to reduce transportation emissions and improve overall supply chain efficiency
4. Recyclable and non-recyclable items	4.1 Recyclable Items in LGF manufacturing 4.1.1 Metal components 4.1.2 Wooden materials 4.1.3 Fabric scraps and textile fibers 4.1.4 Plastic items, including buttons, tags and packaging materials 4.2 Non-recyclable Items in LGF manufacturing 4.2.1 Paints, coatings and dyes 4.2.2 Contaminated materials 4.2.3 Treated wood and other materials
5. Different types of waste in LGF manufacturing	5.1 Leather waste from cutting and trimming processes 5.2 Wood waste from packaging or display materials 5.3 Metal waste from trims, buttons, zippers and other hardware

	5.4 Leather waste, including scraps from LGF production and defective products
	5.5 Plastic waste, such as packaging materials, labels and plastic buttons
	5.6 Solid waste from chemical treatments or dyeing processes
	5.7 Packaging waste from raw materials and finished products

Curricular Content Guide

1. Underpinning Knowledge	1.1 Principles of green practices in LGF manufacturing 1.2 Sources of environmental impacts 1.3 Ways of mitigating environmental impacts 1.4 Recyclable and non-recyclable items 1.5 Different types of waste in LGF manufacturing 1.6 Hazardous waste in LGF production 1.7 Green habits to reduce waste
2. Underpinning Skills	2.1 Applying green practices in LGF manufacturing 2.2 Identifying sources of environmental impacts 2.3 Identifying re-cyclable and non-recyclable items 2.4 Minimizing resource use in the workplace 2.5 Identifying different types of waste in LGF manufacturing 2.6 Disposing hazardous waste in LGF production 2.7 Practicing green habits to reduce waste in personal & professional life
3. Underpinning Attitudes	3.1 Commitment to occupational health and safety 3.2 Promptness in carrying out activities 3.3 Sincere and honest to duties 3.4 Environmental concerns 3.5 Eagerness to learn 3.6 Tidiness and timeliness 3.7 Respect for rights of peers and seniors in the workplace 3.8 Communication with peers, subordinates and seniors in the workplace
4. Resource Implications	The following resources must be provided: 4.1 Workplace (simulated or actual) 4.2 Projector 4.3 Learning manuals 4.4 Materials (eco-Leather, low-impact chemicals, green packaging) 4.5 Infra-structure (clean tech, waste management, energy-saving systems)

Assessment Evidence Guide

1. Critical Aspects of Competency	Assessment required evidence that the candidate: 1.1 interpreted green concepts 1.2 explained ways of mitigating environmental impacts in LGF manufacturing 1.3 minimized resource use in the workplace 1.4 implemented waste management practices
2. Methods of Assessment	Competency should be assessed by: 2.1 Written test 2.2 Practical demonstration 2.3 Oral questioning 2.4 Portfolio (optional)
3. Context of Assessment	3.1 Competency assessment must be done in an assessment/training center or in an actual or simulated work place after completion of the training. 3.2 Assessment should be done by a nationally certified assessor or occupation-specific industry expert.

The Occupation Specific Competencies

Unit of Competency: INTERPRET LEATHER PRODUCTS AND CAD CAM OPERATION	Nominal Duration: 15 hrs.	Unit Code: SICIP-LGF-FLGD-01-O
Unit Descriptor: This unit covers the knowledge, skills and attitudes required to interpret Leather products and CAD CAM operation. It specifically includes the tasks of identifying footwear and shoe last, identifying Leather goods and identifying CAD CAM operation.		

Elements and Performance Criteria:

(Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables).

Elements of Competency	Performance Criteria
1. Identify footwear and shoe last	1.1 <u>Basic style of footwear</u> is identified and described ensuring an understanding of design variations and features. 1.2 <u>Parts of footwear</u> are identified and described. 1.3 <u>Different types of lasts</u> are identified and described ensuring the correct selection based on shoe design and fit. 1.4 <u>Reference points and lines of the last</u> are identified and explained to ensure accurate measurements for footwear production. 1.5 <u>Shoe sizing systems</u> are described and applied in the manufacturing process. 1.6 <u>Construction of footwear</u> is described.
2. Identify Leather goods	2.1 <u>Types of Leather goods</u> are identified and described. 2.2 <u>Parts of Leather goods</u> are identified and described. 2.3 <u>Construction methods of Leather goods</u> are interpreted.
3. Identify CAD CAM operation	3.1 CAD CAM operations are identified and described in design and manufacturing processes. 3.2 <u>Hardware components for CAD CAM systems</u> are identified and their functions understood. 3.3 <u>Software used for CAD CAM</u> is identified and its capabilities explained. 3.4 <u>Functions of the CAD CAM system</u> are described in manufacturing operations. 3.5 Benefits of using CAD CAM systems in industrial applications are understood.

