Garment Production
LEVEL – IV

TVET CURRICULUM

Based on December, 2021 (V- III) Occupational standard (OS)

Preface

The reformed TVET-System is an outcome-based system. It utilizes the needs of the labor market and occupational requirements from the world of work as the benchmark and standard for TVET delivery. The requirements from the world of work are analyzed and documented – taking into account international benchmarking – as occupational standards (OS).

In the reformed TVET-System, curricula and curriculum development play an important role with regard to quality driven comparable TVET-Delivery. The Curricula help to facilitate the training process in a way, that trainees acquire the set of occupational competences (skills, knowledge and attitude) required at the working place and defined in the occupational standards (OS).

This curriculum has been developed by a group of professional experts from different Regional TVET Bureaus, colleges, Industries, Institutes and universities based on the occupational standard for Garment production Level IV.

The curriculum development process has been actively supported and facilitated by **Ministry of Labor and Skills.**

TVET-Program Design

1.1.   TVET-Program Title: Garment production **Level IV**

1.2.   TVET-Program Description

The Program is designed to develop the necessary knowledge, skills and attitude of the trainees to the standard required by the occupation. The contents of this program are in line with the occupational standard. The Trainees who successfully completed the Program will be qualified to work as a **Garment producer** with competencies elaborated in the respective OS. Graduates of the program will have the required qualification to work in the **Industry** sector in the field of **garment production.**

The prime objective of this training program is to equip the Trainees with the identified competences specified in the OS. Graduates are therefore expected to Organize Garment production process, Perform Machine lay out for product change, Drape fabrics to make patterns, Produce Advanced Garment products, Improve Garment production process, Apply textile coloration and finishing and Apply statistics to operational processes in accordance with the performance criteria and evidence guide described in the OS.

1.3.   TVET-Program Training Outcomes

The expected outputs of this program are the acquisition and implementation of the following units of competences:

IND GAP4 011221   Organize Garment production process

IND GAP4 02 1221   Perform Machine lay out for product change

IND GAP4 03 1221   Drape fabrics to make patterns

IND GAP4 04 1221   Produce Advanced Garment products

IND GAP4 05 1221   Improve Garment production process

IND GAP4 06 1221   Apply textile coloration and finishing

IND GAP4 07 1221 Apply statistics to operational processes

1.4.   Duration of the TVET-Program

The Program will have duration of **484 *hours*** including the on school/ Institution training and on-the-job practice or cooperative training time. Such cooperative training based on realities of the industry, nature of the occupation, location of the TVET institution, and other

factors will be considered in the training delivery to ensure that trainees acquire practical and workplace experience.

s.no	Unit competency	TVET Institution training		Cooperative training	Total hours	Remarks
		Theory	Practical			
1.	Organize Garment production process	12	6	12	30	
2.	Perform Machine lay out for product change	14	30	6	50	
3.	Drape fabrics to make patterns	12	108	0	120	
4.	Produce Advanced Garment products	18	126	6	150	
5.	Improve Garment production process	12	6	18	36	
6.	Apply textile coloration and finishing	24	30	16	70	
7.	Apply statistics to operational processes	12	12	4	28	
8.	Total	104	318	62	484	

1.5. Qualification Level and Certification

Based on the descriptors elaborated on the Ethiopian National TVET Qualification Framework (NTQF) the qualification of this specific TVET Program is Level IV**.**

The trainee can exit after successfully completing the modules in one level and will be awarded the equivalent institutional certificate on the level completed. However, only institutional certificate of training accomplishment will be awarded.

1.6. Target Groups

Any citizen **with or without disability** who meets the entry requirements under items 1.7 and capable of participating in the training activities is entitled to take part in the Program.

1.7 Entry Requirements

The prospective participants of this program are required to possess the requirements or directive of the **Ministry of Labor and Skills**.

1.8 Mode of Delivery

This TVET-Program is characterized as a formal Program on middle level technical skills. The mode of delivery is co-operative training. The time spent by the trainees in the real work place/ industry will give them enough exposure to the actual world of work and enable them to get hands-on experience.

The co-operative approach will be supported with school-based lecture-discussion, simulation and actual practice. These modalities will be utilized before the trainees are exposed to the industry environment.

Hence based on the nature of the occupation, location of the TVET institutions, and interest of the industry alternative mode of cooperative training such as apprenticeships, internship and traineeship will be employed. In addition, in the areas where industry is not sufficiently available the established production and service centers/learning factories in TVET institutions will be used as cooperative training places. The Training-Institution and identified companies have forged an agreement to co-operate with regard to the implementation of this program.

1.9. TVET-Program Structure

Unit of Competence		Module Code & Title		Training Outcomes	Duration (In Hours)
IND GAP4 011221	Organize Garment production process	IND GAP4 M010322	• Organizing Garment production process	• Set objectives • Determine production requirements • Prioritize work and Sequence production • Organize team and resources • implement variations to production plan • Implement and monitor work flow	30
IND GAP4 02 1221	Perform Machine lay out for product change	IND GAP4 M02 0322	• Performing Machine lay out for product change	• Identify machine/s • Conduct production layout • Pilot/proto • Re-allocate machine to meet the requirements	50
IND GAP4 03 1221	Drape fabrics to make patterns	IND GAP4 M 03 0322	• Draping fabrics to make patterns	• Prepare draping tools and equipment • Prepare model form for draping • Prepare fabric for draping • Plan drape • Perform draping • Transfer drape to paper • Produce final pattern	120
IND GAP4 04 1221	Produce Advanced Garment products	IND GAP4M 04 0322	• Producing Advanced Garment products	• Prepare for garment production • Produce garment • Complete production process	150

IND GAP4 05 1221	Improve Garment production process	IND GAP4 M05 0322	• Improving Garment production process	• Identify key elements of production requirements • Review production processes • Identify improvement opportunities • Implement improvement	36
IND GAP406 1221	Apply textile coloration and finishing	IND GAP4 M06 0322	• Appling textile coloration and finishing	• Identify colorization techniques • Describe uses of colorization techniques in design process • Colorize fabrics • Ensure workplace standards are met • Document process	70
IND GAP4 07 1221	Apply statistics to operational processes	IND GAP4 M07 0322	• Applying statistics to operational processes	• Collect process data • Interpret data • Calculate control limits •	28

*The time duration (Hours) indicated for the module should include all activities in and out of the TVET institution.

1.10 Institutional Assessment

Two types of evaluation will be used in determining the extent to which training outcomes are achieved. The specific training outcomes are stated in the modules. In assessing them, verifiable and observable indicators and standards shall be used.

The *formative assessment* is incorporated in the training modules and form part of the training process. Formative evaluation provides the trainee with feedback regarding success or failure in attaining training outcomes. It identifies the specific training errors that need to be corrected, and provides reinforcement for successful performance as well. For the teacher, formative evaluation provides information for making instruction and remedial work more effective.

Summative Evaluation the other form of evaluation is given when all the modules in the program have been accomplished. It determines the extent to which competence have been achieved. And, the result of this assessment decision shall be expressed in the term of institutional Assessment implementation guidelines..

Techniques or tools for obtaining information about trainees' achievement include oral or written test, demonstration and on-site observation.

1.11 TVET Teachers Profile

The teachers conducting this particular TVET Program are A Level and who have satisfactory practical experiences or equivalent qualifications.

LEARNING MODULE 01

TVET-PROGRAMME TITLE: **Garment Production Level IV**

MODULE TITLE: Organize Garment Production Process

MODULE CODE: <u>IND GAP4 M 01 0322</u>

NOMINAL DURATION: .30... Hours

MODULE DESCRIPTION This module covers the skills and knowledge required to plan, organize and implement work activities of production Process to achieve planned outcomes in Garment industries.

