



# **STANDARD KEMAHIRAN PEKERJAAN KEBANGSAAN (NATIONAL OCCUPATIONAL SKILLS STANDARD)**

## **STANDARD PRACTICE, STANDARD CONTENT & CURRICULUM of COMPETENCY UNIT FOR**

**APPAREL PATTERN  
MAKING LEVEL 2  
TA-021-2:2014**



**JPK**

**KEMENTERIAN SUMBER MANUSIA**



**MALAYSIAN TEXTILE  
MANUFACTURERS ASSOCIATION**

STANDARD PRACTICE  
(SP)

# COMPETENCY PROFILE CHART (CPC)

## COMPETENCY PROFILE (CP)

# CURRICULUM of COMPETENCY UNIT (CoCU) - CORE

**CURRICULUM of COMPETENCY UNIT (CoCU)  
- ELECTIVE**

## TRAINING HOURS SUMMARY

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## Glossary

1	Design placement	Indication in positioning art (logo, patch, embroidery, etc), accessories and decorations on the pattern
2	Decoration design line	Graphic representation, especially a detailed plan (trim, stitching, etc)for construction or manufacture.
3	Garment sample	Garment which are developed in order to check accuracy of measurement
4	Pattern design	Sketch/drawing of garment
5	Pattern construction	Garment details instruction such as double needle, single needle, clean finish, etc
6	Pattern block	Basic pattern that follows the natural lines and represents the basic dimensions of a figure, from which all styles are based on. Also called basic pattern, block pattern, or foundation pattern

## **STANDARD PRACTICE**

### **NATIONAL OCCUPATIONAL SKILLS STANDARD (NOSS) FOR APPAREL PATTERN MAKING**

#### **LEVEL 2**

## **1. INTRODUCTION**

### **1.1 Occupation Overview**

Paper pattern is the paper/ cardboard template from which the parts of a garment are traced onto fabric before cutting out and assembling. It can also be in the form of electronic format/special software. Pattern making personnel / Pattern maker creates templates or models that are used to produce copies of various garment products such as shirts, skirts and pants.

The following section explains the apparel pattern making process. Generally, it begins with an existing block pattern that most closely resembles the designer's vision. The basic procedure for apparel making is to design a pattern and put it into an identifiable form. The traditional method of pattern making includes creation of hard paper patterns. The modern apparel making system has adopted the digitization of pattern making process. These days many clothing firms provide the most modern and technical services for garment construction. They can create fresh computerized patterns or make modifications to existing hard paper patterns or digitize the available data. These patterns can be made from their own samples or specifications provided by the apparel manufacturers. Most of these firms try to provide patterns that will sew properly without confusion in the production line.

Apparel pattern making personnel's tasks begin by checking buyers' constructions/ blueprints, instructions and other production information that describe what patterns are needed. From these examinations, measurements are developed based on the size of the product(s). Specifications and identifications are then marked on materials. Automated and manual tools are set up and operated to make patterns. Any discrepancies are adjusted and repaired before the pattern blocks are traced according to buyers' base block or drawn/sketched according to buyers' specifications. The sample measurements of pattern designs are assured as per buyer construction requirements and sample garments are made according to pattern and materials.

Consequently, the development of this Apparel Pattern Making NOSS is essential in developing skilled workers in this area. Figure 1.1 and Figure 1.2 are the Occupational Structure (OS) and Occupational Area Structure (OAS) respectively for Apparel Manufacturing Sub-sector, which show the position of Apparel Pattern Making Job Area within the Textile and Apparel sector.

## **1.2 Justification and Rationale for NOSS Development**

In response to the requirements to develop a flexible, dynamic and responsive NOSS package, and also to fulfil the needs in providing multi tasking and multi skilling personnel in the Textile and Apparel industry, a session was conducted to develop this NOSS package.

This NOSS document shall be used as a basis for training and assessment by training providers in Malaysia. With the demand for skilled paper pattern makers in the field of apparel pattern making, there is a need for the industry to produce quality, professional, well-trained and certified practitioners. The certified practitioner should be passionate in this field, committed, creative and has good time management skills so as to be able to produce quality patterns that meet buyer/client requirements. Having a competent workforce will help position Malaysia as a centre of excellence in Apparel Manufacturing in the region.

## **1.3 Regulatory / statutory body requirements for employment**

- None

## **1.4 Training programme pre requisites**

The pre-requisites for the enrolment of this course are as follows:

- Completed at least lower secondary school and/or ;
- Minimum of 6 months experience in the Textile and Apparel industry and;
- Able to calculate, read and write in Bahasa Malaysia and English while proficiency in other languages will be an advantage and;
- Ability to handle sewing machine and perform basic sewing will be an advantage and;
- Physically, emotionally and mentally fit and
- Not colour blind

## 2. OCCUPATIONAL STRUCTURE

Apparel Pattern Making (Level 2) personnel come under sub-sector Apparel Manufacturing. Figure 1.1 and 1.2 show the structured career path and area of Apparel Pattern Making (Level 2) personnel.