Range of Variables

Variable	Range
1. Basic style of footwear	May include but not limited to: 1.1. Oxford shoe

	1.2. Derby shoe 1.3. Moccasin shoe 1.4. Court shoe 1.5. Boot 1.6. Sandal 1.7. Sports shoe
2. Parts of footwear	2.1 Upper part 1.1.1. Toe cap 1.1.2. Vamp 1.1.3. Quarter 1.1.4. Back counter 1.1.5. Tongue 1.1.6. Eyelet part 1.1.7. Collar 2.2 Bottom part 1.2.1. Socks 1.2.2. Insole 1.2.3. Outsole 1.2.4. Heel 1.2.5. Welt 2.3 Top lift
3. Different types of lasts	3.1 Solid block 3.2 Scoop 3.3 Hinge (V/C) 3.4 Thong
4. Reference points and lines of last	4.1 Toe point 4.2 Ball point 4.3 Instep point 4.4 Waist point 4.5 Vamp point 4.6 Seat point 4.7 Feather edge 4.8 Stick length
5. Shoe sizing systems	5.1 English/UK system 5.2 Paris point/French system 5.3 Japanese system 5.4 Mondo point 5.5 US system
6. Construction of footwear	6.1 Cemented 6.2 Goodyear welted 6.3 Injection molding 6.4 String 6.5 Strobel 6.6 Californian
7. Types of Leather goods	7.1 Apparel 7.1.1 Jackets

	7.1.2 Pants 7.1.3 Skirts 7.1.4 Shoes 7.2 Accessories 7.2.1 Belts 7.2.2 Wallets 7.2.3 Key ring 7.2.4 Bags 7.2.5 Gloves 7.3 Furniture 7.3.1 Sofas 7.3.2 Chairs 7.3.3 Ottomans 7.4 Automotive 7.4.1 Car seat 7.4.2 Steering wheels 7.5 Specialty Products 7.5.1 Book covers 7.5.2 Watch straps 7.6 Musical instrument cases
8. Parts of Leather goods	8.1 Front part 8.2 Back part 8.3 Bottom part 8.4 Handle part 8.5 Gusset 8.6 Outer 8.7 Inner 8.8 Stamp pocket 8.9 Coin pocket 8.10 CC pocket 8.11 Flap
9. Construction methods of Leather goods	9.1 Bottom based 9.2 Gusset based 9.3 Folded edge 9.4 Turn edge 9.5 Raw edge 9.6 Double folded
10. Hardware components for CAD CAM	10.1 Central processing unit (CPU) 10.2 RAM 10.3 Hard disk 10.4 Input device 10.5 Last scanner 10.6 CD-ROM 10.7 External storage device 10.8 Monitor 10.9 Printer 10.10 Key board

	10.11 A3 scanner 10.12 Plotter 10.13 Digitizer and puck
11. Software used for CAD CAM	11.1 Shoe Master 11.2 I-CAD 11.3 Fast shoe 11.4 Crispin 11.5 Romans CAD
12. Functions of the CAD CAM system	12.1 Style line 12.2 Pattern making 12.3 Digitizing 12.4 Pattern engineering 12.5 Grading 12.6 Pattern cutting 12.7 Consumption of materials 12.8 3D pattern 12.9 Visualizing