LEARNING OUTCOMES

LO1. Set objectives

LO2. Determine production requirements

LO3. Prioritize work and Sequence production

LO4. Organize team and resources

LO5 Implement variations to production plan

LO 6 Implement and monitor work flow

MODULE CONTENTS:

At the end of the module the trainee will be able to:

LO1. Set objectives

 1.1 Plan and set objectives

 1.2 State clear objectives.
   1.2.1 just in time (JIT)
   1.2.2 Aim
   1.2.3 VAM
   1.2.4 quick response
   1.2.5 quality circles
   1.2.6 team processes
   1.2.7 benchmarking

  1.3 Reflect objectives

  1.4 Identify SMART objectives

LO2. Determine production requirements

 2.1 Identifying project quantity and quality

 2.2 Identify production process

 2.3 Establishing overall plan

2.4 Establishing required resource

2.5 Maintain repetitive production runs

2.6 Stock services replenishment

LO3. Prioritize work and Sequence production

3.1 Prioritize work

      3.1.1   Production demand

      3.1.2   Customer request

      3.1.3   Resource requirement

      3.1.4   Production requirement

      3.1.5   Delivery date

3.2 identifying required process steps

3.3 Preparing document.

LO4. Organize team and resources

4.1 Selecting work team.

4.2 Identifying facility, equipment and material,

LO5 Implement variations to production plan

5.1.   Coordinate systematic implementation of production plan

5.2.   Reallocating work

5.3.   Identify and correcting production efficiency

5.4.   define Team or individual responsibility

LO 6 Implement and monitor work flow

6.1 Monitoring work flow.

6.2 Ensuring the implemented methods of work

6.3 Troubleshooting factors of production delay

6.4 Maintaining and reporting recorded documents

Learning Methods:				
For none impaired trainees	**Reasonable Adjustment for Trainees with Disability (TWD)**			
	Low Vision	**Deaf**	**Hard of hearing**	**Physical impairment**
Lecture-discussion	❖ Provide large print text ❖ Prepare the lecture in **Audio/video** ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text ❖ Make sure the luminosity of the light of class room is kept ❖ Use normal tone of voice ❖ Encourage trainees to record the lecture in audio format ❖ Provide Orientation on the physical feature of the work shop ❖ Summarize main points	❖ Assign sign language interpreter ❖ Arrange the class room seating to be conducive for eye to eye contact ❖ Make sure the luminosity of the light of class room is kept ❖ Introduce new and relevant vocabularies ❖ Use short and clear sentences ❖ Give emphasis on visual lecture and ensure the attention of the trainees ❖ Avoid movement during lecture time ❖ Present the lecture in video format ❖ Summarize main points	❖ Organize the class room seating arrangement to be accessible to trainees ❖ Speak loudly ❖ Ensure the attention of the trainees ❖ Present the lecture in video format ❖ Ensure the attention of the trainees	❖ Organize the class room seating arrangement to be accessible for wheelchairs users. ❖ Facilitate and support the trainees who have severe impairments on their upper limbs to take note ❖ Provide Orientation on the physical feature of the work shop
Demonstration	❖ Conduct close follow up ❖ Use verbal description ❖ Provide special attention in the process of guidance ❖ facilitate the support of peer trainees ❖ Prepare & use simulation	❖ use Sign language interpreter ❖ Use video recorded material ❖ Ensure attention of the trainees ❖ Provide structured training ❖ Show clear and short method ❖ Use gesture	❖ Illustrate in clear & short method ❖ Use Video recorded material ❖ Ensure the attention of the trainees)	❖ Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines ❖ Assign peer trainees to assist ❖ Conduct close follow up
Group discussion	❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up	❖ Use sign language interpreters ❖ Facilitate the integration of trainees with group members	❖ Facilitate the integration of trainees with group members	❖ Introduce the trainees with their peers

	❖ Introduce the trainees with other group member ❖ Brief the thematic issues of the work	❖ Conduct close follow up ❖ Introduce the trainees with other group member	❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Inform the group members to speak loudly	
Exercise	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training ❖ Introduce new and relevant vocabularies	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/ practical training	❖ Assign peer trainees ❖ Use additional nominal hours if necessary
Individual assignment	❖ prepare the assignment questions in large text ❖ Encourage the trainees to prepare and submit the assignment in large texts ❖ Make available recorded assignment questions ❖ Facilitate the trainees to prepare and submit the assignment in soft or hard copy	❖ Use sign language interpreter ❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material	❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material	

ASSESSMENT METHODS:

Interview		• Use sign language interpreter ❖ Ensure or conform whether the proper communication was conducted with the trainee through the service of the sign language interpreter ❖ Use short and clear questioning ❖ Time extension	❖ Speak loudly ❖ Using sign language interpreter if necessary	❖ Use written response as an option for the trainees having speech challenges
Written test	❖ Prepare the exam in large texts ❖ Use interview as an option if necessary ❖ Prepare the exam in audio format ❖ Assign human reader ❖ (if necessary) ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, True or False, matching and short answers ❖ Avoid essay writing ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, true or false, matching and short answers if necessary.	❖ Use oral response as an option to give answer for trainees having severe upper limb impairment ❖ Time extension for trainees having severe upper limb impairment

ASSESSMENT CRITERIA

Lo1 Set objectives

- Objectives are planned consistent with and linked to work activities in accordance with organizational aims.
- Objectives are stated as measurable targets with clear time frames.
- Support and commitment of team members are reflected in the objectives.
- Realistic and attainable objectives are identified.

LO2 Determine production requirements

- Projected quantity and quality requirements, standard times and production capacities are identified.
- Production process and material handling options are identified.
- Resources required for the project or production order are established.

LO3 Priorities work and Sequence production

- Work is prioritized taking into account production demands, customer requests, requirements, and efficiency standards of the workplace.
- Steps required for the process are identified ensuring most efficient use of resources.
- Documentation is prepared in accordance with workplace practices.

LO4 Organize team and resources

- Work team is selected and organized in accordance with workplace practices.
- Facility, equipment, material, and resources required for the production process are identified and organized in accordance with the production schedule and OHS practices.

LO5 Implement variations to production plan

- Systematic implementation of variations to the *production plan* is coordinated to ensure production meets the schedule and specifications.
- Work is re-allocated in accordance with production priorities, where required.
- Inefficiencies are identified and dealt with in accordance with workplace production practices.
- Team or individual responsibilities are defined and communicated

LO6 Implement and monitor work flow

- Workflow is monitored to ensure production schedule is maintained.
- Methods are implemented to ensure that work is directed to each work area or location as required, and potential congestion areas are identified.
- Troubleshooting occurs on a regular basis in response to breakdowns,

Annex: Resource Requirements

Item No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Trainee)
IND GAP4M 01 0322 Organize Garment Production Process				
A.	*Learning Materials*			
1.	TTLM	Information sheet, operation sheet and lab test	25	1:1
2.	Apparel Manufacturing Sewn Product Analysis"	Ruth E. Glock, Grace I. Kunz(2005)	5	5:1
3	The Technology of Clothing Manufacture	Carr H.,(2005)	5	5:1
4	Apparel Manufacturing Hand Book	Jacob Solinger,(1980}	5	5:1
5	Journals/Publication/Magazines			
B.	*Learning Facilities & Infrastructure*			
1.	Lecture Room	Standard	1	1:25
2.	Work shop	Standard	1	1:25
3.	Library			
4.	Visual training media (LCD, laptops, whiteboard)	Standard		1:25
C.	*Consumable Materials*			
1.	Paper	A4	2 pac	1:12
3	Marker	White board	4pcs	1:1
D.	*Tools and Equipments*			
1.	Standard size table		2	1:13
2.	Record book	Not book format	25	1:1
3.	Chart		25	1:1

LEARNING MODULE 02
TVET-PROGRAMME TITLE: Garment Production **Level IV**
MODULE TITLE: **Performing Machine lay out for product change**
MODULE CODE: **IND GAP4 M02 0322**
NOMINAL DURATION: .50... Hours
MODULE DESCRIPTION: This module covers the skills and knowledge required to Perform Machine lay out for production changes in a Garment industry.