SECTOR	TEXTILE & APPAREL								
SUB SECTOR	APPAREL MANUFACTURING								
AREA	APPAREL PRODUCTION MANAGEMENT								
JOB AREA	SAMPLE DEVELOPMENT SECTION		CUTTING SECTION		SEWING SECTION	FINISHING SECTION			
SUB AREA	PATTERN MAKING	MARKER PLANNING	CUTTING	EMBROIDERY /PRINTING	SEWING SECTION	TRIMMING	IRONING	FOLDING	PACKING
LEVEL 5	PLANT MANAGER								
LEVEL 4	PATTERN AND MARKER EXECUTIVE		CUTTING EXECUTIVE		SEWING EXECUTIVE	FINISHING EXECUTIVE			
LEVEL 3	SENIOR PATTERN MAKER	MARKER PLANNING SUPERVISOR	CUTTING SUPERVISOR	EMBROIDERY SUPERVISOR	SEWING SUPERVISOR	FINISHING SUPERVISOR			
LEVEL 2	<b>PATTERN MAKER</b>	MARKER PLANNER	CUTTING OPERATOR	EMBROIDERY SENIOR OPERATOR	SEWING SENIOR OPERATOR	FINISHING SENIOR OPERATOR			
LEVEL 1	NO LEVEL	NO LEVEL	NO LEVEL	EMBROIDERY OPERATOR	SEWING OPERATOR	FINISHING OPERATOR			

**Figure 1.1 Occupational Structures of Apparel Pattern Making for Textile & Apparel Sector in Malaysia**

# **OCCUPATIONAL AREA STRUCTURE**

SECTOR	TEXTILE & APPAREL								
SUB SECTOR	APPAREL MANUFACTURING								
AREA	APPAREL PRODUCTION MANAGEMENT								
JOB AREA	SAMPLE DEVELOPMENT SECTION		CUTTING SECTION		SEWING SECTION	FINISHING SECTION			
SUB AREA	PATTERN MAKING	MARKER PLANNING	CUTTING	EMBROIDERY /PRINTING	SEWING SECTION	TRIMMING	IRONING	FOLDING	PACKING
LEVEL 5	PRODUCTION MANAGEMENT								
LEVEL 4	APPAREL PATTERN DESIGN DEVELOPMENT AND TECHNOLOGY		CUTTING TECHNOLOGY		SEWING TECHNOLOGY	FINISHING TECHNOLOGY			
LEVEL 3	APPAREL PATTERN DESIGN AND CONSTRUCTION	MARKER PLANNING SUPERVISION	CUTTING SUPERVISION	EMBROIDERY SUPERVISION	SEWING SUPERVISION	FINISHING SUPERVISION			
LEVEL 2	APPAREL PATTERN MAKING	MARKER PLANNING	CUTTING OPERATION	EMBROIDERY OPERATION	SEWING OPERATION	FINISHING OPERATION			
LEVEL 1	NO LEVEL	NO LEVEL	NO LEVEL						

**Figure 1.2 Occupational Area Structures of Apparel Pattern Making for Textile & Apparel Sector in Malaysia**

### 3. DEFINITION OF COMPETENCY LEVELS

#### 3.1 Level of Competency and Definition Stipulated by JPK

The NOSS is developed for various occupational areas. Candidates for certification must be assessed and trained at certain levels to substantiate competencies. Below is a guideline of each NOSS Level as defined by the Department of Skills Development, Ministry of Human Resources, Malaysia.

Malaysia Skills Certificate Level 1	: Competent in performing a range of varied work activities, most of which are routine and predictable.
Malaysia Skills Certificate Level 2	: Competent in performing a significant range of varied work activities, performed in a variety of contexts. Some of the activities are non-routine and require individual responsibility and autonomy.
Malaysia Skills Certificate Level 3	: Competent in performing a broad range of varied work activities, performed in a variety of contexts, most of which are complex and non-routine. There is considerable responsibility and autonomy and control or guidance of others is often required.
Malaysia Skills Diploma Level 4	: Competent in performing a broad range of complex technical or professional work activities performed in a wide variety of contexts and with a substantial degree of personal responsibility and autonomy. Responsibility for the work of others and allocation of resources is often present.
Malaysia Skills Advanced Diploma Level 5 :	Competent in applying a significant range of fundamental principles and complex techniques across wide and often unpredictable variety of contexts. Very substantial personal autonomy and often significant responsibility for the work of others and for the allocation of substantial resources features strongly, as do personal accountabilities for analysis, diagnosis, planning, execution and evaluation.

#### **4. MALAYSIAN SKILLS CERTIFICATION**

Candidates, after being assessed and verified as having fulfilled the Malaysian Skills Certification requirements, shall be awarded with *Sijil Kemahiran Malaysia*, Level 2 (Apparel Pattern Making).

#### **5. JOB COMPETENCIES**

##### **5.1 List of Core Competencies**

The Apparel Pattern Making (Level 2) personnel must be competent in performing the following core competencies:

- Paper Pattern Design And Construction
- Decoration Design Placement
- Garment Sample Measurement Assurance
- Garment Sample Development

##### **5.2 List of Elective Competencies**

- None

#### **6. WORKING CONDITIONS**

##### **6.1. Working environment**

Apparel Pattern Making personnel/ pattern maker typically works in standard shifts, except when approaching deadlines that demand overtime. They work within normal working hours from morning to evening depending on the organisation's nature of business. They may be required to work extra hours to fulfil internal and external requirements from buyers such as pattern approval timeline. They may also be exposed to prolonged sitting and leaning over tables.. Most pattern makers design their work by themselves, although some interact with designers and production staff.