Curricular Content Guide

1. Underpinning Knowledge	1.1 Basic style of footwear 1.2 Parts of footwear 1.3 Types of last 1.4 Reference points and lines of last 1.5 Shoe sizing systems 1.6 Construction of footwear 1.7 Types of Leather goods 1.8 Parts of Leather goods 1.9 Construction methods of Leather goods 1.10 Hardware and software for CAD CAM 1.11 Functions of CAD CAM system
2. Underpinning Skills	2.1 Identifying footwear and shoe last 2.2 Applying shoe sizing systems in manufacturing process 2.3 Identifying Leather goods (including types, parts & construction methods) 2.4 Identifying hardware and software for CAD CAM systems 2.5 Identifying CAD CAM operations in design and manufacturing processes
3. Underpinning Attitudes	3.1 Commitment to occupational health and safety 3.2 Promptness in carrying out activities 3.3 Sincerity and honesty to duties 3.4 Environmental concerns 3.5 Eagerness to learn 3.6 Tidiness and timeliness 3.7 Respect for rights of peers and seniors in the workplace 3.8 Good relationships with peers, sub-ordinates and seniors in the workplace

4. Resource Implications	The following resources must be provided: 4.1 Workplace (simulated or actual) 4.2 Personal protective equipment (PPE) 4.3 Tools and equipment 4.4 Last 4.5 Hardware & software 4.6 CAD CAM system 4.7 Projector 4.8 Stationary 4.9 Learning manual
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Assessment Evidence Guide

1. Critical Aspects of Competency	Assessment must evidence that the candidate: 1.1 identified footwear and shoe last 1.2 described construction of footwear 1.3 identified Leather goods 1.4 interpreted construction methods of Leather goods 1.5 identified CAD CAM Operations 1.6 explained hardware and software for CAD CAM
2. Methods of Assessment	Methods of assessment may include but is not limited to: 2.1 Written test 2.2 Practical demonstration 2.3 Oral questioning 2.4 Portfolio (optional)
3. Context of Assessment	3.1 Competency assessment must be done in an assessment/training center or in an actual or simulated work place after completion of the training. 3.2 Assessment should be done by a nationally certified assessor or occupation-specific industry expert.

Unit of Competency: PERFORM MANUAL PATTERN MAKING FOR FOOTWEAR	Nominal Duration: 60 hrs.	Unit Code: SICIP-LGF-FLGD-02-O
Unit Descriptor: This unit covers the knowledge, skills and attitudes required to perform manual pattern making for footwear. It specifically includes the tasks of preparing for work, preparing mean form, making standard/shell, preparing sectional pattern, and Cleaning and maintaining workplace.		

Elements and Performance Criteria:

(Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables).

Elements of Competency	Performance Criteria
1. Prepare for work	1.1 Safety procedures and protocols are reviewed and followed to minimize risks during the work process. 1.2 Job specifications and instructions are read and interpreted to ensure clear understanding of tasks and requirements. 1.3 Appropriate <u>personal protective equipment (PPE)</u> is selected and worn based on the work environment and tasks to ensure safety. 1.4 Required <u>tools and equipment</u> are selected and collected based on job specifications and work requirements. 1.5 Work area is prepared by ensuring it is Clean, organized, and safe for the task at hand.
2. Prepare mean forme	2.1 <u>Last</u> is selected based on the shoe style to ensure proper fit and design alignment. 2.2 Last masking is performed following the standard procedure to protect the last during the production process. 2.3 Inside and outside forme are prepared to create a precise mold for the shoe structure. 2.4 Mean forme is prepared using the inside and outside forme, ensuring symmetry and correct proportions. 2.5 All measurements are verified to ensure that the mean forme meets the required specifications. 2.6 Mean forme is properly stored and ready for use in subsequent shoe manufacturing stages.
3. Make standard/shell	3.1 <u>Types of standard/shell</u> are identified based on the specific requirements for the shoe production. 3.2 Upper standard/shell is prepared using the mean forme to ensure proper fit and design accuracy. 3.3 Lining standard/shell is prepared based on the mean forme, ensuring it aligns with the upper standard for a

	seamless design. 3.4 Standard/shell is checked for any defects or inconsistencies to ensure it meets quality standards. 3.5 Completed standard/shell is stored ensuring it is ready for use in further production stages.
4. Prepare sectional pattern	4.1 Components are separated from the standard/shell according to the required specifications for the sectional pattern preparation. 4.2 Allowances are identified and incorporated into the pattern as per the design requirements to ensure proper fit and functionality. 4.3 Sectional patterns are prepared with accurate measurements to ensure proper alignment during the manufacturing process. 4.4 Sectional patterns are checked for consistency and accuracy to meet the required standards. 4.5 Prepared sectional patterns are bundled up and organized for easy identification and use in the next production stages.
5. Clean and maintain workplace	5.1 Tools and equipment are Cleaned and maintained to ensure they are in good working condition. 5.2 Tools and equipment are stored properly after use to prevent damage and ensure easy access. 5.3 Workplace is cleaned regularly to maintain a safe and organized environment.