LEARNING OUTCOMES
 	
At the end of the module the trainee will be able to:
 	
  LO1. Identify machine/s
 	
  LO2. Conduct production layout
 	
  LO3. Pilot/proto
 	
  LO4. Re-allocate machine to meet the requirements

MODULE CONTENTS:
 	
LO1. Identify machine/s
 	
    1.1. OHS practices
 	
    1.2. Selecting Machine accordance with product specifications
 	
    1.3. Interpreting Product specifications and types of machine requirements.
 	
    1.4. Identifying Production systems
 	
LO2. Conduct production layout
 	
    2.1. Obtaining Garment production
    2.2. checking Machine operation
    2.3. performing Machine layout with product specifications and operations sequences
    2.4. checking Sample produced
 	
LO3. Pilot/proto
 	
    3.1 testing Pilot production
 	
    3.2 Re-setting the machine product standards
 	
LO4. Re-allocate machine to meet the requirements
 	
    4.1 interpreted Pilot results and determine re-allocation
 	
    4.2 Assessing machine Lay out
 	
    4.2. Setting target
 	
    4.3. Informing newly arranged layout to Appropriate production personnel
 	
    4.4. maintained and reports Recorded documents

Learning Methods:				
For none impaired trainees	**Reasonable Adjustment for Trainees with Disability (TWD)**			
	Low Vision	**Deaf**	**Hard of hearing**	**Physical impairment**
Lecture-discussion	❖ Provide large print text ❖ Prepare the lecture in **Audio/video** ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text ❖ Make sure the luminosity of the light of class room is kept ❖ Use normal tone of voice ❖ Encourage trainees to record the lecture in audio format ❖ Provide Orientation on the physical feature of the work shop ❖ Summarize main points	❖ Assign sign language interpreter ❖ Arrange the class room seating to be conducive for eye to eye contact ❖ Make sure the luminosity of the light of class room is kept ❖ Introduce new and relevant vocabularies ❖ Use short and clear sentences ❖ Give emphasis on visual lecture and ensure the attention of the trainees ❖ Avoid movement during lecture time ❖ Present the lecture in video format ❖ Summarize main points	❖ Organize the class room seating arrangement to be accessible to trainees ❖ Speak loudly ❖ Ensure the attention of the trainees ❖ Present the lecture in video format ❖ Ensure the attention of the trainees	❖ Organize the class room seating arrangement to be accessible for wheelchairs users. ❖ Facilitate and support the trainees who have severe impairments on their upper limbs to take note ❖ Provide Orientation on the physical feature of the work shop
Demonstration	❖ Conduct close follow up ❖ Use verbal description ❖ Provide special attention in the process of guidance ❖ facilitate the support of peer trainees ❖ Prepare & use simulation	❖ use Sign language interpreter ❖ Use video recorded material ❖ Ensure attention of the trainees ❖ Provide structured training ❖ Show clear and short method ❖ Use gesture ❖ rovide tutorial support (if necessary)	❖ Illustrate in clear & short method ❖ Use Video recorded material ❖ Ensure the attention of the trainees ❖ rovide tutorial support (if necessary)	❖ Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines ❖ Assign peer trainees to assist ❖ Conduct close follow up ❖ rovide tutorial support (if necessary
Group discussion	❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up	❖ Use sign language interpreters ❖ Facilitate the integration of trainees with group members	❖ Facilitate the integration of trainees with group members	❖ Introduce the trainees with their peers

	❖ Introduce the trainees with other group member ❖ Brief the thematic issues of the work	❖ Conduct close follow up ❖ Introduce the trainees with other group member	❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Inform the group members to speak loudly	
Exercise	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training ❖ Introduce new and relevant vocabularies	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/ practical training	❖ Assign peer trainees ❖ Use additional nominal hours if necessary
Individual assignment	❖ prepare the assignment questions in large text ❖ Encourage the trainees to prepare and submit the assignment in large texts ❖ Make available recorded assignment questions ❖ Facilitate the trainees to prepare and submit the assignment in soft or hard copy	❖ Use sign language interpreter ❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material	❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material	

ASSESSMENT METHODS:

Interview		• Use sign language interpreter ❖ Ensure or conform whether the proper communication was conducted with the trainee through the service of the sign language interpreter ❖ Use short and clear questioning ❖ Time extension	❖ Speak loudly ❖ Using sign language interpreter if necessary	❖ Use written response as an option for the trainees having speech challenges
Written test	❖ Prepare the exam in large texts ❖ Use interview as an option if necessary ❖ Prepare the exam in audio format ❖ Assign human reader ❖ (if necessary) ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, True or False, matching and short answers ❖ Avoid essay writing ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, true or false, matching and short answers if necessary.	❖ Use oral response as an option to give answer for trainees having severe upper limb impairment ❖ Time extension for trainees having severe upper limb impairment
Demonstration/ Observation	❖ Brief the instruction or provide them in large text ❖ Time extension	❖ Use sign language interpreter ❖ Brief on the instruction of the exam ❖ Provide activity-based/ practical assessment method ❖ Time extension	❖ Provide activity based assessment ❖ Brief on the instruction of the exam ❖ Use loud voice ❖ Time extension	❖ Provide activity based assessment ❖ Conduct close follow up ❖ Time extension

ASSESSMENT CRITERIA :-

LO1. Identify machine/s

- Machine is selected in accordance with product specifications and *OHS practices*
- Product specifications are interpreted correctly in relation to types of machine requirements.
- Production systems are identified

LO2. Conduct production layout

- Garment to be used for production is obtained
- Machine operation is checked to ensure correct operation
- Machine layout is performed in accordance with product specifications and operations sequences.
- Sample is produced and checked for conformance with product standards and specifications.

LO3. Pilot/proto

- Pilot is tested in accordance with workplace practices to ensure required standards of quality are met.
- Re-set the machine to meet the required product standards.

LO4. Re-allocate machine to meet the requirements

- Pilot results are interpreted to determine re-allocation requirements
- Lay out changes are assessed in accordance with product specifications and target set.
- Appropriate production personnel are informed of the availability of the newly arranged machine in accordance with Standard Operation Procedure.
- Records are maintained and reports prepared, where necessary, in accordance with workplace practices

Annex: Resource Requirements

Item No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Learner)
	IND GAP4 M02 0322 Performing Machine lay out for product change			
A.	**Learning Materials**			
1.	TTLM	Information sheet, Lap test Operation sheet	5	1-5
2.	Reference Books			
3.			5	1:5
4.			5	1:5
B.	**Learning Facilities & Infrastructure**			
1.	Lecture Room	Standard	1	1:25
2	Visual training media (LCD, laptops, blackboard, whiteboard, flip chart)		1	1:25
C.	**Consumable Materials**			
1.	Carton			
2.	Poly bag		1pack	1:1
D.	**Tools and Equipment's**			
1.	Single needle lock stitch		5	1:5
2.	Double needle lock stitch		5	1:5
3.	Over lock/safety stitch		5	1:5
4.	Flat lock		5	1:5
5.	Button hole		5	1:5
6.	Button attach		5	1:5
7.	Welting		5	1:5
8.	Eye let		5	1:5
9.	Pattern sewer		5	1:5

LEARNING MODULE 03
TVET-PROGRAMME TITLE: Garment Production **Level IV**
MODULE TITLE: **Drape fabrics to make patterns**
MODULE CODE: **IND GAP4 M03 0322**
NOMINAL DURATION: .120... Hours
MODULE DESCRIPTION: This module covers the skills and knowledge required to produce pattern using draping techniques in garment industry.
LEARNING OUTCOMES At the end of the module the trainee will be able to: **LO1.** Prepare draping tools and equipment **LO2.** Prepare model form for draping **LO3**. Prepare fabric for draping **LO4.** Plan drape **LO5.** Perform draping **LO6.** Transfer drape to paper **LO7.** Produce final pattern