##### **6.2. Issues Related To Area of Work**

Good health and stamina are important because these workers must stand a great deal. Prolonged exposure to sitting and leaning over tables may cause irritation, so special care of ergonomic position must be taken when working. Personnel in this field are also required to adhere to safety and security procedures as well as statutory/regulatory bodies' requirements in order to protect themselves.

## **7. EMPLOYMENT PROSPECTS**

### **7.1. Malaysian Market**

The textiles and textile products industry in Malaysia comprises four sub-sectors, namely primary textiles which cover activities such as polymerisation, spinning, weaving, knitting and wet processing; made-up garments; made-up textiles; and textile accessories. The growth of Malaysia's textiles and apparel industry accelerated in the early 1970s when the country embarked on export-oriented industrialisation. Due to the intensified global competition, Malaysia textile manufacturers are moving up the value chain by diversifying into the production of higher value-added textiles, implementing automation and computerised manufacturing processes, seeking business collaboration with foreign companies to acquire new technologies and undertaking research and development activities to develop new processes, new applications and value-added products. The industry currently employs more than 68,000 workers. (Source: Malaysian Investment Development Authority- MIDA)

In 2011, the industry was the 10th largest export earner, contributing approximately 2.3 per cent to Malaysia's total exports of manufactured goods. Exports of textiles and textile products for the year 2011 were RM10.8 billion while imports amounted to RM6.6 billion. The main export items were yarn, woven fabrics and apparels while imports were mostly yarn and woven fabrics. Malaysia's apparel manufacturers continue to maintain an excellent reputation for quality to meet high standards set by international brands owner such as Nike, Adidas, DKNY, Ann Taylor, Armani, Talbots, Puma, Asics, Levis and Tommy Hilfiger.

New growth areas in textiles industry have been targeted for promotion under the Third Industrial Master Plan (IMP3). The growth areas for the industry include industrial and home textiles, functional fabrics, high-end fabrics and garments, ethnic fabrics, and key support facilities and services such as design houses and fashion centres, specialized dyeing and finishing facilities.

There are excellent prospects in the private sector due to a shortage of hands-on experts in the Apparel Pattern Making area. The same is also true in the public sector where this area seems to be currently experiencing a lack of professionals and well-experienced personnel. This area, thus, has a very good job market potential for skilled personnel due to a shortage of such highly skilled experts in this region.

Upon completion of the Competency Units (Core), other related occupations with respect to employment opportunities are:

- Marker Planner
- Senior Embroidery Operator
- Cutting Operator
- Senior Sewing Operator
- Senior Finishing Operator



Other related industries with respect to employment opportunities are:

- Education (Fashion and Design)
- Fashion house/Boutique
- Fashion magazine
- Film Industry

## **7.2. International Market**

There is potential for apparel pattern making personnel to work overseas by looking at the demands and trends of employment opportunities internationally. Subject to licensing in various countries, there is an opportunity to seek employment abroad. For example, in New Zealand, unlike most other jobs in the clothing industry, which are declining, numbers of clothing pattern maker has remained relatively stable. Local clothing manufacturers are focusing on producing clothes for niche markets, such as high fashion or specialty outdoor wear, which is often made in limited runs and with an emphasis on quality and fit. This creates more work for pattern makers. Some clothing designers even report difficulties finding skilled pattern makers, as established contract workers are often booked out months in advance. Employers of clothing pattern makers range from small boutique designers to large apparel manufacturers such as Swazi. Some clothing pattern makers are self-employed, contracting their services out to a range of clients.

(<http://www.careers.govt.nz/jobs/manufacturing/clothing-pattern-maker/job-opportunities>)

## **7.3. List of Industry Sector Employers**

- Tai Wah Garments Industry Sdn Bhd.
- Trans Pacific Industries Sdn Bhd.
- Hing Yiap Group Bhd.
- Gimmill Industrial (M) Sdn Bhd.
- Pen Apparel Sdn Bhd.
- United Sweethearts Garment Sdn Bhd.

## **7.4. Codes, Standard and Practices in Area /Sub Area in Malaysia and Internationally**

- None

## **8. TRAINING, INDUSTRIAL/PROFESSIONAL RECOGNITION, OTHER QUALIFICATIONS AND ADVANCEMENTS**

Apparel pattern making is a skilled profession and many pattern makers have to work from just a sketch transforming the one dimensional line drawing into a three dimensional garment. Consequently pattern makers play a highly respected and influential role in the fashion industry - many top designers will work in tandem with their pattern maker with lifelong friendships developing. Many pattern cutters have an art or fashion degree background but there are also the "working on the job" route too as apparel pattern making is regarded as a craft. As for career advancement, most competent Apparel Pattern Making personnel develop their competency through real-world on-the-job situations.