Range of Variables

Variable	Range May include but not limited to:
1. personal protective equipment (PPE)	1.1. Mask 1.2. Apron
2. Tools and equipment	2.1. Last 2.2. Cutting matt 2.3. Masking tape 2.4. Pattern paper 2.5. Anti-cutter 2.6. Pencil 2.7. Scale 2.8. Measuring tape 2.9. Eraser 2.10. Sharpener 2.11. Divider 2.12. Pinner/Awl 2.13. Scissor
3. Last	3.1 Close shoe last 3.2 Open shoe last 3.3 Moccasin last

	3.4 Court last
4. Types of standard/shell	4.1 Upper standard/shell 4.2 Lining standard/shell
5. Components	5.1 Upper 5.2 Lining 5.3 Insole 5.4 Out sole
6. Allowances	6.1 Folding allowance 6.2 Stitch and turnover allowance 6.3 Seam Allowance 6.4 Underlay / setting allowance 6.5 Trimming allowance. 6.6 Lasting allowance
7. Sectional Patterns	7.1 Upper 7.2 Lining 7.3 Interlining 7.4 Bottom pattern

Curricular Content Guide

1. Underpinning Knowledge	1.1 Personal protective equipment (PPE) 1.2 Tools and equipment 1.3 Last 1.4 Components 1.5 Allowances 1.6 Mean forme 1.7 Sectional patterns
2. Underpinning Skills	2.1 Preparing work area (by ensuring it is Clean, organized and safe for the task at hand) 2.2 Performing last masking (following the standard procedure to protect the last during the production process) 2.3 Preparing mean forme (using the inside and outside forme, ensuring symmetry and correct proportions) 2.4 Identifying types of standard/shell (based on the specific requirements for shoe production) 2.5 Making standard/shell 2.6 Preparing sectional patterns (with accurate measurements to ensure proper alignment during the manufacturing process) 2.7 Cleaning and maintaining tools, equipment and workplace (to ensure a good & safe working condition)
3. Underpinning Attitudes	3.1 Commitment to occupational health and safety 3.2 Promptness in carrying out activities 3.3 Sincerity and honesty to duties 3.4 Environmental concerns 3.5 Eagerness to learn 3.6 Tidiness and timeliness 3.7 Respect for rights of peers and seniors in the workplace

	3.8 Good relationships with peers, sub-ordinates and seniors in the workplace
4. Resource Implications	The following resources must be provided: 4.1 Workplace (simulated or actual) 4.2 Personal protective equipment (PPE) 4.3 Tools and equipment 4.4 Last 4.5 Sectional patterns 4.6 Learning materials

Assessment Evidence Guide

1. Critical Aspects of Competency	Assessment must evidence that the candidate: 1.1 prepared work area (by ensuring it is clean, organized & safe for the task at hand) 1.2 prepared mean form (using the inside and outside forme, ensuring symmetry and correct proportions) 1.3 made standard/shell 1.4 prepared sectional pattern 1.5 Cleaned and maintained workplace on regular basis to ensure a safe and organized environment
2. Methods of Assessment	Methods of assessment should include: 2.1 Written test 2.2 Practical demonstration 2.3 Oral questioning 2.4 Portfolio (optional)
3. Context of Assessment	3.1 Competency assessment must be done in an assessment/training center or in an actual or simulated work place after completion of the training. 3.2 Assessment should be done by a nationally certified assessor or occupation-specific industry expert.

Unit of Competency: PERFORM MANUAL PATTERN MAKING FOR LEATHER GOODS	Nominal Duration: 75 hrs.	Unit Code: SICIP-LGF-FLGD-03-O
Unit Descriptor: This unit of competency covers the knowledge, skills and attitudes required to perform manual pattern making for Leather goods. It specifically includes the tasks of preparing for work, making basic pattern, making cutting pattern, and cleaning and maintaining workplace.		

Elements and Performance Criteria:

(Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables).

