



Skills for Employment Investment Program (SEIP)

COMPETENCY-BASED LEARNING MATERIAL (FACULTY GUIDE) FOR LASTING AND ASSEMBLING OPERATIONS *(LEATHER GOODS AND FOOTWEAR SECTOR)*

**Finance Division, Ministry of Finance
Government of the People's Republic of Bangladesh**

Table of Contents

Copyright	3
Approval Sheet	4
How to Use this Competency-based Learning Material	6
Introduction to Teaching Adult Learners	7
List of Icons	9
Modules	10
Module 1: Identify basic lasting and assembling operations	10
Learning Outcome 1.1 - Identify basic operations	11
Learning Outcome 1.2 - Identify tools, equipment and machinery	12
Module 2: Prepare upper and last for lasting	13
Learning Outcome 2.1 - Prepare for work	14
Learning Outcome 2.2 - Collect materials	15
Learning Outcome 2.3 - Carry out temporary lacing	16
Learning Outcome 2.4 - Attach insole	17
Learning Outcome 2.5 - Clean and maintain workplace	18
Module 3: Perform basic lasting operation	19
Learning Outcome 3.1 - Prepare for work	20
Learning Outcome 3.2 - Perform conditioning of prepared upper	21
Learning Outcome 3.3 - Carry out last operation	22
Learning Outcome 3.4 - Clean and maintain workplace	23
Module 4: Prepare upper and sole for assembling	24
Learning Outcome 4.1 - Prepare for work	25
Learning Outcome 4.2 - Carry out heat setting and wrinkle chasing	26
Learning Outcome 4.3 - Make sole margin	27
Learning Outcome 4.4 - Carry out roughing and scouring	28
Learning Outcome 4.5 - Apply adhesive and attach filler	29
Learning Outcome 4.6 - Perform priming and cementing	30
Learning Outcome 4.7 - Clean and maintain workplace	31
Module 5: Perform sole assembling operation	32
Learning Outcome 5.1 - Prepare for work	33
Learning Outcome 5.2 - Perform sole attaching and pressing	34
Learning Outcome 5.3 - Perform chilling and edge cleaning operations	35
Learning Outcome 5.4 - Perform de-lasting and final inspection	36
Learning Outcome 5.5 - Clean and maintain workplace	37

Copyright

The Competency-based Learning Material (Faculty Guide) for Lasting and Assembling Operations is a document, aligned to its applicable competency standard, for providing training consistent with the requirements of industry in order for individuals who graduated through the established standard via competency-based assessment to be suitably qualified for a relevant job.

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Approval Sheet

Identification and validation of modules and content for this occupation were made by experts within this sector. A series of consultations were held to accurately capture industry and employer needs and expectations and develop the learning material that would help to enhance the employability of the youth trained. This process started on 5 August 2018 and concluded with a validation workshop with a sectoral working group on 18 October 2018.

Experts Involved

Industry and subject-matter experts who provided their valuable inputs to develop this competency-based learning material [August 2018 – October 2018]:

Name	Organisation	Designation
Md. Golam Shah Newaz	US Bangla Limited	General Manager
Mr. Ibne Oyahid	Akij Footwear Limited	Trainer
Mr. Jani Roy	Earth Footwear Limited	Trainer
Md. Shahin Alam	Golden Akij Shoe Limited	BTEB Certified Assessor
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Validation Workshop

Competency-based learning material validation workshop participants [held on 18 October 2018]:

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Md. Shahin Alam	Golden Akij Shoe Limited	BTEB Certified Assessor
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Md. Mosaddequr Rahman	Bata Shoe Co. Bangladesh Limited	Lasting In-Charge

How to Use this Competency-based Learning Material

Welcome to the competency-based learning material for Lasting and Assembling Operations to use in footwear manufacturing work. These modules contain training materials and activities for learners to complete in order to become competent and qualified as a skilled worker.

There are five (5) modules that make up this course which comprises the skills, knowledge and attitudes required to become a skilled worker including:

1. Identify basic lasting and assembling operations
2. Prepare upper and last lasting
3. Perform basic lasting operation
4. Prepare upper and sole for assembling
5. Perform sole assembling operations

As a trainer, you are required to guide the learners through a series of activities in order to complete each learning outcome of the module. These activities may be completed as part of structured classroom activities or they may be required to work at their own pace.

These activities will require the learners to complete associated learning and practice activities in order to gain knowledge and skills they need to achieve the learning outcomes. Refer to **Learning Activity Page of each module** to know the sequence of learning tasks and the appropriate resources to use for each task.

This page will serve as the road map towards the achievement of competence. If you read the **Information Sheets**, these will give you an understanding of the work, and why things are done the way they are. Once the learners have finished reading the Information Sheets, they are required to complete the questions in the **Self-Check Sheets**.

The self-check process follows the Information Sheets in the learning guide. Completing self-checks will help the learners know how they are progressing. To know how they fared with self-checks, they can review the **Answer Key**.

The learners are required to complete all activities as directed in the **Job Sheet**. This is where they will apply their newly acquired knowledge while developing new skills. When working, high emphasis should be laid on safety requirements. The learners should be encouraged to raise relevant queries or ask the facilitator for assistance as required.

