

Model Curriculum

CAD/CAM Operator (Footwear)

SECTOR: LEATHER
SUB-SECTOR: FOOTWEAR
OCCUPATION: DESIGNING (FOOTWEAR)
REF ID: LSS/Q2103, V1.0
NSQF LEVEL: 4



Certificate

CURRICULUM COMPLIANCE TO QUALIFICATION PACK – NATIONAL OCCUPATIONAL STANDARDS

is hereby issued by the

LEATHER SECTOR SKILL COUNCIL

for

MODEL CURRICULUM

Complying to National Occupational Standards of

Job Role/Qualification Pack: 'CAD/CAM Operator (Footwear)' QP No. 'LSS/Q2103 NSQF Level 4'

Date of Issuance: June 6th, 2018

Valid up to*: June 12th, 2021

*Valid up to the next review date of the Qualification Pack or the
'Valid up to' date mentioned above (whichever is earlier)



Authorised Signatory
(Leather Sector Skill Council)

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CAD/CAM Operator (Footwear)

CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of a “CAD/CAM Operator (Footwear)”, in the “Leather” Sector/Industry and aims at building the following key competencies amongst the learner.

Program Name	CAD/CAM Operator (Footwear)		
Qualification Pack Name & Reference ID.	CAD/CAM Operator (Footwear) LSS/Q2103		
Version No.	1.0	Version Update Date	25-08-2018
Pre-requisites to Training	Minimum Educational Qualifications: CAD/CAM Certification Training: Diploma/Certification in CAD/CAM Experience: N/A		
Training Outcomes	After completing this programme, participants will be able to: <ul style="list-style-type: none"> • Summarize the importance on overview of leather industry and generic skills: General instructions on importance of leather industry, general hazards in leather industry, basic health safety and hygiene precautions, generic skills to be followed in leather industry. • Operate the CAD/CAM software to design footwear: Prepare the work area for CAD/CAM operation, obtain and check the data on the specification sheet, set the machine parameters, draw the pattern on the CAD software, digitize the manual pattern on the CAD software, perform size wise grading of footwear, adjust the pattern specification, Set parameters on CAM machine, ensure the design output is cut and handed over to the next department, ensure the work is saved as a back-up before shutting down the CAD machine, shut down the machine after use. • Maintain the work area, tools and machines: Handle material, tools and machines, maintain clean and hazard free work area, maintain proper usage of cleaning equipment, maintain correct usage of workplace tools and equipment. • Maintain health, safety and security at workplace: Well versed with health and safety measures in terms of personal safety and equipment safety relevant to CAD/CAM operations. • Demonstrate compliance with industry, regulatory and organizational requirements: Carry out work in accordance with organizational guidelines and procedures, identify and report any possible deviation. 		

This course encompasses 4 out of 4 National Occupational Standards (NOS) of "CAD/CAM Operator (Footwear)" Qualification Pack issued by "Leather Sector Skill Council".