Elements of Competency	Performance Criteria
1. Prepare for work	1.1 Safety procedures and protocols are reviewed and followed to minimize risks during the work process. 1.2 Job specifications and instructions are read and interpreted to ensure clear understanding of tasks and requirements. 1.3 Appropriate <u>personal protective equipment (PPE)</u> is selected and worn based on the work environment and tasks to ensure safety. 1.4 Required <u>tools and equipment</u> are selected and collected based on job specifications and work requirements. 1.5 Work area is prepared by ensuring it is Clean, organized, and safe for the task at hand.
2. Make basic pattern	2.1 <u>Leather goods</u> design is selected based on the specifications and client requirements. 2.2 Measurements are identified and verified as per the selected design to ensure accuracy. 2.3 Basic pattern is constructed using the identified measurements to match the design specifications. 2.4 Pattern is checked for correct proportions and fit before finalizing the construction. 2.5 Adjustments are made to the pattern as necessary to ensure it meets design standards. 2.6 Final basic pattern is stored properly for use in further stages of production.
3. Make cutting pattern	3.1 <u>Components</u> are separated from the basic pattern based on the design specifications for accurate cutting. 3.2 <u>Allowances</u> are identified and incorporated into the cutting pattern as per the required measurements and standards. 3.3 <u>Cutting patterns</u> are prepared with precise measurements to ensure proper fitting during the cutting process.

	3.4 Cutting patterns are checked for accuracy and alignment with the design before finalizing. 3.5 All necessary adjustments are made to the cutting patterns to meet the required specifications. 3.6 Prepared cutting patterns are bundled up and organized for easy access during the production process. 3.7 Cutting patterns are labeled to ensure proper identification and use during manufacturing.
4. Clean and maintain workplace	4.1 Tools and equipment are Cleaned and maintained to ensure they are in good working condition. 4.2 Tools and equipment are stored properly after use to prevent damage and ensure easy access. 4.3 Workplace is Cleaned regularly to maintain a safe and organized environment.

Range of Variables

Variable	Range
	May include but not limited to:
1. personal protective equipment (PPE)	1.1 Mask 1.2 Apron
2. Tools and equipment	2.1 Cutting matt 2.2 Pattern paper 2.3 Anti-cutter 2.4 Pencil 2.5 Scale 2.6 Measuring tape 2.7 Eraser 2.8 Sharpener 2.9 Divider 2.10 Pinner/Awl
3. Leather goods	3.1 Wallet 3.2 Executive Bag 3.3 Ladies Bag 3.4 Ladies Purse 3.5 Waist Belt
4. Components	4.1 Upper 4.2 Inner 4.3 Lining 4.4 Reinforcement
5. Allowances	5.1 Folding allowance 5.2 Stitch and turnover allowance 5.3 Seam allowance 5.4 Underlay/setting allowance 5.5 Trimming allowance.
6. Cutting Patterns	6.1 Upper 6.2 Inner 6.3 Lining

Curricular Content Guide

1. Underpinning Knowledge	1.1 Personal protective equipment (PPE) 1.2 Types of patterns 1.3 Tools and equipment 1.4 Leather goods 1.5 Components 1.6 Allowances 1.7 Basic pattern 1.8 Cutting Patterns
2. Underpinning Skills	2.1 Preparing work area (by ensuring it is Clean, organized and safe for the task at hand) 2.2 Selecting Leather goods design (based on the specifications and client requirements) 2.3 Preparing basic pattern (using identified measurements to match the design specifications) 2.4 Preparing cutting patterns (with precise measurements to ensure proper fitting during the cutting process) 2.5 Cleaning and maintaining tools, equipment and workplace (to ensure good & safe working condition)
3. Underpinning Attitudes	3.1 Commitment to occupational health and safety 3.2 Promptness in carrying out activities 3.3 Sincerity and honesty to duties 3.4 Environmental concerns 3.5 Eagerness to Learn 3.6 Tidiness and timeliness 3.7 Respect for rights of peers and seniors in the workplace 3.8 Good relationships with peers, sub-ordinates and seniors in the workplace
4. Resource Implications	The following resources must be provided: 4.1 Workplace (simulated or actual) 4.2 Personal protective equipment (PPE) 4.3 Tools and equipment 4.4 Job specification 4.5 Leather goods design sample 4.6 Learning manual

Assessment Evidence Guide

1. Critical Aspects of Competency	Assessment must evidence that the candidate: 1.1 prepared work area 1.2 made basic pattern 1.3 made cutting patterns 1.4 cleaned and maintained the tools, equipment & workplace
2. Methods of Assessment	Methods of assessment should include: 2.1 Written test

	2.2 Practical demonstration 2.3 Oral questioning 2.4 Portfolio (optional)
3. Context of Assessment	3.1 Competency assessment must be done in an assessment/training center or in an actual or simulated work place after completion of the training. 3.2 Assessment should be done by a nationally certified assessor or occupation-specific industry expert.