When the learners have completed all the tasks required in the learning guide, an assessment event will be scheduled to evaluate if they have achieved competency of the specified learning outcomes and are ready for the next task.

Introduction to Teaching Adult Learners

Since you will be dealing with adult learners, it is important to understand the basic principles of adult learning and methodologies. Adults learn best through associations, experiences and application. A few facts to consider while teaching adult learners:

Discussion: Adult learning is best managed through mutual dialogue and discussion. Discussion needs to be encouraged and used in the classroom to maximise learning.

Associations: Adults have experiences which can be related to any learning objectives to create associations which enhance conceptual comprehension. Associations can be used to create user interest and gain attention. Adults learn new attitudes or skills best in relation to previous life experiences.



This strategy also ensures knowledge retention.

Create an environment conducive to learning and sharing: Make people feel comfortable talking to you and each other. They should feel at ease asking questions, sharing views even if they are not very sure of the efficacy of their suggestions or views.

Physical surroundings: Temperature, light, space and furniture should be optimal. There should be no distractions.

Inculcate respect: Encourage learners' contributions and experiences. People are more encouraged to learn and share when their experiences are acknowledged - new information builds easily on past knowledge and experience.

Reward and recognition: Acknowledging the efforts of people, even small attempts, can reap great benefits. Learners like to receive praise and positive encouragement, which motivates them to deliver their best.

Learners also like to be reassured that they are correctly recalling or using information they have absorbed in the classroom.

Structured teaching: Learners study faster when information or skills are presented in a structured way:

- Concepts to be taught in small, bite sized portions for easy assimilation
- Put forth the easiest ideas or skills first and then gradually build on them
- Bring in the important ideas first
- Reinforce key ideas at regular intervals
- Reinforce high order concepts at regular intervals

Move learner from generic to specific flow of information: Introduce the generic concepts first and then move to specific more complex information to ease understanding and comprehension.

Application of concepts/ideas taught: Help students put into practice the concepts taught in the class through exercises and work-based projects. Application ensures knowledge retention and skill building.

Relevance building: Build up relevance of the concepts being taught in class by relating them to day-to-day life and workplace experiences.

Learners should know to use and apply what they have learned in the classroom as they learn faster when they recognise that what they are learning will be useful in the future.

Sharing: Encourage learners to learn from each other and solve problems collectively. This makes learning easier and improves team spirit and the interpersonal skills of the learners.

Participation: Involve learners in the class - adults favour to be *active participants* in learning rather than passive receivers of knowledge. People learn faster when they actively process information, solve problems and practice skills.

Motivate: Inspire the class so that teaching does not become a one-way process of knowledge download. Learners will learn faster when they feel an inner urge to learn and be an active participant in the class.

Create a learning environment in which the learners feel free and able to shed their inhibitions and develop receptivity towards new ideas and concepts.

Students will have different motivation levels - some will be more eager to learn than others as each learner is different from the other and therefore need to be treated differently.

And remember - adapt your communication style to suit the needs of the audience.

Communicate effectively: Communicate in a manner that is understood by the class. The language and sentence structuring should be clear and succinct.

Technical concepts should be explained in a manner that de-mystifies the concept - make things simple and easy to understand.

Avoid using *too much* technical jargon - if it is part of the curriculum, ensure the class is first made familiar with the words or jargon used.

Assessments: Conduct skill and knowledge checks regularly:















- Reinforce high order concepts at regular intervals.
- Conduct formative and summative assessments.
- Strengthen areas which appear to be weak.

Regular feedback:

- Provide regular feedback to learners
- Help them identify their strengths and areas of improvement
- Feedback should always be constructive
- Timely and specific feedback is easier to accept and act on



List of Icons

Icon Name	Icon
Module content	
Learning outcomes	
Performance criteria	
Contents	
Assessment criteria	
Resources required	
Information sheet	
Self-check Quiz	
Answer key	
Activity	
Video reference	
Learner job sheet	
Assessment plan	
Review of competency	

Module 1: Identify basic lasting and assembling operations

Module Descriptor:	This module covers the skills, knowledge and attitudes to identify basic lasting and assembling operations. It specifically includes identify basic operations, and identifying tools, equipment and machinery used in lasting and assembling operations.	
Nominal Duration:	56 hours	
Learning Outcomes:	1.1.	Identify basic operations
	1.2.	Identify tools, equipment and machinery
Performance Criteria:	1.1.	Lasting operations are identified and defined.
	1.2.	Types of lasting are identified and described.
	1.3.	Assembling operations are identified and defined.
	1.4.	Tools and equipment used in lasting and assembling operations are identified.
	1.5.	Machinery used in lasting and assembling operations is identified.