Trainees begin by observing and assisting experienced workers, sometimes in formal training programmes. They then advance to the more difficult tasks performed by experienced workers such as supervisory and management programmes.

## **9. SOURCES OF ADDITIONAL INFORMATION**

### **9.1 Local**

- Malaysian Textile and Apparel Centre (MATAC)  
C-9-4, Megan Avenue 1,  
189 Jalan Tun Razak,  
50400 Kuala Lumpur, Malaysia  
Tel: +603-2162 1454 Fax: +603-21625148  
Email: info@mtma.org.my
- Malaysian Textile Manufacturers Association (MTMA)  
C-9-4, Megan Avenue 1,  
189 Jalan Tun Razak,  
50400 Kuala Lumpur, Malaysia  
Tel: +603-2162 1454 Fax: +603-21625148  
Email: info@mtma.org.my
- Malaysian Knitting Manufacturers Association (MKMA)  
12-1, Jalan Megat, 83000 Batu Pahat,  
Johor, Malaysia  
Tel: 607 - 4343203  
Fax: 607 - 4314682  
Email: mkma@streamyx.com  
Website: <http://www.mkma.org>
- Malaysia External Trade Development Corporation (MATRADE)  
Menara MATRADE, Jalan Khidmat Usaha, Off Jalan Duta  
50480 Kuala Lumpur, Malaysia  
Tel: +603-6207 7077 Fax: +603-6203 7037  
Email: info@matrade.gov.my  
Website: [www.matrade.gov.my](http://www.matrade.gov.my)
- Ministry of International Trade and Industry (MITI)  
Block 10, Government Offices Complex, Jalan Duta,  
50622 Kuala Lumpur, Malaysia  
Tel: +603-80008000 Fax: 603-62012337  
Email: webmiti@miti.gov.my

- Malaysian Investment Development Authority (MIDA)  
Block 4 Plaza Sentral Jalan Stesen Sentral 5, 50470 Kuala Lumpur,  
Federal Territory of Kuala Lumpur, Malaysia  
+60 3-2267 3633
- Malaysia Production Corporation (MPC)  
Lorong Produktiviti, Off Jalan Sultan,  
46200 Petaling Jaya, Selangor Darul Ehsan. Malaysia  
Tel : 603 - 7955 7266 Fax : 603 - 7957 8068  
Email : marketing@mpc.gov.my
- Ministry of Domestic Trade, Co-operation Consumerism,  
Kementerian Perdagangan Dalam Negeri, Koperasi dan Kepenggunaan  
No 13, Persiaran Perdana,  
Presint 2, 62623 Putrajaya,  
Malaysia  
Tel: 603-8000 8000 Fax: 603-8882 5762
- Department of Occupational Safety and Health (DOSH)  
Ministry of Human Resources  
Level 2,3 &4, Block D3, Complex D  
Federal Government Administrative Centre  
62530 W. P. Putrajaya  
Tel: 603-8886 5000 Fax: 603-8889 2443

## **9.2 International**

- Asean Federation of Textile Industries (AFTEX)  
Secretariat Office  
C-9-4, Megan Avenue 1,  
189 Jalan Tun Razak,  
50400 Kuala Lumpur, Malaysia  
Tel: +603-2162 1454 Fax: +603-21625148  
Email: info@mtma.org.my
- The Academy of Fashion Profession (TaF.tc)  
Central Plaza #14-06  
298 Tiong Bahru Road  
Singapore 168730  
Tel: (65) 64759897 Fax: (65) 64753583  
www. taftc.org
- Garment Manufacturer Association in Cambodia  
No. 175 Jawahar Nehru Blvd (Street 215) Phnom Penh,  
Kingdom of Cambodia  
Tel: (855) 23-301 181 Fax: (855) 23-882 860  
Email: info@gmac-cambodia.org

- Cotton Incorporated  
488 Madison Avenue  
New York, NY 10022-5702  
Tel: (212) 4138300  
Fax: (212) 4138377

## 10. ACKNOWLEDGEMENT

The Director General of DSD would like to extend his gratitude to the organisations and individuals who have been involved in developing this standard.

This Standard has been proofread by a qualified personnel, named as follows;

Name (IC No.)	: Nabilah Ooi Abdullah
Qualification	: MEd, Open University Malaysia (OUM), BSc (Ed) Hons, Universiti Sains Malaysia (USM) & TESL (Certificate), Institut Bahasa

A draft of this Standard was circulated to the following list of companies for two weeks for validation and feedback:

- Trans Pacific Industries Sdn Bhd
- Tai Wah Garments Industry Sdn Bhd
- Workwear Designs & Marketing Sdn Bhd

This Standard has been checked by the MTMA Coordinator, DSD and approved by the members of Skills Development Endorser Committee (SDEC) on **13 November 2013**.

The SDEC members listed bellow has reached a consensus on this standard.