MODULE CONTENTS:

LO1. Prepare draping tools and equipment

    1.1.   Setting up work area

    1.2.   Selecting and preparing Draping tools and equipment

LO2. Prepare model form for draping

    2.1 Identifying and marking body reference points

    2.2 Checking and confirming Measurements

LO3. Prepare fabric for draping

    3.1 Estimating required fabric.

    3.2 Identifying fabric grain

    3.3 Identify and assessing fabric handling qualities

LO4. Plan drape

    4.1 . identifying adding wearing ease requirements

    4.2 . identify dart manipulating Requirements

    4.3 Planning seam position

    4.4 Developed draping plan

LO5. Perform draping

    5.1.   Pinning fabric

    5.2.   Molding fabric

    5.3.   Adding ease

    5.4.   Forming darts and seams

    5.5.   Truing

LO6. Transfer drape to paper

    6.1 .Removing drape from model

    6.2 Drawing lines

    6.3 Using drape as a template

    6.4 Truing and marking

LO7. Produce final pattern

    7.1 . Produce Pattern

    7.2 . Checking Pattern pieces

    7.3 . Labeling Pattern pieces

    7.4 Finalizing and checking patterns

    7.5 Completing specification sheets

    7.6 . Filing finished patterns

Learning Methods:				
For none impaired trainees	**Reasonable Adjustment for Trainees with Disability (TWD)**			
	Low Vision	**Deaf**	**Hard of hearing**	**Physical impairment**
Lecture-discussion	❖ Provide large print text ❖ Prepare the lecture in **Audio/video** ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text ❖ Make sure the luminosity of the light of class room is kept ❖ Use normal tone of voice ❖ Encourage trainees to record the lecture in audio format ❖ Provide Orientation on the physical feature of the work shop ❖ Summarize main points	❖ Assign sign language interpreter ❖ Arrange the class room seating to be conducive for eye to eye contact ❖ Make sure the luminosity of the light of class room is kept ❖ Introduce new and relevant vocabularies ❖ Use short and clear sentences ❖ Give emphasis on visual lecture and ensure the attention of the trainees ❖ Avoid movement during lecture time ❖ Present the lecture in video format ❖ Summarize main points	❖ Organize the class room seating arrangement to be accessible to trainees ❖ Speak loudly ❖ Ensure the attention of the trainees ❖ Present the lecture in video format ❖ Ensure the attention of the trainees	❖ Organize the class room seating arrangement to be accessible for wheelchairs users. ❖ Facilitate and support the trainees who have severe impairments on their upper limbs to take note ❖ Provide Orientation on the physical feature of the work shop
Demonstration	❖ Conduct close follow up ❖ Use verbal description ❖ Provide special attention in the process of guidance ❖ facilitate the support of peer trainees ❖ Prepare & use simulation	❖ use Sign language interpreter ❖ Use video recorded material ❖ Ensure attention of the trainees ❖ Provide structured training ❖ Show clear and short method ❖ Use gesture ❖ rovide tutorial support (if necessary)	❖ Illustrate in clear & short method ❖ Use Video recorded material ❖ Ensure the attention of the trainees ❖ rovide tutorial support (if necessary)	❖ Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines ❖ Assign peer trainees to assist ❖ Conduct close follow up ❖ rovide tutorial support (if necessary

Group discussion	❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Brief the thematic issues of the work	❖ Use sign language interpreters ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member	❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Inform the group members to speak loudly	❖ Introduce the trainees with their peers
Exercise	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training ❖ Introduce new and relevant vocabularies	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/ practical training	❖ Assign peer trainees ❖ Use additional nominal hours if necessary
Individual assignment	❖ prepare the assignment questions in large text ❖ Encourage the trainees to prepare and submit the assignment in large texts ❖ Make available recorded assignment questions ❖ Facilitate the trainees to prepare and submit the assignment in soft or hard copy	❖ Use sign language interpreter ❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material	❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material	

ASSESSMENT METHODS:

Interview		• Use sign language interpreter ❖ Ensure or conform whether the proper communication was conducted with the trainee through the service of the sign language interpreter ❖ Use short and clear questioning ❖ Time extension	❖ Speak loudly ❖ Using sign language interpreter if necessary	❖ Use written response as an option for the trainees having speech challenges
Written test	❖ Prepare the exam in large texts ❖ Use interview as an option if necessary ❖ Prepare the exam in audio format ❖ Assign human reader ❖ (if necessary) ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, True or False, matching and short answers ❖ Avoid essay writing ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, true or false, matching and short answers if necessary.	❖ Use oral response as an option to give answer for trainees having severe upper limb impairment ❖ Time extension for trainees having severe upper limb impairment
Demonstration/ Observation	❖ Brief the instruction or provide them in large text ❖ Time extension	❖ Use sign language interpreter ❖ Brief on the instruction of the exam ❖ Provide activity-based/ practical assessment method ❖ Time extension	❖ Provide activity based assessment ❖ Brief on the instruction of the exam ❖ Use loud voice ❖ Time extension	❖ Provide activity based assessment ❖ Conduct close follow up ❖ Time extension

ASSESSMENT CRITERIA:

LO.1 Prepare draping tools and equipment

- Work area is set up according to OHS practices and specifications for work.
- Draping tools and equipment are selected and prepared.

LO.2 Prepare model form for draping

- Body reference points on model form are identified and marked.
- Any additional model form preparation is identified.
- Measurements are checked for conformance to required specifications.

LO.3 Prepare fabric for draping

- Dimensions of fabric piece required for each section/piece to be draped are estimated.
- Warp, weft and bias of fabric are identified.
- Fabric handling qualities are identified and assessed.

LO.4 Plan drape

- Requirements for adding wearing ease for movement are identified.
- Requirements for manipulating dart excess are identified.
- Seam positioning is planned.
- Drape plan is developed.

LO.5 Perform draping

- Fabric is pinned on model form, relating body reference points and fabric grains.
- Fabric is molded and manipulated to fit model form.
- Ease is added to allow for movement.
- Fabric is smoothed or manipulated over contours of model form.
- Darts and seams are formed and pinned.
- Drape is prepared for truing.

LO.6. Transfer drape to paper

- Drape is removed from model form.
- Lines are drawn or ruled on drape at pin positions.
- Drape is used as a template to create paper pattern or block.
- Pattern or block is trued and marked.

LO.7. Produce final pattern

- Pattern is produced.
- Pattern pieces are checked for accuracy of seam allowances, hems, functional openings and closures, seam match, and flow-through.
- Pattern pieces are labeled and markings completed.
- Pattern is finalized and checked to ensure accuracy, completeness and compliance to specifications.
- Specification sheets are completed and attached to pattern blocks for storage.
- Finished patterns are filed and stored.