Learning Outcome 1.1 – Identify basic operations

Contents:	<ul style="list-style-type: none"> ▪ Lasting and their types- Lasting, hand lasting, machine lasting ▪ Lasting operations - Insole attaching to last bottom, back part moulding, toe puff attaching and upper conditioning (mulling), toe and forepart lasting, seat and side lasting 		
Resources Required:	<ul style="list-style-type: none"> ▪ Workplace (simulated or actual) ▪ Personal Protective Equipment (PPE): hand gloves, safety shoes, apron, finger guard, hair protector, ear guard and goggles ▪ Tools and equipment: lasts, pincers, thimbles, scissors and hammers 		
Learning Activities:	Activity	Resource	Student Guide Page
	1.1.1	<ul style="list-style-type: none"> ▪ Information Sheet 1.1.1 ▪ Self-Check Quiz 1.1.1 ▪ Answer Key 1.1.1 https://www.youtube.com/watch?v=Kof-qlFfw6k	7 10 17
Assessment Criteria:	<ul style="list-style-type: none"> ▪ Lasting operations are identified and defined ▪ Types of lasting are identified and described. ▪ Assembling operations are identified and defined. 		



Learning Outcome 1.2 – Identify tools, equipment and machinery

Contents:	<ul style="list-style-type: none"> ▪ Tools and equipment used in lasting and assembling operations ▪ Machinery used in lasting and assembling operations 		
Resources Required:	<ul style="list-style-type: none"> ▪ Workplace (simulated or actual) ▪ Personal protective equipment (PPE): gloves, dust mask, safety shoes, goggles, working clothes, apron ▪ Tools and equipment: manual handling device (box, trolley), scissors, pincers, hammers, roughie, Allen keys (size 2.5mm to 6mm), spanners (size 8mm to 19mm), needle nose pliers, screw drivers, oil can, grease gun 		
Learning Activities:	Activity	Resource	Student Guide Page
	1.2.1	<ul style="list-style-type: none"> ▪ Information Sheet 1.2.1 ▪ Self-Check Quiz 1.2.1 ▪ Answer Key 1.2.1 https://www.youtube.com/watch?v=qDKQ29XgLWo	<p>11</p> <p>16</p> <p>17</p>
Assessment Criteria:	<ul style="list-style-type: none"> ▪ Tools and equipment used in lasting and assembling operations are identified ▪ Machinery used in lasting and assembling operations is identified. 		

Module 2: Prepare upper and last for lasting

Module Descriptor:	This module covers the skills, knowledge and attitudes to prepare the stitched upper and last for machine lasting. It specifically includes preparing for work, collect appropriate materials, performing temporary lacing with upper and attaching insole to last bottom.	
Nominal Duration:	56 hours	
Learning Outcomes:	2.1.	Prepare for work
	2.2.	Collect materials
	2.3.	Carry out temporary lacing
	2.4.	Attach insole
Performance Criteria:	2.1.	Job specifications and instructions are read and interpreted.
	2.2.	Appropriate personal protective equipment (PPE) is identified and selected.
	2.3.	Appropriate tools and equipment are identified and selected.
	2.4.	Work bundles are received, inspected and checked as per job specification.
	2.5.	Defective materials are identified, marked and recorded as per standard operating procedure.
	2.6.	Upper is laced with temporary lace as per job specification.
	2.7.	Lacing norm is followed as per standard operating procedure.
	2.8.	Insole is secured to last button using appropriate attachment method.
	2.9.	Closed upper and lasted insole is placed into work transportation method (WTM) as per standard operating procedure.
	2.10.	Tools and equipment are cleaned, maintained and stored.
	2.11.	Machine and machine parts are cleaned as per standard operating procedure.
	2.12.	Workplace is cleaned and waste material disposed of.



Learning Outcome 2.1 – Prepare for work

Contents:	<ul style="list-style-type: none"> ▪ Job specifications ▪ Job instruction ▪ Personal protective equipment ▪ Tools and equipment 		
Resources Required:	<ul style="list-style-type: none"> ▪ Workplace (simulated or actual) ▪ Personal protective equipment (PPE): safety shoes, masks, apron, hair protector, ear guard and goggles ▪ Tools and equipment: scissors, hammers 		
Learning Activities:	Activity	Resource	Student Guide Page
	2.1.1	<ul style="list-style-type: none"> ▪ Information Sheet 2.1.1 ▪ Self-Check Quiz 2.1.1 ▪ Answer Key 2.1.1 https://www.youtube.com/watch?v=QrakiqQcEUU	19 24 38
Assessment Criteria:	<ul style="list-style-type: none"> ▪ Job specifications and instructions are read and interpreted. ▪ Appropriate personal protective equipment (PPE) is identified and selected. ▪ Appropriate tools and equipment are identified and selected. 		



Learning Outcome 2.2 – Collect Materials

Contents:	<ul style="list-style-type: none"> ▪ Work bundles: stitched upper, moulded insole, temporary laces 		
Resources Required:	<ul style="list-style-type: none"> ▪ Workplace (simulated or actual) ▪ Personal protective equipment (PPE): safety shoes, masks, apron, hair protector, ear guard and goggles ▪ Tools and equipment: scissors, hammers 		
Learning Activities:	Activity	Resource	Student Guide Page
	2.2.1	<ul style="list-style-type: none"> ▪ Information Sheet 2.2.1 ▪ Self-Check Quiz 2.2.1 ▪ Answer Key 2.2.1 	25 26 38
Assessment Criteria:	<ul style="list-style-type: none"> ▪ Work bundles are received, inspected and checked as per job specification. ▪ Defective materials are identified, marked and recorded as per standard operating procedure 		