- Mr. Seow Hon Cheong
- Mr. Poon Chee Kiong
- Ms Adeline Cheong Pik Tho

## 11. NOSS DEVELOPMENT COMMITTEE MEMBERS

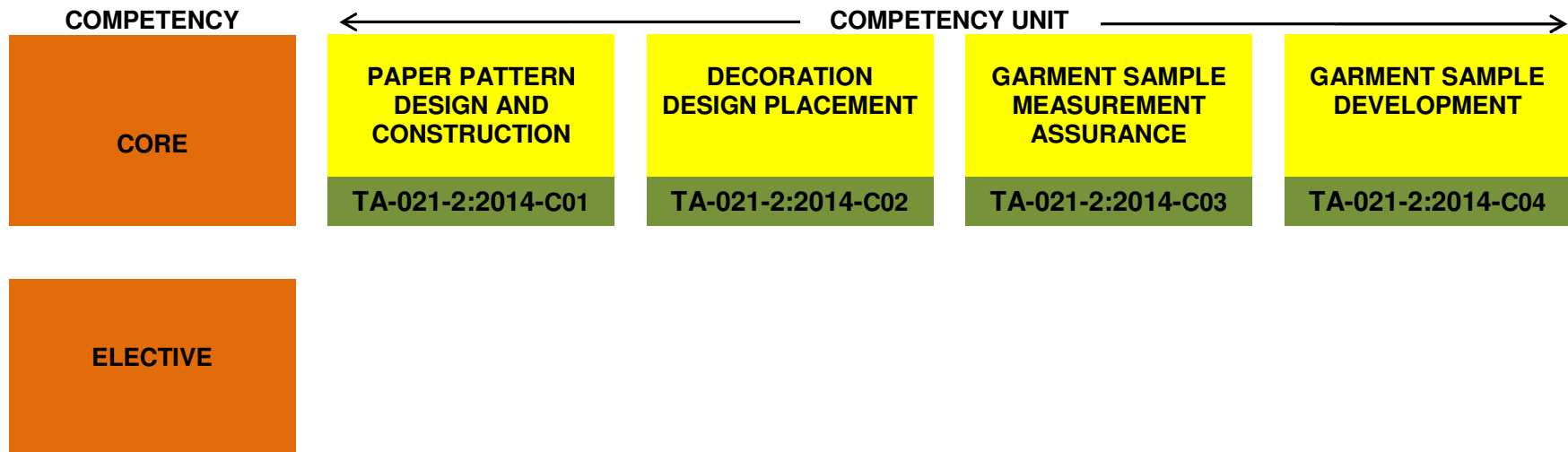
### APPAREL PATTERN MAKING

### LEVEL 2

PANEL		
1.	Mr. Lau Boon Puh	Director Chairman of Training Committee for MATAC Honsin Apparel Sdn. Bhd. Batu Pahat, Johor
2.	Ms. Ng Jen Nee	Assistant Paper Pattern Manager United Sweethearts Garment Sdn. Bhd. Pulau Pinang
3.	Ms. Seow Xing Ying	Product Development Manager Trans Pacific Industries S/B, Melaka
4.	Ms. Loh Nyook Siang	Paper Pattern Specialist Hing Yiap Knitting S/B, Kuala Lumpur
5.	Ms. Hing Gek Pew	Paper Pattern Specialist Hing Yiap Knitting S/B, Kuala Lumpur
6.	Ms. Lim Siew Chin	Paper Pattern Specialist Xin Hong Garments Industry S/B Batu Pahat, Johor
7.	Ms. Lim Swee Lee	Paper Pattern Specialist Yungwah Industries Sdn. Bhd. Singapore
8.	Ms. Chang Hwee Hwee	Paper Pattern Specialist Gimmill Industries (M) Sdn. Bhd. Batu Pahat
9.	Ms. Chin Kwai Lai	Manager/Tutor Malaysian Textile Manufacturers Association (MTMA), Kuala Lumpur
10	Encik Jamizal bin Mohammad Zinul	Head of Centre /Trainer Malaysian Textile & Apparel Centre (MATAC) Batu Pahat, Johor
FACILITATOR		
11.	Mrs. Siti Salmah Binti Mohd Nor	
CO-FACILITATOR		
12.	Ms. Regina Leong	Malaysian Textile and Apparel Centre (MATAC)
DOCUMENTOR		
13.	Madam Maggie Chean	Malaysian Textile and Apparel Centre (MATAC)

## COMPETENCY PROFILE CHART (CPC)

<b>SECTOR</b>	TEXTILE & APPAREL		
<b>SUB SECTOR</b>	APPAREL MANUFACTURING		
<b>JOB AREA</b>	SAMPLE DEVELOPMENT SECTION		
<b>NOSS TITLE</b>	APPAREL PATTERN MAKING		
<b>JOB LEVEL</b>	TWO (2)	<b>JOB AREA CODE</b>	TA-021-2:2014



## COMPETENCY PROFILE (CP)

<b>Sub-Sector</b>	<b>APPAREL MANUFACTURING</b>
<b>Job Area</b>	<b>SAMPLE DEVELOPMENT SECTION</b>
<b>NOSS Title</b>	<b>APPAREL PATTERN MAKING</b>
<b>Level</b>	<b>TWO (2)</b>