Annex: Resource Requirements

	IND GAP4 M03 0322 Drape fabrics to make patterns			
Item No.	**Category/Item**	**Description/ Specifications**	**Quantity**	**Recommended Ratio (Item: Trainee)**
A.	*Learning Materials*			
1.	TTLM	TTTLM prepared by the trainer	5	1:1
2.	Joseph, Helen, Armstrong. Pattern Making for Fashion Design.	(3rd edition) Prentice Hall 1999.	5	1:1
	The Perfect Fit classic guide to alter patterns, Creative publishing international	2005	5	1:5
	Garment Technology for Fashion Designers	Gerry Cooklin,1997	5	1:5
4.	Journals/Publication/Magazines		5	1:5
B.	*Learning Facilities & Infrastructure*			
1.	Visual training media (LCD, laptops, blackboard, whiteboard, flip chart		1	1:25
C.	*Consumable Materials*			
1.	Muslin fabric	Cotton	Meter	5 meters individual
2	Fabric for draping	Depend on styles	Meter	5 meters individual
3	Interlining	Depend on styles	Meter	5 meters individual
4	Limning	Depend on styles	meter	5 meters individual
5	Sewing threads	Cone	25	1:1
6	Draping pins	Packet	25	1;1
7	Zippers	Standard	150	3:1
8	Pattern papers	Hard /roll	5	1:5

9	Marker Pens	White board/packet	5	1:5
10	Pencils	HB	25	1:1
11	Erasers		25	1:1
12	Narrow tape/ribbon		75	3:1
13	Tape measure	Standard/pieces	25	1:25
D.	*Tools and Equipments*			
1.	Models /Body form	Female, Males, Children's	9	1:3
2	Steam Iron		5	1:5
3	Fabric scissors		25	1:1
4	Rulers	Straight, curve….	25	1:1
5	Pattern Notcher		5	1:5

LEARNING MODULE 04			
TVET-PROGRAMME TITLE: **Garment Production Level IV**			
MODULE TITLE: **Producing Advanced Garment products**			
MODULE CODE: **IND GAP4 M04 0322**			
NOMINAL DURATION: .150... Hours			
MODULE DESCRIPTION: This module covers the skills and knowledge required to design, planning and production of advanced garment			
LEARNING OUTCOMES At the end of the module the trainee will be able to: **LO1. Prepare for garment production** **LO2. Produce garment** **LO3. Complete production process**			

MODULE CONTENTS:
 	
LO1. Prepare for garment production
 	
      1.1 Developing Pattern for garment production
 	
      1.2 Modifying Patterns for new design
 	
      1.3 Selecting appropriate Fabric and materials,
 	
      1.4 Selecting sewing tools and equipment
 	
      1.5 Checking Equipment ensure correct operation
 	
      1.6 Assessing Ability of sewing tools and equipment
 	
      1.7 Identifying Additional sewing resources
 	
LO2. Produce garment
 	
      2.1. Applying OHS practices sew garment
 	
      2.2. Sew garment
 	
            2.2.1.   Jacket with lining
            2.2.2.   Denim jacket
            2.2.3.   Suit
            2.2.4.   Coat
 	
      2.3. Checking Garment against pattern and design
 	
      2.4. Correcting minor process faults or defectt
 	
      2.5. Reviewing Production techniques
 	
LO3. Complete production process			

4.1 Finished garment

4.2 Assessing Garment against design and pattern

4.3 Rectifying garment faults

4.4 Cleaning Area and equipment

4.5 Stored tools and equipment

Learning Methods:				
For none impaired trainees	**Reasonable Adjustment for Trainees with Disability (TWD)**			
	Low Vision	**Deaf**	**Hard of hearing**	**Physical impairment**
Lecture-discussion	❖ Provide large print text ❖ Prepare the lecture in **Audio/video** ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text ❖ Make sure the luminosity of the light of class room is kept ❖ Use normal tone of voice ❖ Encourage trainees to record the lecture in audio format ❖ Provide Orientation on the physical feature of the work shop ❖ Summarize main points	❖ Assign sign language interpreter ❖ Arrange the class room seating to be conducive for eye to eye contact ❖ Make sure the luminosity of the light of class room is kept ❖ Introduce new and relevant vocabularies ❖ Use short and clear sentences ❖ Give emphasis on visual lecture and ensure the attention of the trainees ❖ Avoid movement during lecture time ❖ Present the lecture in video format ❖ Summarize main points	❖ Organize the class room seating arrangement to be accessible to trainees ❖ Speak loudly ❖ Ensure the attention of the trainees ❖ Present the lecture in video format ❖ Ensure the attention of the trainees	❖ Organize the class room seating arrangement to be accessible for wheelchairs users. ❖ Facilitate and support the trainees who have severe impairments on their upper limbs to take note ❖ Provide Orientation on the physical feature of the work shop
Demonstration	❖ Conduct close follow up ❖ Use verbal description ❖ Provide special attention in the process of guidance ❖ facilitate the support of peer trainees ❖ Prepare & use simulation	❖ use Sign language interpreter ❖ Use video recorded material ❖ Ensure attention of the trainees ❖ Provide structured training ❖ Show clear and short method ❖ Use gesture ❖ rovide tutorial support (if necessary)	❖ Illustrate in clear & short method ❖ Use Video recorded material ❖ Ensure the attention of the trainees ❖ rovide tutorial support (if necessary)	❖ Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines ❖ Assign peer trainees to assist ❖ Conduct close follow up ❖ rovide tutorial support (if necessary

Group discussion	❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Brief the thematic issues of the work	❖ Use sign language interpreters ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member	❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Inform the group members to speak loudly	❖ Introduce the trainees with their peers
Exercise	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training ❖ Introduce new and relevant vocabularies	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/ practical training	❖ Assign peer trainees ❖ Use additional nominal hours if necessary
Individual assignment	❖ prepare the assignment questions in large text ❖ Encourage the trainees to prepare and submit the assignment in large texts ❖ Make available recorded assignment questions ❖ Facilitate the trainees to prepare and submit the assignment in soft or hard copy	❖ Use sign language interpreter ❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material	❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material	

ASSESSMENT METHODS:

Interview		❖ Use sign language interpreter ❖ Ensure or conform whether the proper communication was conducted with the trainee through the service of the sign language interpreter ❖ Use short and clear questioning ❖ Time extension	❖ Speak loudly ❖ Using sign language interpreter if necessary	❖ Use written response as an option for the trainees having speech challenges
Written test	❖ Prepare the exam in large texts ❖ Use interview as an option if necessary ❖ Prepare the exam in audio format ❖ Assign human reader ❖ (if necessary) ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, True or False, matching and short answers ❖ Avoid essay writing ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, true or false, matching and short answers if necessary.	❖ Use oral response as an option to give answer for trainees having severe upper limb impairment ❖ Time extension for trainees having severe upper limb impairment
Demonstration/ Observation	❖ Brief the instruction or provide them in large text ❖ Time extension	❖ Use sign language interpreter ❖ Brief on the instruction of the exam ❖ Provide activity-based/ practical assessment method ❖ Time extension	❖ Provide activity based assessment ❖ Brief on the instruction of the exam ❖ Use loud voice ❖ Time extension	❖ Provide activity based assessment ❖ Conduct close follow up ❖ Time extension

ASSESSMENT CRITERIA :-

LO1. Prepare for garment production

- Pattern is developed for garment production according to size and design requirements.

- Patterns are modified for new design

- Fabric, materials, tools and equipment are selected and prepared.

- Equipment is checked to ensure correct operation.

- Ability of tools and equipment to achieve plan is assessed.

- Additional resources that may be required are identified.

LO2. Produce garment

- Equipment is used to produce or sew garment according to pattern and required OHS practices.

- Garment is checked against pattern and design.

- Minor process faults are identified and corrected where necessary.

- Production techniques and design are continuously reviewed in an iterative manner to make improvements.

LO3. Complete production process

- Garment is finished according to design requirements.

- Garment is assessed against design and pattern.

- Garment faults are rectified.

- Area and equipment is cleaned.

- Tools and equipment are stored as required.