Learning Outcome 2.3 – Carry out temporary lacing

Contents:	<ul style="list-style-type: none"> ▪ Temporary lace ▪ Lacing norm 		
Resources Required:	<ul style="list-style-type: none"> ▪ Workplace (simulated or actual) ▪ Personal protective equipment (PPE):safety shoes, masks, apron, ear guard and goggles ▪ Tools and equipment: trolley, measuring scale/tape, scissors ▪ Materials: stitched upper and temporary laces 		
Learning Activities:	Activity	Resource	Student Guide Page
	2.3.1	<ul style="list-style-type: none"> ▪ Information Sheet 2.3.1 ▪ Self-Check Quiz 2.3.1 ▪ Answer Key 2.3.1 	27 28 39
Assessment Criteria:	<ul style="list-style-type: none"> ▪ Upper is laced up with temporary lace as per job specification. ▪ Lacing norm is followed as per standard operating process 		



Learning Outcome 2.4 – Carry out temporary lacing

Contents:	<ul style="list-style-type: none"> ▪ Insole ▪ Method of insole attaching ▪ Work Transport Methods (WTM) 		
Resources Required:	<ul style="list-style-type: none"> ▪ Workplace (simulated or actual) ▪ Personal Protective Equipment (PPE): safety shoes, masks, apron, ear guard and goggles ▪ Tools and equipment: trolley, measuring scale/tape scissors ▪ Materials: insole and last 		
Learning Activities:	Activity	Resource	Student Guide Page
	2.4.1	<ul style="list-style-type: none"> ▪ Information Sheet 2.4.1 ▪ Self-Check Quiz 2.4.1 ▪ Job Sheet 1 ▪ Answer Key 2.4.1 	<p>29</p> <p>30</p> <p>31</p> <p>39</p>
Assessment Criteria:	<ul style="list-style-type: none"> ▪ Insole is securely attached to the last bottom according to the method of insole attachment used ▪ Closed upper and lasted insole is placed into the rack/work transportation method (WTM) according to factory procedures 		



Learning Outcome 2.5 – Clean and maintain workplace

Contents:	<ul style="list-style-type: none"> ▪ Tools and equipment for cleaning ▪ Points to follow in storing of tools and equipment ▪ Good practices for storage of tools and equipment 		
Resources Required:	<ul style="list-style-type: none"> ▪ Workplace (simulated or actual) ▪ Personal Protective Equipment (PPE): safety shoes, masks, apron, ear guard and goggles ▪ Tools and equipment: trolley, measuring scale/tape scissors ▪ Materials: insole and last 		
Learning Activities:	Activity	Resource	Student Guide Page
	2.5.1	<ul style="list-style-type: none"> ▪ Information Sheet 2.5.1 ▪ Self-Check Quiz 2.5.1 ▪ Answer Key 2.5.1 	<p>33</p> <p>36</p> <p>39</p>
Assessment Criteria:	<ul style="list-style-type: none"> ▪ Tools and equipment are cleaned, maintained and stored. ▪ Machine and machine parts are cleaned as per standard operating procedure. ▪ Workplace is cleaned and waste material disposed of. 		

Module 3: Perform basic lasting operation

Module Descriptor:	This module covers the skills, knowledge and attitudes to perform basic machine lasting. It specifically includes preparing for work, performing conditioning or mulling of prepared upper, carrying out lasting operation, and cleaning and maintaining the workplace.	
Nominal Duration:	64 hours	
Learning Outcomes:	3.1.	Prepare for work
	3.2.	Perform conditioning of prepared upper
	3.3.	Carry out lasting operation
	3.4.	Clean and maintain workplace
Performance Criteria:	3.1.	Job specifications and instructions are read and interpreted.
	3.2.	Appropriate personal protective equipment (PPE) is identified and selected.
	3.3.	Appropriate tools and equipment are identified and selected.
	3.4.	Work pieces are collected, checked and prepared as per standard operating procedure.
	3.5.	Lasting machine is tested and adjustments made, if necessary, as per manufacturer's specification.
	3.6.	Temperature of conditioning chamber is adjusted as per job specification.
	3.7.	Water level of conditioning chamber is checked and adjusted if necessary.
	3.8.	Prepared upper is placed in conditioning chamber for specified time.
	3.9.	Toe lasting is identified as per job specification.
	3.10.	Process of toe lasting is identified and described.
	3.11.	Side and seat lasting is identified as per job specification.
	3.12.	Side and seat lasting are checked as per standard operating procedure.
	3.13.	Lasting is carried out as per job specification.
	3.14.	Tools and equipment are cleaned, maintained and stored.
	3.15.	Machine and machine parts are cleaned as per standard operating procedure.
	3.16.	Workplace is cleaned and waste material disposed of.