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1	<p>Overview on leather industry and generic skills</p> <p>Theory Duration (hh:mm) 06:00</p> <p>Practical Duration (hh:mm) 08:00</p> <p>Corresponding NOS Code Bridge Module</p>	<ul style="list-style-type: none"> • Explain the importance of leather industry • Describe leather manufacturing process • Explain general hazards or risk that can lead to accidents • Follow basic safety, health and hygiene measures • Demonstrate the procedure to wear PPE for safety • Communicate effectively with co-workers in writing as well as orally • Follow the instructions related to the worksite and machine operation 	<p>Chairs, Trainer desk, Computer, Student table, Projector, White projector screen, White board, Flip chart display stand, Safety Hazard signs, Gloves, Helmet, Safety shoe, Ear plug, Apron, Goggles, Newspaper, Stationery</p>
2	<p>Operate the CAD/CAM software to design footwear</p> <p>Theory Duration (hh:mm) 26:00</p> <p>Practical Duration (hh:mm) 138:00</p> <p>Corresponding NOS Code LSS/N2103</p>	<ul style="list-style-type: none"> • Prepare a hazard free working area as per the safety norms of the organization • Maintain the cleanliness and orderliness of the workplace • Check the data on the job specification sheet • Carry out functions in line with the responsibilities of job role • Set the machine parameters as per the manufacturers instruction • Draw the pattern on the CAD software as per specification given • Digitize the manual pattern on the CAD software as per specification given • Perform size wise grading of footwear as per measurements provided by client • Adjust the pattern specification as per the product standards and allowance required • Set parameters on CAM machine as per manufacturer's instruction • Check the design output is cut and handed over to the next department • Shut down the CAD machine after the work is saved as back-up 	<p>Cleaning Cloth, Pan, Broom, Dust bin, Sample specification sheet, Instruction Manual, CAD/CAM machine, High definition Computer with CAD software, Digitising Tablet, PPE set</p>
3	<p>Maintain the work area, tools and machines</p> <p>Theory Duration (hh:mm) 04:00</p> <p>Practical Duration (hh:mm)</p>	<ul style="list-style-type: none"> • Handle materials, machinery, equipment and tools safely and correctly • Follow correct lifting and handling procedures • Maintain tools, equipment and machine in working condition • Organize the work for subordinates • Prepare a clean and hazard free working area • Deal with work interruptions • Carry out running maintenance within agreed 	<p>Laptop, Marker, Projector, White projector screen, Stationery, White board, Gloves, Helmet, Safety shoe, Ear plug, Apron, Goggles, Cleaning cloth, Bucket, Cleaning</p>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	06:00 Corresponding NOS Code LSS/N8501	<p>schedules</p> <ul style="list-style-type: none"> Report unsafe equipment and other dangerous occurrences to the plant supervisor Check that the correct machine guards are in place Dispose the waste safely in the designated location Store accurate records and documents 	materials, Mop, Dust bin, Broom
4	<p>Maintain health, safety and security at workplace</p> <p>Theory Duration (hh:mm) 02:00</p> <p>Practical Duration (hh:mm) 06:00</p> <p>Corresponding NOS Code LSS/N8601</p>	<ul style="list-style-type: none"> Comply with health and safety related instructions applicable to the workplace Demonstrate the method of wearing the different Personal Protective equipment as per protocol Report any service malfunctions that cannot be rectified Store materials and equipment in line with manufacturer's and organizational requirements Minimize health and safety risks to self and others due to own actions Monitor the workplace and work processes for potential risks and threats Carry out periodic walk-through to keep work area free from hazards and obstructions Report hazards and potential risks/ threats to supervisors or other authorized personnel Carry out mock drills/ evacuation procedure at the workplace Demonstrate procedures pertaining to first aid and fire fighting in the event of workplace emergencies Follow organisation procedures for shutdown and evacuation when required 	First aid kit, Fire extinguisher, Earplug, Head cover, Helmet, Apron, Gumboot, Respiratory mask, Goggles, Hand gloves, Phenyl, Floor cleaning machine, Safety shower unit, Safety eyewash unit
5	<p>Comply with industry, regulatory and organizational requirements</p> <p>Theory Duration (hh:mm) 02:00</p> <p>Practical Duration (hh:mm) 02:00</p> <p>Corresponding NOS Code LSS/N8701</p>	<ul style="list-style-type: none"> Carry out work functions in accordance with legislation and regulations, organizational guidelines and procedures Obtain clarifications on policies and procedure from the supervisor Follow the policies and procedures within the work practices Identify any possible deviation to ethical requirements Report any possible deviation to ethical requirements 	Sample legal documents according to factory act

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	Total Duration Theory Duration 40:00 Practical Duration 160:00	Unique Equipment Required: Chairs, Trainers desk and Computer, Student table, Projector, White projector screen, White board, Flip chart display stand, Safety Hazard signs, Newspaper, Stationery, PPE set, Cleaning Cloth, Pan & Broom, Dust bin, Sample Specification Sheet, Instruction Manual, CAD CAM Machine, High definition Computer with CAD software, Digitising Tablet, Laptop, Marker, Gloves, Helmet, Safety shoe, Ear plug, Apron, Goggles, Bucket, Cleaning materials, Mop, First aid kit, Fire extinguisher, Sample legal documents	

Grand Total Course Duration: 200 Hours, 0 Minutes

(This syllabus/ curriculum has been approved by [Leather Sector Skill Council](#))

Trainer Prerequisites for Job role: “CAD/CAM Operator (Footwear)” mapped to Qualification Pack: “LSS/Q2103, v 1.0”