IND GAP4 M04 0322 Producing Advanced Garment products				
Item No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Trainee)
A.	*Learning Materials*			
1.	TTLM	Information sheet, Lap test Operation sheet	5	1:5
2.	Reference Books			
4.	Apparel Product Development	Maurice J.Johnson & Evelyn C.moore, Prentice Hall Inc,(92001)	5	1:5
	Apparel Manufacturing Sewn Product Analysis	. Ruth E. Glock and Grace I. Kunz Fourth Edition, Pearson Prentice Hall, (2005)	5	1:5
	Sewing for the Apparel Industry	Shaeffer Claire Prentice Hall, New Jersey,(2001)	5	1:5
	Stitches & Seams	Laing R.M., Webster J, The Textile Institute,Manchester,U.K (1998)	5	1:5
B.	*Learning Facilities & Infrastructure*			
1.	Lecture Room	Standard	1	1:25
2.	Visual training media (LCD, laptops, blackboard, whiteboard,		1	1:25

	flip chart)			
3.				
C.	*Consumable Materials*			
1.	Pattern Paper	A1	250	2:25
2	Marker	Permanent	6pack	1:1
3	Pin	striate	25pac	1:1
4	Fabric	Different characteristic depande on the project	250meter	10:1
5	Fabric chalk			
D.	*Tools and Equipments*			
1.	Scissor		25	1:1
2	SNLSM	Any type and brands	25	1:1
3	Button attaché	Any type and brands	5	1:5
4	Button sewing	Any type and brands	5	1:5
5	Bar tack machine	Any type and brands	5	1:5
6	French carve		25	1:5
7	Hip carve		25	1:5
8	Ruler	50cm Plastic	25	1:1
9	Sewing thread	Depend on the fabric property	25 spo	1:1

LEARNING MODULE 5
TVET-PROGRAMME TITLE: Garment Production **Level IV**
MODULE TITLE: **Improving Garment production process**
MODULE CODE: **<u>IND GAP4 M05 0322</u>**
NOMINAL DURATION: .36... Hours
MODULE DESCRIPTION: This module covers the skills and knowledge to review production processes used in garment production and contribute to identifying and implementing improvements. The module applies to providing input to improvement of processes in the range of garment production industry, including volume and custom production

LEARNING OUTCOMES At the end of the module the trainee will be able to:
 	
     LO1. Identify key elements of production requirements
 	
     LO2. Review production processes
 	
     LO3. Identify improvement opportunities
 	
     LO4. Implement improvement

MODULE CONTENTS:
 	
 LO1. Identify key elements of production requirements
 	
     1.1 Identify key customer need and expectation
 	
     1.2 Understand garment production process
 	
     1.3 Understand types of production systems
 	
     1.4 Identify feature of each production systems
 	
     1.5 Understand garment value chain
 	
     1.6 Identify key supplier
 	
     1.7 Identify enterprise quality standard
 	
     1.8 identify Enterprise production requirements
 	
 LO2. Review production processes
 	
     2.1 Reviewing OHS practice
 	
     2.2 Identifying of production waste
 	
     2.3 Identify mmethods of monitoring production outcomes
 	
     2.4 Assessing ggarment production outcomes
 	
 LO3. Identify improvement opportunities
 	
     3.1 identify improvement Opportunities

3.2 Use improvement techniques and tools

3.3 Use improvement methods

3.4 Evaluate improvement with appropriate personnel

3.5 Reporting, recording and recommendations

LO4. Implement improvement

4.1 Identify implications of production improvement

4.2 Identify desired result of improvement and measure outcome

4.3 Identify negative implication of production improvement

4.4 Identifying and implementing methods of addressing   negative implications

4.5 Improving communication

4.6 Implementing improvement

4.7 Monitoring the improvement

4.8 Adjusting improvement '

Learning Methods:				
For none impaired trainees	**Reasonable Adjustment for Trainees with Disability (TWD)**			
	Low Vision	**Deaf**	**Hard of hearing**	**Physical impairment**
Lecture-discussion	❖ Provide large print text ❖ Prepare the lecture in **Audio/video** ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text ❖ Make sure the luminosity of the light of class room is kept ❖ Use normal tone of voice ❖ Encourage trainees to record the lecture in audio format ❖ Provide Orientation on the physical feature of the work shop ❖ Summarize main points	❖ Assign sign language interpreter ❖ Arrange the class room seating to be conducive for eye to eye contact ❖ Make sure the luminosity of the light of class room is kept ❖ Introduce new and relevant vocabularies ❖ Use short and clear sentences ❖ Give emphasis on visual lecture and ensure the attention of the trainees ❖ Avoid movement during lecture time ❖ Present the lecture in video format ❖ Summarize main points	❖ Organize the class room seating arrangement to be accessible to trainees ❖ Speak loudly ❖ Ensure the attention of the trainees ❖ Present the lecture in video format ❖ Ensure the attention of the trainees	❖ Organize the class room seating arrangement to be accessible for wheelchairs users. ❖ Facilitate and support the trainees who have severe impairments on their upper limbs to take note ❖ Provide Orientation on the physical feature of the work shop
Demonstration	❖ Conduct close follow up ❖ Use verbal description ❖ Provide special attention in the process of guidance ❖ facilitate the support of peer trainees ❖ Prepare & use simulation	❖ use Sign language interpreter ❖ Use video recorded material ❖ Ensure attention of the trainees ❖ Provide structured training ❖ Show clear and short method ❖ Use gesture ❖ provide tutorial support (if necessary)	❖ Illustrate in clear & short method ❖ Use Video recorded material ❖ Ensure the attention of the trainees ❖ provide tutorial support (if necessary)	❖ Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines ❖ Assign peer trainees to assist ❖ Conduct close follow up ❖ provide tutorial support (if necessary

Group discussion	❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Brief the thematic issues of the work	❖ Use sign language interpreters ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member	❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Inform the group members to speak loudly	❖ Introduce the trainees with their peers
Exercise	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training ❖ Introduce new and relevant vocabularies	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/ practical training	❖ Assign peer trainees ❖ Use additional nominal hours if necessary
Individual assignment	❖ prepare the assignment questions in large text ❖ Encourage the trainees to prepare and submit the assignment in large texts ❖ Make available recorded assignment questions ❖ Facilitate the trainees to prepare and submit the assignment in soft or hard copy	❖ Use sign language interpreter ❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material	❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material	

ASSESSMENT METHODS:

Interview		• Use sign language interpreter ❖ Ensure or conform whether the proper communication was conducted with the trainee through the service of the sign language interpreter ❖ Use short and clear questioning ❖ Time extension	❖ Speak loudly ❖ Using sign language interpreter if necessary	❖ Use written response as an option for the trainees having speech challenges
Written test	❖ Prepare the exam in large texts ❖ Use interview as an option if necessary ❖ Prepare the exam in audio format ❖ Assign human reader ❖ (if necessary) ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, True or False, matching and short answers ❖ Avoid essay writing ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, true or false, matching and short answers if necessary.	❖ Use oral response as an option to give answer for trainees having severe upper limb impairment ❖ Time extension for trainees having severe upper limb impairment
Demonstration/ Observation	❖ Brief the instruction or provide them in large text ❖ Time extension	❖ Use sign language interpreter ❖ Brief on the instruction of the exam ❖ Provide activity-based/ practical assessment method ❖ Time extension	❖ Provide activity based assessment ❖ Brief on the instruction of the exam ❖ Use loud voice ❖ Time extension	❖ Provide activity based assessment ❖ Conduct close follow up ❖ Time extension

ASSESSMENT CRITERIA:

LO.1 Identify key elements of production requirements

- Key customers and their needs and expectations are identified.

- Garment production processes are described in terms of how they contribute to the value chain.

- Key suppliers are identified and their role in the value chain described.

- Enterprise quality standards for critical points of production process are identified.

- Enterprise production requirements are identified.

LO.2 Review production processes

- Housekeeping practices are identified and reviewed against enterprise standards to assess conformity.

- OHS practices are identified and reviewed against enterprise standards to assess conformity.

- Production waste is identified.

- Methods of monitoring production outcomes are identified.

- Garment production outcomes are assessed against production goals.

LO.3 Identify improvement opportunities

- Opportunities for improvement are identified.

- Suggestions for improvement are made.

- Improvement is tested with appropriate personnel.

- Reports, records and recommendations for improvement are provided.