Learning Outcome 3.1 – Prepare for work

Contents:	<ul style="list-style-type: none"> • Pre-lasting operation: <ul style="list-style-type: none"> - Toe-puff attaching - Back part moulding - Upper and lining lamination - Feather edge stitching - Insole attaching • Adjustment of machine <ul style="list-style-type: none"> - Temperature - Cycle/dwell time - Air pressure - Wiper temperature regulator - Thermoplastic rod temperature regulator - Pincer pull pressure regulator 		
Resources Required:	<ul style="list-style-type: none"> ▪ Workplace (simulated or actual) ▪ Personal protective equipment (PPE): hand gloves, safety shoes, masks, apron, finger guard, hair protector, ear guard and goggles ▪ Tools and equipment: lasts, pincers, thimbles, scissors and hammers 		
Learning Activities:	Activity	Resource	Student Guide Page
	3.1.1	<ul style="list-style-type: none"> ▪ Information Sheet 3.1.1 ▪ Self-Check Quiz 3.1.1 ▪ Answer Key 3.1.1 	43 44 51
Assessment Criteria:	<ul style="list-style-type: none"> ▪ Job specifications and instructions are read and interpreted. ▪ Appropriate personal protective equipment (PPE) is identified and selected. ▪ Appropriate tools and equipment are identified and selected. ▪ Work pieces are collected, checked and prepared as per standard operating procedure. ▪ Lasting machine is tested and adjustments made, if necessary, as per manufacturer's specification. 		



Learning Outcome 3.2 - Perform conditioning of prepared upper

Contents:	<ul style="list-style-type: none"> ▪ Upper conditioning or mulling 		
Resources Required:	<ul style="list-style-type: none"> ▪ Workplace (simulated or actual) ▪ Personal protective equipment (PPE): hand gloves, safety shoes, masks, apron, finger guard, hair protector, ear guard and goggles ▪ Tools and equipment: mulling machine ▪ Materials: stitched upper 		
Learning Activities:	Activity	Resource	Student Guide Page
	3.2.1	<ul style="list-style-type: none"> ▪ Information Sheet 3.2.1 ▪ Self-Check Quiz 3.2.1 ▪ Answer Key 3.2.1 	45 46 51
Assessment Criteria:	<ul style="list-style-type: none"> ▪ Temperature of the conditioning chamber or mulling machine is adjusted according to job specification ▪ Water level of conditioning chamber is checked ▪ The upper is placed on the chamber for the specified time. 		



Learning Outcome 3.3 – Carry out lasting operation

Contents:	<ul style="list-style-type: none"> ▪ Toe/forepart lasting ▪ Side and seat lasting 		
Resources Required:	<ul style="list-style-type: none"> ▪ Workplace (simulated or actual) ▪ Personal protective equipment (PPE): hand gloves, safety shoes, masks, apron, finger guard, hair protector, ear guard and goggles ▪ Tools and equipment: forepart lasting machine ▪ Materials: last with insole attached, upper after mulling 		
Learning Activities:	Activity	Resource	Student Guide Page
	3.3.1	<ul style="list-style-type: none"> ▪ Information Sheet 3.3.1 ▪ Self-Check Quiz 3.3.1 ▪ Answer Key 3.3.1 https://www.youtube.com/watch?v=BsgMkmTvN9w	47 49 51
Assessment Criteria:	<ul style="list-style-type: none"> ▪ Toe lasting is identified as per job specification. ▪ Process of toe lasting is identified and described. ▪ Side and seat lasting is identified as per job specification. ▪ Side and seat lasting are checked as per standard operating procedure. ▪ Lasting is carried out as per job specification. 		



Learning Outcome 3.4 – Clean and maintain workplace

Contents:	<ul style="list-style-type: none"> ▪ Tools and equipment for cleaning ▪ Points to follow in storing of tools and equipment ▪ Good practices for storage of tools and equipment 		
Resources Required:	<ul style="list-style-type: none"> ▪ Workplace (simulated or actual) ▪ Personal Protective Equipment (PPE): safety shoes, masks, apron, ear guard and goggles ▪ Tools and equipment: trolley, measuring scale/tape scissors ▪ Materials: insole and last 		
Learning Activities:	Activity	Resource	Student Guide Page
	2.5.1	<ul style="list-style-type: none"> ▪ Information Sheet 2.5.1 ▪ Self-Check Quiz 2.5.1 ▪ Answer Key 2.5.1 	33 36 39
Assessment Criteria:	<ul style="list-style-type: none"> ▪ Tools and equipment are cleaned, maintained and stored. ▪ Machine and machine parts are cleaned as per standard operating procedure. ▪ Workplace is cleaned and waste material disposed of. 		