<b>CU Title</b>	<b>CU Code</b>	<b>CU Descriptor</b>	<b>CU Work Activities</b>	<b>Performance Criteria</b>
1. Paper Pattern Design And Construction	TA-021-2 :2014-C01	<p>Paper Pattern Design And Construction competency unit specifies the competency in designing and constructing paper pattern for garment making in accordance with buyer requirements (design construction specification, measurement, Bill of Materials (BOM), etc) and company Standard Operating Procedures.</p> <p>The outcome of this competency is to produce paper pattern for basic/simple garment such as shirt, pants or any other menswear/ladies wear.</p> <p>The person who is competent in paper pattern design and construction should be able</p>	<p>1. Check paper pattern design and construction requirements</p> <p>2. Carry out paper pattern design and construction preparation</p>	<p>1.1 Garment information (types such as shirt, pants or any other menswear/ ladies wear, parts of section such as sleeves, collar, shape such as flare skirt, pencil skirt/H line, A line skirt ) identified according to buyer requirements</p> <p>1.2 Job order (sample delivery date, sizes, etc) confirmed</p> <p>1.3 Buyer specification (e.g. silhouette)/ instruction/ constructions) interpreted</p> <p>1.4 Fabric construction (knits/woven, interlining, etc) identified according to buyer requirements</p> <p>1.5 Measuring data reviewed according to buyer measuring manual</p> <p>2.1 Workstation organized</p> <p>2.2 Tools, equipment and materials obtained and arranged</p> <p>2.3 Sewing method identified according to garment parts (armhole, collar, neck seam, etc.)</p> <p>2.4 Seam allowances determined</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
		<p>to comprehend the sewing method/ technique, fabric type (stretchable/ non stretchable), buyer constructions specification, BOM, and company Standard Operating Procedure (SOP).</p> <p>She/he should be able to check paper pattern design and construction requirements, carry out paper pattern design and construction preparation, carry out design calculation, carry out paper pattern construction, carry out paper pattern design and construction documentations and upkeep workstation.</p>	<p>3. Carry out pattern design calculation</p> <p>4. Carry out paper pattern construction</p> <p>5. Carry out paper pattern design and construction documentations</p>	<p>3.1 Buyer specifications / measurement data confirmed according to measurement manual (inches/ centimetre, measuring method, etc)</p> <p>3.2 Design specifications calculated according to buyer construction requirements</p> <p>3.3 Design calculation output documented according to documentation procedure</p> <p>4.1 Pattern block traced according to buyer base block or drawn/sketched according to buyer specifications</p> <p>4.2 Pattern measured according to measuring manual, buyer requirements (size specification, type of fabric, etc)</p> <p>4.3 Pattern cutting executed according to design line and buyer requirements</p> <p>4.4 Pattern output (seam allowances, notches, panel matching, etc) checked according to buyer construction design</p> <p>4.5 Cut panels (size, panel name, etc) labelled according to company standard procedure</p> <p>4.6 Pattern name/styling identified and labelled according to company standard procedure</p> <p>5.1 Job completion confirmed</p> <p>5.2 Paper pattern design activities</p>



CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
			6. Upkeep workstation	<p>status (completion date, number of completed pattern, type of pattern, etc) recorded according to documentation procedure</p> <p>6.1 Used tool, equipment, material stored/kept in place</p> <p>6.2 Depleted materials replenished</p> <p>6.3 Waste disposed according to disposal procedure and regulatory/statutory bodies requirements</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
2. Decoration Design Placement	TA-021-2 :2014-C02	<p>Decoration Design Placement competency unit specifies the competency in positioning art (logo, patch, embroidery, etc), accessories and decorations on the pattern in accordance with buyer requirements (design construction specification, measurement, Bill of Materials (BOM), etc) and company Standard Operating Procedures.</p> <p>The outcome of this competency is to produce pattern with art, accessories and decoration placement.</p> <p>The person who is competent in decoration design placement should be able to comprehend the buyer constructions specification, BOM, and company Standard Operating Procedure (SOP).</p> <p>She/he should be able to check design placement requirement, carry out design placement preparation, carry out art placement positioning, carry out decoration line design and</p>	<p>1. Check design placement requirements</p> <p>2. Carry out design placement preparation</p> <p>3. Carry out art placement positioning</p> <p>4. Carry out decoration line design and accessories placement</p>	<p>1.1 Job order (sample delivery date, sizes, etc) confirmed</p> <p>1.2 Design placement (art, decoration line design and accessories) identified / confirmed according to buyer specification/ instruction/ constructions</p> <p>1.3 Fabric requirements (types, structure, etc) identified according to buyer requirements</p> <p>1.4 Measuring data reviewed according to buyer measuring manual</p> <p>2.1 Workstation organized</p> <p>2.2 Measuring tools and materials obtained and arranged</p> <p>2.3 Placement sewing method identified according to buyer requirements</p> <p>3.1 Art specification (sizes , textures, etc) confirmed according to buyer requirements</p> <p>3.2 Art position identified and placed according to measuring manual (location such as edge of logo, centre of logo)</p> <p>4.1 Decoration design line (trim, stitching, etc) confirmed and designed according to buyer requirements</p> <p>4.2 Trim placement (eyelet, button, button hole, etc) executed according to buyer construction requirements</p> <p>4.3 Art decoration documents updated</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
		accessories placement and check design placement panel.	5. Check design placement panel	<p>5.1 Design placement (art, decoration line design and accessories ) panel examined according to construction design and measuring manual</p> <p>5.2 Discrepancies in design placement proposed for corrective action/ improvement</p> <p>5.3 Design placement adjusted according to buyer approval/consent of the design placement proposal</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
3. Garment Sample Measurement Assurance	TA-021-2 :2014-C03	<p>Garment Sample Measurement Assurance competency unit specifies the competency in evaluating the measurement of semi finished and completed garment sample made by sample maker in accordance with paper pattern, buyer requirements (design construction specification, measurement, Bill of Materials (BOM), etc) and company Standard Operating Procedures.</p> <p>The outcome of this competency is to ensure the semi finished and completed garment samples are constructed as per measurement.</p> <p>The person who is competent in garment sample measurement assurance should be able to comprehend buyer construction specifications, BOM, and company Standard Operating Procedure (SOP).</p> <p>She/he should be able to check garment sample</p>	<p>1. Check garment sample measurement requirements</p> <p>2. Carry out garment sample measurement activities</p> <p>3. Report garment sample measurement results</p>	<p>1.1 Buyer specification/ instruction/ constructions interpreted</p> <p>1.2 Fabric requirements (types, structure, etc) identified according to buyer requirements</p> <p>1.3 Sample specification reviewed</p> <p>1.4 Measuring data reviewed according to buyer measuring manual</p> <p>2.1 Semi finished or completed garment sample obtained</p> <p>2.2 Semi finished or completed garment sample measured according to paper pattern and buyer requirements</p> <p>2.3 Discrepancies on semi finished garment sample measurement detected according to measuring manual and documented</p> <p>2.4 Buyer sketches compared with completed garment (design line, garment appearance, etc.)</p> <p>2.5 Measurement output (specification, design line, etc) recorded according to company standard operating procedure</p> <p>3.1 Measurement output (specification, design line, etc) identified and compared with buyer specification requirements</p> <p>3.2 Buyer specification data (e.g. tolerance variance) documented according to sample size</p> <p>3.3 Garment sample measurement</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
		measurement requirements, carry out garment sample measurement activities and report garment sample measurement results.		results submitted/distributed to authorised personnel/department according to company standard operating procedure