Unit of Competency: CARRY OUT PATTERN MAKING USING CAD CAM	Nominal Duration: 75 hrs.	Unit Code: SICIP-LGF-FLGD-04-O
Unit Descriptor: This unit covers the knowledge, skills and attitudes required to carry out pattern making using CAD CAM. It specifically includes the tasks of preparing for work, carrying out pattern digitize or scan, preparing sectional pattern, cutting piece pattern, and Cleaning and maintaining workplace.		

Elements and Performance Criteria:

(Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables).

Elements of Competency	Performance Criteria
1. Prepare for work	1.1 Necessary safety protocols are reviewed and followed to maintain a safe work environment during the preparation phase. 1.2 Computer, digitizer or scanner are checked to ensure they are in proper working condition before starting the task. 1.3 CAD CAM software is run and checked to ensure proper connectivity with the digitizer/scanner. 1.4 <u>Workpiece</u> is selected and collected based on the design requirements.
2. Carry out pattern digitize or scan	2.1 Workpiece is placed on the digitizer or scanner according to the specific requirements for pattern digitizing or scanning. 2.2 Digitizer or scanner is initialized with the CAD CAM software to ensure proper setup for the task. 2.3 Digitization or scanning of the style line is performed according to the workpiece, ensuring accurate capture of design details. 2.4 Scanning process is monitored to ensure that all required details of the workpiece are captured correctly. 2.5 Digitized or scanned data is checked for accuracy and consistency with the original pattern. 2.6 Final digitized or scanned pattern is saved and stored in the appropriate format for further use in the design process.
3. Prepare sectional pattern	3.1 <u>Pattern engineering</u> is performed following the standard procedure. 3.2 New pieces are created based on the style line, ensuring they match the overall design specifications. 3.3 <u>Pattern details</u> are added as per the requirements. 3.4 Sectional pattern is checked for accuracy and adjusted to ensure proper alignment with the original design.

	3.5 Modifications to the sectional pattern are made based on feedback and design specifications. 3.6 Completed sectional pattern is saved and stored in the required format for further use or production.
4. Cut piece pattern	4.1 Pattern paper is placed in the plotter or cutting machine according to the machine's setup requirements. 4.2 Piece pattern is selected based on the project specifications and requirements. 4.3 Selected pattern is cut using the plotter, ensuring precise cuts and accurate pattern pieces. 4.4 Cutting process is monitored to ensure that all pieces are accurately cut and aligned with the design. 4.5 Piece patterns are collected after cutting and checked for any defects or discrepancies. 4.6 Final cut piece patterns are reviewed to ensure they meet the required specifications and design standards. 4.7 Cut piece patterns are stored in an organized manner to prevent damage and ensure easy access for further production stages.
5. Clean and maintain workplace	5.1 Computer and digitizer/scanner are turned off after use to ensure proper shutdown and preservation of equipment. 5.2 CAM device and plotter are Cleaned and turned off according to standard procedures to maintain its functionality and longevity. 5.3 Workplace is Cleaned thoroughly, ensuring all surfaces are free from dust, debris, and any other contaminants.

Range of Variables

Variable	Range
	May include but not limited to:
1. Workpiece	1.1 Standard/shell 1.2 Mean forme 1.3 Basic pattern 1.4 Bottom pattern
2. Pattern engineering	2.1 Allowance fixing 2.2 Marking notch/ Chamber 2.3 Central line drawing 2.4 Stitch line finalizing 2.5 Line smoothing.
3. Pattern details	3.1 Article name 3.2 Piece name 3.3 Last name 3.4 Size 3.5 Date