Module 4: Prepare upper and sole for assembling

Module Descriptor:	This module covers the skills, knowledge and attitudes to prepare lasted upper and sole for assembling. It specifically includes preparing for work, performing heat setting and wrinkle chasing, marking sole margin on lasted upper, carrying out roughing and scouring, applying adhesive to bottom of lasted insole and attaching filler, performing sole priming and sole cementing, and cleaning and maintaining the workplace.	
Nominal Duration:	56 hours	
Learning Outcomes:	4.1.	Prepare for work
	4.2.	Carry out heat setting and wrinkle chasing
	4.3.	Mark sole margin on lasted upper
	4.4.	Carry out roughing and scouring
	4.5.	Apply adhesive and attach filler
	4.6.	Perform priming and cementing
	4.7.	Clean and maintain workplace
Performance Criteria:	4.1.	Job specifications and instructions are read and interpreted.
	4.2.	Appropriate personal protective equipment (PPE) is identified and selected.
	4.3.	Appropriate tools and equipment are identified and selected.
	4.4.	Heat setting is applied as per job specification.
	4.5.	Wrinkle chasing is carried out on lasted upper using hot air blower or hand iron.
	4.6.	Outsoles and lasted uppers are matched as per job specification.
	4.7.	Upper is marked as per profile of outsole margin which is to be cemented for attachment.
	4.8.	Roughing and scouring is carried out as per markings.
	4.9.	Grains and finish of lasting margin of upper are removed without damage.
	4.10.	Adhesive is applied to bottom of lasted insole as per job specification.
	4.11.	Filler is attached on bottom profile of lasted upper as per job specification.
	4.12.	Primers and cement are identified as per job specification.
	4.13.	Outsole is primed as per materials and job specification.
	4.14.	Sole cementing is carried out as per materials and job specification.
	4.15.	Tools and equipment are cleaned, maintained and stored.
	4.16.	Machine and machine parts are cleaned as per standard operating procedure.
	4.17.	Workplace is cleaned and waste material disposed of.



Learning Outcome 4.1 – Prepare for work

Contents:	<ul style="list-style-type: none"> ▪ Job specifications ▪ Job instruction ▪ Personal protective equipment ▪ Tools and equipment 		
Resources Required:	<ul style="list-style-type: none"> ▪ Workplace (simulated or actual) ▪ Personal protective equipment (PPE): safety shoes, masks, apron, hair protector, ear guard and goggles ▪ Tools and equipment: scissors, hammers 		
Learning Activities:	Activity	Resource	Student Guide Page
	2.1.1	<ul style="list-style-type: none"> ▪ Information Sheet 2.1.1 ▪ Self-Check Quiz 2.1.1 ▪ Answer Key 2.1.1 ▪ https://www.youtube.com/watch?v=QrakiqQcEUU 	<p>19</p> <p>24</p> <p>38</p>
Assessment Criteria:	<ul style="list-style-type: none"> ▪ Job specifications and instructions are read and interpreted. ▪ Appropriate personal protective equipment (PPE) is identified and selected. ▪ Appropriate tools and equipment are identified and selected. 		



Learning Outcome 4.2 – Carry out heat setting and wrinkle chasing

Contents:	<ul style="list-style-type: none"> ▪ Heat setting ▪ Wrinkle chasing 		
Resources Required:	<ul style="list-style-type: none"> ▪ Workplace (simulated or actual) ▪ Personal protective equipment (PPE): safety shoes, masks, apron, hair protector, ear guard and goggles ▪ Tools and equipment: heat setting machine, hot air blower and hand iron ▪ Materials: lasted upper 		
Learning Activities:	Activity	Resource	Student Guide Page
	4.2.1	<ul style="list-style-type: none"> ▪ Information Sheet 4.2.1 ▪ Self-Check Quiz 4.2.1 ▪ Answer Key 4.2.1 	<p>55</p> <p>57</p> <p>69</p>
Assessment Criteria:	<ul style="list-style-type: none"> ▪ Heat setting of lasted upper is performed as per job requirements. ▪ Wrinkle chasing of lasted upper is demonstrated by using hot air blower/hand iron 		



Learning Outcome 4.3 – Mark sole margin

Contents:	<ul style="list-style-type: none"> ▪ Outsoles ▪ Marking sole margin on lasted upper 		
Resources Required:	<ul style="list-style-type: none"> ▪ Workplace (simulated or actual) ▪ Personal protective equipment (PPE): hand gloves, safety shoes, masks, apron, finger guard, hair protector, ear guard and goggles ▪ Tools and equipment: marker ▪ Materials: lasted upper, outsole 		
Learning Activities:	Activity	Resource	Student Guide Page
	4.3.1	<ul style="list-style-type: none"> ▪ Information Sheet 4.3.1 ▪ Self-Check Quiz 4.3.1 ▪ Answer Key 4.3.1 https://www.youtube.com/watch?v=YfCGUVFv7dw	58 59 69
Assessment Criteria:	<ul style="list-style-type: none"> ▪ Outsoles and lasted uppers are matched according to design and sizes ▪ Upper is marked according to the profile of outsole margin which to be cemented for attachment 		



Learning Outcome 4.4 – Carry out roughing and scouring

Contents:	<ul style="list-style-type: none"> ▪ Pounding ▪ Roughing and scouring ▪ Damages 		
Resources Required:	<ul style="list-style-type: none"> ▪ Workplace (simulated or actual) ▪ Personal protective equipment (PPE): hand gloves, safety shoes, masks, apron, finger guard, hair protector, ear guard and goggles ▪ Tools and equipment: pounding machine, roughing and scouring machine ▪ Materials: lasted upper 		
Learning Activities:	Activity	Resource	Student Guide Page
	4.4.1	<ul style="list-style-type: none"> ▪ Information Sheet 4.4.1 ▪ Self-Check Quiz 4.4.1 ▪ Answer Key 4.4.1 	<p>60</p> <p>61</p> <p>69</p>
Assessment Criteria:	<ul style="list-style-type: none"> ▪ Roughing and scouring is interpreted in accordance with markings ▪ Grains and finish of the lasting margin of upper are removed without damages 		