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
4. Garment Sample Development	TA-021-2 :2014-C04	<p>Garment Sample Development competency unit specifies the competency in cutting and making garment sample in accordance with paper pattern, sample making process, buyer requirements (design construction specification, measurement, Bill of Materials (BOM), etc) and company Standard Operating Procedures.</p> <p>The outcome of this competency is to ensure the garment sample for fitting references is developed as per requirements.</p> <p>The person who is competent in garment sample development should be able to comprehend the sample making process, buyer constructions specification, BOM, and company Standard Operating Procedure (SOP).</p> <p>She/he should be able to check garment sample development requirements, carry out garment sample development preparation,</p>	<p>1. Check garment sample development requirements</p> <p>2. Carry out garment sample development preparation</p> <p>3. Carry out cutting activities</p> <p>4. Arrange sewing sample activities</p>	<p>1.1 Job order (sample delivery date, sizes, etc) confirmed in accordance with buyer requirements</p> <p>1.2 Buyer specification/ instruction/ constructions interpreted</p> <p>1.3 Fabric requirements (types, structure, etc) identified according to buyer requirements</p> <p>1.4 Measuring data reviewed according to buyer measuring manual</p> <p>1.5 Job styling confirmed</p> <p>2.1 Workstation organized</p> <p>2.2 Tools (scissors, needles, measuring tape, rulers, etc) , equipment (e.g. single needle, lockstitch sewing machine, overlock sewing machine) and materials (paper pattern, fabrics, accessories, trim, etc) prepared</p> <p>2.3 Sewing method (clean finishing, overlocking, etc) identified</p> <p>3.1 Job styling confirmed</p> <p>3.2 Quantity of panel confirmed</p> <p>3.3 Fabric direction (e.g. grain line) on panel confirmed</p> <p>3.4 Cutting activities executed</p> <p>4.1 Cut panels details (number of panel, with/without art placement, type of panel, etc) confirmed according to job order</p> <p>4.2 Sample construction produced/ checked according to sewing</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
		carry out cutting activities, arrange sewing sample activities and carry out sample finishing activities.	5. Carry out sample finishing activities	<p>requirements attachments/folders</p> <p>5.1 Completed sample quality assured</p> <p>5.2 Sample finishing activities (trimming, ironing, etc) executed according to type of fabric</p> <p>5.3 Work area cleaned from materials waste and used tools, equipment and materials stored and kept in placed</p> <p>5.4 Garment sample stored/kept in sample room/area according to company Standard Operating Procedure</p> <p>5.5 Status of constructed garment sample reported to superior according to job order requirements</p>