Curricular Content Guide

1. Underpinning Knowledge	1.1 Workpiece 1.2 Style lines 1.3 Pattern engineering 1.4 Pattern details 1.5 Computer and Digitizer 1.6 CAM
2. Underpinning Skills	1.7 Preparing for work 1.8 Performing digitization or scanning of the style line 1.9 Performing pattern engineering 1.10 Preparing piece pattern 1.11 Cutting piece pattern using CAM 1.12 Cleaning and maintaining CAM device, plotter and workplace
3. Underpinning Attitudes	3.1 Commitment to occupational health and safety 3.2 Promptness in carrying out activities 3.3 Sincerity and honesty to duties 3.4 Environmental concerns 3.5 Eagerness to Learn 3.6 Tidiness and timeliness 3.7 Respect for rights of peers and seniors in workplace 3.8 Good relationships with peers, sub-ordinates and seniors in workplace
4. Resource Implications	The Following resources must be provided: 4.1 Workplace (simulated or actual) 4.2 Personal protective equipment (PPE) 4.3 Work pieces 4.4 CAD CAM system 4.5 Projector 4.6 Pattern paper 4.7 Learning manual

Assessment Evidence Guide

1. Critical Aspects of Competency	Assessment must evidence that the candidate: 1.1 prepared for work 1.2 carried out pattern digitize or scan 1.3 prepared sectional pattern 1.4 cut piece pattern 1.5 performed pattern engineering 1.6 Cleaned and maintained CAB device, plotter and workplace
2. Methods of Assessment	Methods of assessment may include but is not limited to: 2.1 Written test 2.2 Practical demonstration

	2.3 Oral questioning 2.4 Portfolio (optional)
3. Context of Assessment	3.1 Competency assessment must be done in an assessment/training center or in an actual or simulated work place after completion of the training. 3.2 Assessment should be done by a nationally certified assessor or occupation-specific industry expert.

Unit of Competency: PERFORM PATTERN GRADING FOR FOOTWEAR USING CAD CAM	Nominal Duration: 25 hrs.	Unit Code: SICIP-LGF-FLGD-05-O
Unit Descriptor: This unit of competency covers the knowledge, skills and attitudes required to perform pattern grading for footwear using CAD CAM. It specifically includes the tasks of preparing for work, carrying out grading parameters, carrying out grading, checking and cutting graded patterns, and Cleaning and maintaining workplace.		

Elements and Performance Criteria:

(Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables).

Elements of Competency	Performance Criteria
1. Prepare for work	1.1 Computer and CAD CAM software are checked to ensure they are functioning properly and ready for use. 1.2 Necessary CAD CAM tools and settings are configured to perform pattern grading. 1.3 Required article file is selected and opened within the CAD CAM software for pattern grading tasks. 1.4 All relevant design files are reviewed to ensure they are complete and contain the correct specifications.
2. Carry out grading parameters	2.1 <u>Grading parameters</u> are identified and defined according to the design specifications and size requirements. 2.2 Setting rules and default grade types are followed to ensure consistency in the grading process. 2.3 Grade setting and shell grade rules are followed and maintained to ensure proper fit and proportion across sizes. 2.4 Differences between sizes are calculated accurately to ensure proper scaling of patterns. 2.5 Grading data is recorded to maintain a clear reference for future use and adjustments.
3. Carry out grading	3.1 <u>Grading rules</u> are selected and applied to ensure consistency with the design requirements. 3.2 Model size and size range are selected to ensure proper fit across all sizes in the grading process. 3.3 Dialog box is followed as per job specification to input the correct values and settings. 3.4 Grading adjustments are made based on the selected parameters, ensuring accurate sizing and fit. 3.5 Graded pattern is reviewed for consistency across sizes, ensuring no distortions or inaccuracies. 3.6 Grading process is finalized, and the modified patterns are saved for further use in production.

4. Check and cut graded patterns	4.1 Restriction grading areas are checked to ensure that the grading parameters comply with the design specifications. 4.2 Pattern engineering points are followed to maintain accuracy in the graded patterns and ensure proper alignment. 4.3 Graded patterns are prepared, reviewed for accuracy, and saved in the required format for future use. 4.4 Graded patterns are cut by the CAM device according to the specifications, ensuring precise cutting and accuracy. 4.5 Cut patterns are collected and checked for any defects or discrepancies before being stored. 4.6 Final cut patterns are stored to ensure they are ready for the next stage of production.
5. Clean and Maintain Workplace	5.1 CAM device and plotter are Cleaned and turned off according to the standard operating procedure to maintain its functionality. 5.2 Computer is turned off to prevent damage and ensure energy efficiency after use. 5.3 Workplace is Cleaned to ensure a safe and organized environment for the next task. 5.4 Cleaning supplies and equipment are checked and replenished as needed to support ongoing workplace maintenance.