Learning Outcome 4.5 - Apply adhesive and attach filler

Contents:	<ul style="list-style-type: none"> ▪ Adhesives ▪ Filler 		
Resources Required:	<ul style="list-style-type: none"> ▪ Workplace (simulated or actual) ▪ Personal protective equipment (PPE): Hand gloves, safety shoes, masks, apron, finger guard, hair protector, ear guard and goggles ▪ Tools and equipment: adhesive pot, adhesive brush ▪ Materials: lasted upper, adhesive, bottom filler 		
Learning Activities:	Activity	Resource	Student Guide Page
	4.5.1	<ul style="list-style-type: none"> ▪ Information Sheet 4.5.1 ▪ Self-Check Quiz 4.5.1 ▪ Answer Key 4.5.1 	<p>62</p> <p>63</p> <p>69</p>
Assessment Criteria:	<ul style="list-style-type: none"> ▪ Adhesive is applied to the bottom of lasted insole in accordance with work specifications ▪ Filler is attached on the bottom profile of the lasted upper in accordance with the thickness of upper 		



Learning Outcome 4.6 - Perform Outsole Priming and Cementing

Contents:	<ul style="list-style-type: none"> ▪ Primers ▪ Priming ▪ Cementing 		
Resources Required:	<ul style="list-style-type: none"> ▪ Workplace (simulated or actual) ▪ Personal protective equipment (PPE): apron, mask, gloves (long), safety shoes ▪ Tools and equipment: iron free nylon brush for priming, adhesive pot, adhesive brush ▪ Materials: primers, adhesives filler 		
Learning Activities:	Activity	Resource	Student Guide Page
	4.6.1	<ul style="list-style-type: none"> ▪ Information Sheet 4.6.1 ▪ Job Sheet 2 ▪ Self-Check Quiz 4.6.1 ▪ Answer Key 4.6.1 	<p>64</p> <p>66</p> <p>67</p> <p>70</p>
Assessment Criteria:	<ul style="list-style-type: none"> ▪ Primers and cement are handled in accordance with OHS requirements ▪ Outsole is primed according to material specifications and guidelines ▪ Sole cementing is performed in accordance with materials specification 		



Learning Outcome 4.7 – Clean and maintain workplace

Contents:	<ul style="list-style-type: none"> ▪ Tools and equipment for cleaning ▪ Points to follow in storing of tools and equipment ▪ Good practices for storage of tools and equipment 		
Resources Required:	<ul style="list-style-type: none"> ▪ Workplace (simulated or actual) ▪ Personal Protective Equipment (PPE): safety shoes, masks, apron, ear guard and goggles ▪ Tools and equipment: trolley, measuring scale/tape scissors ▪ Materials: insole and last 		
Learning Activities:	Activity	Resource	Student Guide Page
	2.5.1	<ul style="list-style-type: none"> ▪ Information Sheet 2.5.1 ▪ Self-Check Quiz 2.5.1 ▪ Answer Key 2.5.1 	33 36 39
Assessment Criteria:	<ul style="list-style-type: none"> ▪ Tools and equipment are cleaned, maintained and stored. ▪ Machine and machine parts are cleaned as per standard operating procedure. ▪ Workplace is cleaned and waste material disposed of. 		

Module 5: Perform and assembling operations

Module Descriptor:	This module covers the skills, knowledge and attitudes to perform sole attaching and assembling operations. It specifically includes preparing for work, carrying out sole attaching and pressing, chilling and cleaning operations and carrying out de-lasting and final inspection, and cleaning and maintaining the workplace.	
Nominal Duration:	64 hours	
Learning Outcomes:	5.1.	Prepare for work
	5.2.	Carry out sole attaching and pressing
	5.3.	Perform chilling and cleaning
	5.4.	Carry out de-lasting and final inspection
	5.5.	Clean and maintain workplace
Performance Criteria:	5.1.	Job specifications and instructions are read and interpreted.
	5.2.	Appropriate personal protective equipment (PPE) is identified and selected.
	5.3.	Appropriate tools and equipment are identified and selected.
	5.4.	Upper and sole adhesives are reactivated as per manufacturer's specification.
	5.5.	Sole is attached to lasted upper without causing damage as per standard operating procedure.
	5.6.	Sole press machine is set-up and pressing is carried out as per standard operating procedure.
	5.7.	Lasted shoe is chilled as per standard operating procedure.
	5.8.	Sole and upper are cleaned and kept free from excessive adhesive.
	5.9.	Temporary laces are removed.
	5.10.	De-lasting is performed without damage of top line and seams.
	5.11.	Shoe is inspected against approved sample as per standard operating procedure.
	5.12.	Tools and equipment are cleaned, maintained and stored.
	5.13.	Machine and machine parts are cleaned as per standard operating procedure.
	5.14.	Workplace is cleaned and waste material disposed of.