LO.4 Implement improvement

- Implications of improvement are identified.
- Desired result of improvement is identified and method of measuring outcome established.
- Methods of addressing any possible negative implications are identified and implemented.
- Consultation with relevant personnel is conducted to communicate improvement.
- Improvement is implemented.
- Improvement is monitored to ensure correct implementation and review effectiveness in achieving desired result.
- Adjustments to improvement are made as required

Annex: Resource Requirements

Item No	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Trainee)
IND GAP3 M040303 Performing cutting operation				
A.	Learning Materials			
	Reference manuals and books To be developed by the trainer			
	TTLM		25	1:1
	Maurice J.Johnson & Evelyn C.moore, (2001) Apparel Product Development		5	1:5
	Ruth E. Glock, Grace I. Kunz(2005) Apparel Manufacturing Sewn Product Analysis"		5	1:5
	Carr H.,(2004). The Technology of Clothing Manufacture		5	1:5
	Jacob Solinger,(1980),Apparel Manufacturing Hand Book		5	1:5
	Churter, A.J.(1995),Introduction to Clothing Production Management		5	1:5
	Gerry Cooklin (1995)Introduction to Clothing Manufacture		5	1:5
B.	Learning Facilities & Infrastructure			
	Work shop		1	1:25
	Lecture room		1	1:25
	Library / learning resource area	Equipped with multi media	1	1:25
C.	**Consumable Materials**			
D.	Tools and Equipments			
1.	Fabric scissors	Standard	25	1:1
2.	Straight-knife cutter	Standard	5	1:25
3.	Band knife cutter	Standard	5	1:25
4.	Cutting table	Standard	5	1:25
5.	Rotary cutter	Standard	5	1:25
6.	Spreading table	Standard	5	1:25

LEARNING MODULE 07

TVET-PROGRAMME TITLE: **Garment Production Level IV**

MODULE TITLE: **Applying   textile coloration and finishing**

MODULE CODE: **IND GAP4 M06 0322**

NOMINAL DURATION: .70... Hours

MODULE DESCRIPTION: This module covers the skills and knowledge required to Perform Machine lay out for production changes in a Garment industry.

LEARNING OUTCOMES

At the end of the module the trainee will be able to:

LO1. Identify coloration techniques

LO2. Describe uses of coloration techniques in design process

LO3. Fabrics coloration

LO4. Ensure workplace standards are met

LO5. Document process

MODULE CONTENTS:

LO1. Identify coloration techniques

      1.5.   Identifying   fiber and Fabric property

      1.6.   Identifying coloration techniques

      1.7.   Describe effects of coloration techniques

      1.8.   Describe the process of coloration technique

LO2. Describe uses of coloration techniques in design process

      2.6. Describe use of color inform and inspire design

      2.7. Describing Role of coloration tool

      2.8. describing Effect of coloration on the design

LO3. Fabrics coloration

      3.3 Applying Coloration techniques at variety of fabrics

            3.1.1. colours mixing

            3.1.2. dyeing fabrics

            3.1.3. apply printing on fabrics

            3.1.4. emphasise texture and patterns

      3.4 Analyzing Process to asses outcome

3.5 Modifying Colorization

LO4. Ensure workplace standards are met

4.3 Implementing *OHS practices*

4.4 Checking effects of Coloration to meet garment quality standard

LO5. Document process

5.1 documenting coloration process

5.2 filed and stored document

Learning Methods:				
For none impaired trainees	**Reasonable Adjustment for Trainees with Disability (TWD)**			
	Low Vision	**Deaf**	**Hard of hearing**	**Physical impairment**
Lecture-discussion	❖ Provide large print text ❖ Prepare the lecture in **Audio/video** ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text ❖ Make sure the luminosity of the light of class room is kept ❖ Use normal tone of voice ❖ Encourage trainees to record the lecture in audio format ❖ Provide Orientation on the physical feature of the work shop ❖ Summarize main points	❖ Assign sign language interpreter ❖ Arrange the class room seating to be conducive for eye to eye contact ❖ Make sure the luminosity of the light of class room is kept ❖ Introduce new and relevant vocabularies ❖ Use short and clear sentences ❖ Give emphasis on visual lecture and ensure the attention of the trainees ❖ Avoid movement during lecture time ❖ Present the lecture in video format ❖ Summarize main points	❖ Organize the class room seating arrangement to be accessible to trainees ❖ Speak loudly ❖ Ensure the attention of the trainees ❖ Present the lecture in video format ❖ Ensure the attention of the trainees	❖ Organize the class room seating arrangement to be accessible for wheelchairs users. ❖ Facilitate and support the trainees who have severe impairments on their upper limbs to take note ❖ Provide Orientation on the physical feature of the work shop
Demonstration	❖ Conduct close follow up ❖ Use verbal description ❖ Provide special attention in the process of guidance ❖ facilitate the support of peer trainees ❖ Prepare & use simulation	❖ use Sign language interpreter ❖ Use video recorded material ❖ Ensure attention of the trainees ❖ Provide structured training ❖ Show clear and short method ❖ Use gesture ❖ rovide tutorial support (if necessary)	❖ Illustrate in clear & short method ❖ Use Video recorded material ❖ Ensure the attention of the trainees ❖ rovide tutorial support (if necessary)	❖ Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines ❖ Assign peer trainees to assist ❖ Conduct close follow up ❖ rovide tutorial support (if necessary

Group discussion	❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Brief the thematic issues of the work	❖ Use sign language interpreters ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member	❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Inform the group members to speak loudly	❖ Introduce the trainees with their peers
Exercise	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training ❖ Introduce new and relevant vocabularies	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/ practical training	❖ Assign peer trainees ❖ Use additional nominal hours if necessary
Individual assignment	❖ prepare the assignment questions in large text ❖ Encourage the trainees to prepare and submit the assignment in large texts ❖ Make available recorded assignment questions ❖ Facilitate the trainees to prepare and submit the assignment in soft or hard copy	❖ Use sign language interpreter ❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material	❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material	

ASSESSMENT METHODS:

Interview		• Use sign language interpreter	❖ Speak loudly	❖ Use written response as
		❖ Ensure or conform whether the proper communication was conducted with the trainee through the service of the sign language interpreter	❖ Using sign language interpreter if necessary	an option for the trainees having speech challenges
		❖ Use short and clear questioning		
		❖ Time extension		
Written test	❖ Prepare the exam in large texts	❖ Prepare the exam using short sentences, multiple choices, True or False, matching and short answers	❖ Prepare the exam using short sentences, multiple choices, true or false, matching and short answers if necessary.	❖ Use oral response as an option to give answer for trainees having severe upper limb impairment
	❖ Use interview as an option if necessary			
	❖ Prepare the exam in audio format	❖ Avoid essay writing		❖ Time extension for trainees having severe upper limb impairment
	❖ Assign human reader	❖ Time extension		
	❖ (if necessary)			
	❖ Time extension			
Demonstration/ Observation	❖ Brief the instruction or provide them in large text	❖ Use sign language interpreter	❖ Provide activity based assessment	❖ Provide activity based assessment
	❖ Time extension	❖ Brief on the instruction of the exam	❖ Brief on the instruction of the exam	❖ Conduct close follow up
		❖ Provide activity-based/ practical assessment method	❖ Use loud voice	❖ Time extension
		❖ Time extension	❖ Time extension	

ASSESSMENT CRITERIA :-

LO1. Identify colourisation techniques

- Types of Fabric colorization techniques are identified.

- Effects of colourisation techniques on different fabrics are described.

- Processes used to achieve different colourisation techniques are described.

LO2. Describe uses of colourisation techniques in design process

- Uses of colour to inform and inspire design are described.

- Role of colourisation as production tool is described, including impact on process.

- Effect of colourisation on the design are described

LO3. Colourise fabrics

- Colourisation techniques are applied to a variety of fabrics.

- Process is analysed to assess outcome.

- Colourisation is modified as required.