Range of Variables

Variable	Range May include but not limited to:
1. Grading parameters	1.1 Bottom length 1.2 Ball girth 1.3 Bottom width 1.4 Length
2. Grading rules	2.1 English/UK system 2.2 Paris point/French system 2.3 Japanese system 2.4 Mondo point 2.5 US system

Curricular Content Guide

1. Underpinning Knowledge	1.1 Grading parameters 1.2 Grading rules 1.3 Dialogue box 1.4 CAM
2. Underpinning Skills	2.1 Performing all relevant preparatory works 2.2 Identifying grading parameters 2.3 Carrying out grading 2.4 Checking and cutting graded patterns

	2.5 Operating CAM
3. Underpinning Attitudes	3.1 Commitment to occupational health and safety 3.2 Promptness in carrying out activities 3.3 Sincerity and honesty to duties 3.4 Environmental concerns 3.5 Eagerness to learn 3.6 Tidiness and timeliness 3.7 Respect for rights of peers and seniors in the workplace 3.8 Good relationships with peers, subordinates and seniors in the workplace
4. Resource Implications	The following resources must be provided: 4.1 Workplace (simulated or actual) 4.2 Personal protective equipment (PPE) 4.3 Article file 4.4 CAD CAM system 4.5 Projector 4.6 Pattern paper 4.7 Learning manual

Assessment Evidence Guide

1. Critical Aspects of Competency	Assessment must evidence that the candidate: 1.1 prepared for work 1.2 identified grading parameters 1.3 carried out grading 1.4 checked and cut graded patterns 1.5 Cleaned and maintained workplace
2. Methods of Assessment	Methods of assessment include: 2.1 Written test 2.2 Practical demonstration 2.3 Oral questioning 2.4 Portfolio (optional)
3. Context of Assessment	3.1 Competency assessment must be done in an assessment/training center or in an actual or simulated work place after completion of the training. 3.2 Assessment should be done by a nationally certified assessor or occupation-specific industry expert.

END OF COMPETENCY STANDARD

Workshop/Lab Facility Standard

Course Name:	Footwear and Leather Goods Design and Development with CAD CAM
Number of Trainees:	25

Course-wise Training Space (Theoretical Classroom, Workshop/ Lab/ Classroom cum Workshop):

- Classroom – 350 sft (33 sqm)
- Workshop/ lab – 800 sft (75 sqm)
- OR
- Classroom cum workshop – 1000 sft (93 sqm)

Major Training Equipment and Training Facilities:

S.N	Major Equipment and Training facilities	Required facilities
1.	Computers/Laptop	01
2.	Multimedia Projector	01
3.	Internet connectivity	01
4.	Printer	01
5.	White board with marker	01
6.	Last	25
7.	Cutting matt	25
8.	Pattern paper	100
9.	Scissor	25
10.	Computer/laptop with Shoe Master or I-CAD software or Fast shoe or Crispin or Romans CAD	06
11.	Plotter Machine	01
12.	3D last scanner	01
13.	Digitizer	01
14.	Masking tape	25
15.	Anti-cutter	25
16.	Stationary set (Pencil, scale, eraser, sharpener)	25
17.	Measuring tape	25
18.	Divider	25
19.	Pinner/Awl	25

The following conditions must be fulfilled –

- The institute shall not use the same facilities for any other projects/organizations offering a similar course.

- The institute must provide sufficient evidence to prove ownership of the proposed training equipment.

The list denotes the minimum training equipment and facility required to effectively conduct training for a specific course. Additionally, the institute must ensure that all other necessary training tools, equipment, and furniture are available to meet the requirement of competency standards (CS) provided by SICIP.

For the operation of training course on Footwear and Leather Goods Design and Development with CAD CAM, the institute must ensure the availability of at LGFst 80% of the major training equipment and training facilities (according to the CS) to be eligible for SICIP training delivery. If the score is below 80%, the remaining equipment and facilities need to be installed before the commencement of the training.

The institute will also provide all other hand tools and power tools as per CS for 25 trainees. Also, they will arrange adequate seating arrangement and classroom setup for the 25 trainees.