Learning Outcome 5.1 – Prepare for work

Contents:	<ul style="list-style-type: none"> ▪ Job specifications ▪ Job instruction ▪ Personal protective equipment ▪ Tools and equipment 		
Resources Required:	<ul style="list-style-type: none"> ▪ Workplace (simulated or actual) ▪ Personal protective equipment (PPE): safety shoes, masks, apron, hair protector, ear guard and goggles ▪ Tools and equipment: scissors, hammers 		
Learning Activities:	Activity	Resource	Student Guide Page
	2.1.1	<ul style="list-style-type: none"> ▪ Information Sheet 2.1.1 ▪ Self-Check Quiz 2.1.1 ▪ Answer Key 2.1.1 ▪ https://www.youtube.com/watch?v=QrakiqQcEUU 	19 24 38
Assessment Criteria:	<ul style="list-style-type: none"> ▪ Job specifications and instructions are read and interpreted. ▪ Appropriate personal protective equipment (PPE) is identified and selected. ▪ Appropriate tools and equipment are identified and selected. 		



Learning Outcome 5.2 – Carry out sole attaching and pressing

Contents:	<ul style="list-style-type: none"> ▪ Reactivation of adhesives ▪ Sole attaching and pressing 		
Resources Required:	<ul style="list-style-type: none"> ▪ Workplace (simulated or actual) ▪ Personal protective equipment (PPE): apron, mask, gloves (long), safety shoes ▪ Tools and equipment: sole pressing machine ▪ Materials: cemented upper and sole 		
Learning Activities:	Activity	Resource	Student Guide Page
	5.2.1	<ul style="list-style-type: none"> ▪ Information Sheet 5.2.1 ▪ Self-Check 5.2.1 ▪ Answer Key 5.2.1 https://www.youtube.com/watch?v=BaPEf-bNQEI	<p>73</p> <p>74</p> <p>82</p>
Assessment Criteria:	<ul style="list-style-type: none"> ▪ Upper and sole adhesives are reactivated in accordance with manufacturer's requirements ▪ Sole is attached to lasted upper according to standard operating procedures without damage of materials ▪ Sole press machine is set up in accordance with manufacturer's manual ▪ Sole pressing is performed in accordance with standard operating procedures 		



Learning Outcome 5.3 - Perform Chilling and Edge Cleaning Operations

Contents:	<ul style="list-style-type: none"> ▪ Chilling ▪ Cleaning 		
Resources Required:	<ul style="list-style-type: none"> ▪ Workplace (simulated or actual) ▪ Personal protective equipment (PPE): apron, mask, gloves (long), safety shoes ▪ Tools and equipment: chilling machine ▪ Materials: resin rubber, crepe rubber 		
Learning Activities:	Activity	Resource	Student Guide Page
	5.3.1	<ul style="list-style-type: none"> ▪ Information Sheet 5.3.1 ▪ Self-Check Quiz 5.3.1 ▪ Answer Key 5.3.1 	75 76 82
Assessment Criteria:	<ul style="list-style-type: none"> ▪ Lasted shoe is chilled as per standard operating procedure. ▪ Sole and upper are cleaned and kept free from excessive adhesive. 		



Learning Outcome 5.4 – Carry out de-lasting and final inspection

Contents:	<ul style="list-style-type: none"> ▪ De-lasting ▪ Checking of shoes 		
Resources Required:	<ul style="list-style-type: none"> ▪ Workplace (simulated or actual) ▪ Personal protective equipment (PPE): apron, mask, gloves (long), safety shoes ▪ Tools and equipment: de-lasting machine ▪ Materials: laces, shoes 		
Learning Activities:	Activity	Resource	Student Guide Page
	5.4.1	<ul style="list-style-type: none"> ▪ Information Sheet 5.4.1 ▪ Job Sheet 3 ▪ Self-Check Quiz 5.4.1 ▪ Answer Key 5.4.1 	<p>77</p> <p>79</p> <p>80</p> <p>82</p>
Assessment Criteria:	<ul style="list-style-type: none"> ▪ Temporary laces are removed. ▪ De-lasting is performed without damage of top line and seams. ▪ Shoes are checked in accordance with approved sample. 		



Learning Outcome 5.5 – Clean and maintain workplace

Contents:	<ul style="list-style-type: none"> ▪ Tools and equipment for cleaning ▪ Points to follow in storing of tools and equipment ▪ Good practices for storage of tools and equipment 		
Resources Required:	<ul style="list-style-type: none"> ▪ Workplace (simulated or actual) ▪ Personal Protective Equipment (PPE): safety shoes, masks, apron, ear guard and goggles ▪ Tools and equipment: trolley, measuring scale/tape scissors ▪ Materials: insole and last 		
Learning Activities:	Activity	Resource	Student Guide Page
	2.5.1	<ul style="list-style-type: none"> ▪ Information Sheet 2.5.1 ▪ Self-Check Quiz 2.5.1 ▪ Answer Key 2.5.1 	<p>33</p> <p>36</p> <p>39</p>
Assessment Criteria:	<ul style="list-style-type: none"> ▪ Tools and equipment are cleaned, maintained and stored. ▪ Machine and machine parts are cleaned as per standard operating procedure. ▪ Workplace is cleaned and waste material disposed of. 		