LO4. Ensure workplace standards are met

- OHS practices are implemented in colourising fabrics.

- Colourisation effects and garment quality meet quality standards.

LO5. Document process

- Techniques used to colourise fabrics and their effects are documented for future reference.

- Documentation is filed and stored.

	Applying textile coloration and finishing		IND GAP4 M06 0322	
Item No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Learner)
A.	**Learning Materials**			
1.	TTLM	Information sheet, Lap test Operation sheet	25	1:1
2.	Reference Books			
2.1	The Measurement of Colour	Wright W.D. Adam Hilger Ltd.(1969)	5	1:5
2.2	Modern Concepts of Colour and Appearance	Choudhury A.K.R., Oxford and IBH Publishing Ltd.,(2000)		1:5
3.3	Effective Colour Displays	D. Travis, Academic Press,(1991)		
B.	**Learning Facilities & Infrastructure**			
1.	Lecture Room	Standard	1	1:25
2	Visual training media (LCD, laptops, blackboard, whiteboard, flip chart)		1	1:25
C.	**Consumable Materials**			
1.	Fabric		5 meter	1:5
2.	Different color		5galone	1:5
3	Gas		5 letter	1:5
4				
D.	**Tools and Equipment's**			
1.	Color mixing machine		1	1:25
2.	Color reader		1	1:25
3.				
4.				
5.				

LEARNING MODULE 07			
TVET-PROGRAMME TITLE: **Garment Production Level IV**			
MODULE TITLE: **Apply statistics to operational processes**			
MODULE CODE: **IND GAP4 M 07 0322**			
NOMINAL DURATION: .120... Hours			
MODULE DESCRIPTION This module covers the skills and knowledge required to apply statistical theory and principles to the analysis and control of processes and operations			
LEARNING OUTCOMES **LO1. Collect process data** **LO2. Interpret data** **LO3. Calculate control limits**			
MODULE CONTENTS: At the end of the module the trainee will be able to: **LO1.** Collect process data 1.1 Interpret sampling techniques 1.1.1 sample size 1.1.2 sampling timing 1.1.3 sampling points 1.1.4 sample type 1.1.5 batch sheets 1.2 Obtain standard measurements 1.2.1 standard operating procedures 1.2.2 type of measurements 1.3 Handling required data **LO2. Interpret data** 2.1 Plot data with control chart 2.1.1 Indentify statistical data 2.1.2 calculating statistical data 2.2 distinguishing random and non random patterns 2.3 identify outside control limits 2.4 Recognize situations for taking corrective action 2.5 Determine cost of non-conformance			

LO3. Calculate control limits

   3.1 Determine control limit

   3.2 Consult relevant stakeholders

   3.3 calculate/revise control limits

   3.4 Plot limits on control chart

   3.5 Explaining plot chart

Learning Methods:				
For none impaired trainees	**Reasonable Adjustment for Trainees with Disability (TWD)**			
	Low Vision	**Deaf**	**Hard of hearing**	**Physical impairment**
Lecture-discussion	❖ Provide large print text ❖ Prepare the lecture in **Audio/video** ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text ❖ Make sure the luminosity of the light of class room is kept ❖ Use normal tone of voice ❖ Encourage trainees to record the lecture in audio format ❖ Provide Orientation on the physical feature of the work shop ❖ Summarize main points	❖ Assign sign language interpreter ❖ Arrange the class room seating to be conducive for eye to eye contact ❖ Make sure the luminosity of the light of class room is kept ❖ Introduce new and relevant vocabularies ❖ Use short and clear sentences ❖ Give emphasis on visual lecture and ensure the attention of the trainees ❖ Avoid movement during lecture time ❖ Present the lecture in video format ❖ Summarize main points	❖ Organize the class room seating arrangement to be accessible to trainees ❖ Speak loudly ❖ Ensure the attention of the trainees ❖ Present the lecture in video format ❖ Ensure the attention of the trainees	❖ Organize the class room seating arrangement to be accessible for wheelchairs users. ❖ Facilitate and support the trainees who have severe impairments on their upper limbs to take note ❖ Provide Orientation on the physical feature of the work shop
Demonstration	❖ Conduct close follow up ❖ Use verbal description ❖ Provide special attention in the process of guidance ❖ facilitate the support of peer trainees ❖ Prepare & use simulation	❖ use Sign language interpreter ❖ Use video recorded material ❖ Ensure attention of the trainees ❖ Provide structured training ❖ Show clear and short method ❖ Use gesture ❖ rovide tutorial support (if necessary)	❖ Illustrate in clear & short method ❖ Use Video recorded material ❖ Ensure the attention of the trainees ❖ rovide tutorial support (if necessary)	❖ Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines ❖ Assign peer trainees to assist ❖ Conduct close follow up ❖ rovide tutorial support (if necessary

Group discussion	❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Brief the thematic issues of the work	❖ Use sign language interpreters ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member	❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Inform the group members to speak loudly	❖ Introduce the trainees with their peers
Exercise	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training ❖ Introduce new and relevant vocabularies	❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/ practical training	❖ Assign peer trainees ❖ Use additional nominal hours if necessary
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ASSESSMENT METHODS:				
Interview		• Use sign language interpreter ❖ Ensure or conform whether the proper communication was conducted with the trainee through the service of the sign language interpreter ❖ Use short and clear questioning ❖ Time extension	❖ Speak loudly ❖ Using sign language interpreter if necessary	❖ Use written response as an option for the trainees having speech challenges
Written test	❖ Prepare the exam in large texts ❖ Use interview as an option if necessary ❖ Prepare the exam in audio format ❖ Assign human reader ❖ (if necessary) ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, True or False, matching and short answers ❖ Avoid essay writing ❖ Time extension	❖ Prepare the exam using short sentences, multiple choices, true or false, matching and short answers if necessary.	❖ Use oral response as an option to give answer for trainees having severe upper limb impairment ❖ Time extension for trainees having severe upper limb impairment

ASESSM,ENT CRITERIA

LO 1 Collect process data

- Interpret sampling scheme

- Obtain measurements in accordance with standard procedures

- Handle data, as required

LO2 Interpret data

- Plot data on appropriate control chart

- Distinguish between random and non-random patterns of results

- Identify results outside the control limits

- Recognize situations requiring action

- Take appropriate action in accordance with standard procedures

- Determine cost of non-conformance

LO3 Calculate control limits

- Consult relevant stakeholders to determine appropriate limits

- Use relevant methods to calculate/revise control limits

- Plot limits on control chart

- Explain impact of limit to relevant stakeholders

IND GAP4M 01 0322 Organize Garment Production Process				
Item No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Trainee)
A.	*Learning Materials*			
1.	TTLM	Information sheet, operation sheet and lab test	25	1:1
2.	Entrepreneurship	Hisrich R D and Peters M P,	5	1:5
3	Production Planning and Control Management	Garg R.K, & Sharma V.,1998	5	1:5
4	Introduction to Clothing Production Management	Churter, A.J.,	5	1:5
5	Journals/Publication/Magazines			
B.	*Learning Facilities & Infrastructure*			
1.	Lecture Room	Standard	1	1:25
2.	Work shop	Standard	1	1:25
3.	Library			
4.	Visual training media (LCD, laptops, whiteboard)			1:25
C.	*Consumable Materials*			
1.	Paper	A4	2 pac	1:12
3	Marker		4pcs	1:1
D.	*Tools and Equipments*			
1.	Chart	Pilot and control	12	1:2
2.	calculator	Digital	25	1:1

Acknowledgements

The **Ministry of Labor and Skills** wishes to thank and appreciation for the trainers who donated their effort and time to develop this outcome based curriculum for the TVET Program **garment production Level IV**.

We also thank all regional Labor and Skill/TVET Bureaus, Ministry of labor and skills coordinators, all instructors who developed this curriculum for active facilitation of this curriculum development.

The trainers who developed the curriculum

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