Sr. No.	Area	Details
1	Description	To deliver accredited training service, mapping to the curriculum detailed above, in accordance with the Qualification Pack “LSS/Q2103, Version 1.0”.
2	Personal Attributes	Aptitude for conducting training, and pre/ post work to ensure competent, employable candidates at the end of the training. Strong communication skills, interpersonal skills, ability to work as part of a team; a passion for quality and for developing others; well-organised and focused, eager to learn and keep oneself updated with the latest in the mentioned field.
3	Minimum Educational Qualifications	Diploma or B.Tech in leather footwear technology, Diploma/Certification in CAD/CAM with 18 month’s certificate course in Footwear (any) and above.
4a	Domain Certification	Certified for Job Role: “CAD/CAM Operator (Footwear)”, mapped to QP: “LSS/Q2103, v1.0”. The minimum accepted score is 80%.
4b	Platform Certification	Recommended that the trainer is certified for Job Role: “Trainer”, mapped to QP: “MEP/Q0102”. The minimum accepted score as per SSC guidelines is 80%.
5	Experience	5-6 years of experience as a CAD/CAM operator in leather footwear manufacturing sector.

Assessable Outcome	Assessment Criteria	Total Mark	Out Of	Marks Allocation	
				Theory	Skills Practical
	with care				
	PC8. Maintain tools and equipment		2	0	2
	PC9. Carry out running maintenance within agreed schedules		2	0	2
	PC10. Carry out maintenance and/or cleaning outside responsibility		2	0	2
	PC11. Report unsafe equipment and other dangerous occurrences		3	1	2
	PC12. Ensure that the correct machine guards are in place		2	0	2
	PC13. Work in a comfortable position with the correct posture		3	1	2
	PC14. Use cleaning equipment and methods appropriate for the work to be carried out		2	0	2
	PC15. Dispose of waste safely in the designated location		3	1	2
	PC16. Store cleaning equipment safely after use		1	0	1
	PC17. Complete and store accurate records and documentation		2	0	2
	PC18. Maintain proper lighting, ventilation to make sure general comfort is there while working		2	0	2
	PC19. Give inputs and assist in completing documentation		2	0	2
	PC20. Report the need for maintenance and/or cleaning outside your area of responsibility		2	1	1
	PC21. Ensure safe and correct handling of materials, equipment and tools		2	0	2
	PC22. Maintain appropriate environment to protect stock from pilfering, theft, damage and deterioration		2	0	2
	Total	Total	50	8	42
3. LSS/N8601: Maintain health, safety and security at workplace	PC1. Comply with health and safety related instructions applicable to the workplace	45	3	0	3
	PC2. Use and maintain personal protective equipment as per protocol		3	1	2
	PC3. Carry out own activities in line with approved guidelines and procedures		2	0	2
	PC4. Maintain a healthy lifestyle and guard against dependency on intoxicants		3	1	2

Assessable Outcome	Assessment Criteria	Total Mark	Out Of	Marks Allocation	
				Theory	Skills Practical
	PC5. Follow environment management system related procedures		3	0	3
	PC6. Identify and correct (if possible) malfunctions in machinery and equipment		3	1	2
	PC7. Report any service malfunctions that cannot be rectified		2	0	2
	PC8. Store materials and equipment in line with manufacturer's and organizational requirements		2	0	2
	PC9. Safely handle and move waste and debris		3	1	2
	PC10. Minimize health and safety risks to self and others due to own actions		2	0	2
	PC11. Seek clarifications, from supervisors or other authorized personnel in case of perceived risks		2	0	2
	PC12. Monitor the workplace and work processes for potential risks and threats		2	0	2
	PC13. Carry out periodic walk-through to keep work area free from hazards and obstructions, if assigned		3	1	2
	PC14. Report hazards and potential risks/ threats to supervisors or other authorized personnel		2	0	2
	PC15. Participate in mock drills/ evacuation procedures organized at the workplace		3	0	3
	PC16. Undertake first aid, fire-fighting and emergency response training, if asked to do so		3	0	3
	PC17. Take action based on instructions in the event of fire, emergencies or accidents		2	0	2
	PC18. Follow organization procedures for shutdown and evacuation when required		2	0	2
	Total	Total	45	5	40
4. LSS/N8701: Comply with industry, regulatory and organizational requirements	PC1. Carry out work functions in accordance with legislation and regulations, organizational guidelines and procedures	15	3	0	3
	PC2. Seek and obtain clarifications on policies and procedures, from the		4	1	3

Assessable Outcome	Assessment Criteria	Total Mark	Out Of	Marks Allocation	
				Theory	Skills Practical
	supervisor or other authorized personnel				
	PC3. Apply and follow these policies and procedures within the work practices		2	0	2
	PC4. Provide support to the supervisor and team members in enforcing these considerations		3	1	2
	PC5. Identify and report any possible deviation to these requirements		3	0	3
		Total	15	2	13