## CURRICULUM OF COMPETENCY UNIT (CoCU)

<b>Sub Sector</b>		<b>APPAREL MANUFACTURING</b>					
<b>Job Area</b>		<b>SAMPLE DEVELOPMENT SECTION</b>					
<b>NOSS Title</b>		<b>APPAREL PATTERN MAKING</b>					
<b>Competency Unit Title</b>		<b>PAPER PATTERN DESIGN AND CONSTRUCTION</b>					
<b>Learning Outcome</b>		<p>The person who is competent in this competency unit shall be able to design and construct paper patterns for basic/simple garments such as shirts, pants or any other menswear/ladies wear in accordance with product/buyer requirements (design construction specification, measurement, Bill of Materials (BOM), etc) and company Standard Operating Procedures. Upon completion of this competency unit, trainees will be able to:</p> <ul style="list-style-type: none"> <li>• Check paper pattern design and construction requirements</li> <li>• Carry out paper pattern design and construction preparation</li> <li>• Carry out pattern design calculation</li> <li>• Carry out paper pattern construction</li> <li>• Carry out paper pattern design and construction documentations</li> <li>• Upkeep workstation</li> </ul>					
<b>Competency Unit Code</b>		TA-021-2:2014-C01	<b>Level</b>	2	<b>Training Duration</b>	330 Hours	<b>Credit Hours</b> 33.0
<b>Work Activities</b>	<b>Related Knowledge</b>	<b>Related Skills</b>	<b>Attitude/Safety/Environment</b>	<b>Training Hours</b>	<b>Delivery Mode</b>	<b>Assessment Criteria</b>	
1. Check paper pattern design and construction requirements	i. Garment information: <ul style="list-style-type: none"> <li>• Types of simple/basic garment (shirts, pants or any other menswear/ladies wear, etc)</li> <li>• parts of section (sleeve, neck seam, collar, etc)</li> <li>• garment shape (flare skirt,</li> </ul>			24	Lecture Discussion	i. Garment information such as types, parts of section and garment shape determined and listed according to product/buyer requirements ii. Job order (sample delivery date, sizes, etc) determined iii. Product/buyer	



Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
	<p>pencil skirt/ H line, A line skirt, etc)</p> <p>ii. Job order (sample delivery date, sizes, etc)</p> <p>iii. Product/buyer specifications (Silhouette of garment) /instructions /constructions</p> <p>iv. Types of fabric (knits, woven, etc)</p> <p>v. Measuring data (chest, shoulder, waist, sleeve, etc)</p> <p>vi. Measuring manual (inches/ centimeter, measuring method, etc)</p>					<p>specification (Silhouette of garment) /instruction/ constructions defined and described/ explained</p> <p>iv. Measuring data (chest, shoulder, waist, sleeve, etc) confirmed according to measuring manual</p>
		<p>i. Identify garment information</p> <p>ii. Check job order</p> <p>iii. Interpret product/buyer specifications/ instruction/ constructions</p> <p>iv. Identify types of fabric</p> <p>v. Review measuring data</p>	<p><u>Attitude:</u></p> <p>i. Patient in interpreting</p>	40	Demonstration Observation	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
			and clarifying product/buyer requirements ii. Meticulous and thorough in checking pattern design and construction specification iii. Resourceful in reviewing measuring data  <u>Safety:</u> i. Not applicable			
2. Carry out paper pattern design and construction preparation	i. Workstation setup (drafting table – height & width, adjustable chair/rubber mat, lightings, etc) ii. Types of tools (pattern block, ruler, measuring tape, scissors, etc) iii. Type of materials (various size of paper, cardboard, etc) iv. Sewing method (basic seam allowance, etc)			8	Lecture Discussion	i. Workstation setup readiness (such as drafting table size, adjustable chair/rubber mat, lightings, etc) confirmed ii. Tools (pattern block, ruler, measuring tape, scissors, etc) and materials (various size of paper, cardboard, etc) listed and functions described

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
	v. Garment parts (armhole, collar, neck seam, etc.) vi. Preparation procedure					according to pattern requirements iii. Sewing method (basic seam allowance, etc) determined
		i. Check workstation setup readiness ii. Arrange tools and materials iii. Identify sewing method	<u>Attitude:</u> i. Resourceful in locating tools, equipment and materials ii. Systematic in organizing tools, equipment and materials iii. Adhere to work flow  <u>Safety:</u> i. Sharp tools such as scissors always tied up to work station ii. Always work with proper lighting at workstation	14	Demonstration Observation	iv. Preparation procedure followed

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
3. Carry out design calculation	i. Product/buyer construction specifications ii. Type of measuring data : <ul style="list-style-type: none"> <li>• Half garment measure (chest, hip, waist, etc)</li> <li>• Full garment measure (shoulder, neck seam, collar, etc)</li> </ul> iii. Design specifications (e.g. size measurement) iv. Design calculation method (division of 2 or 4) v. Design calculation output vi. Documentation procedure			24	Lecture Discussion	i. Product/buyer construction specifications confirmed ii. Type of measuring data such as half/full garment measure confirmed and listed according to measurement manual iii. Design calculation method employed according to product/buyer construction requirements iv. Design calculation output documented according to documentation procedure
		i. Check product/buyer construction specifications ii. Check measurement data iii. Follow design specification iv. Execute design calculation v. Document design calculation output		60	Demonstration Observation	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
			<u>Attitude:</u> i. Patient and precise in interpreting product/buyer specifications ii. Meticulous, detailed and thorough in design calculating iii. Resourceful in measuring parts (waist, chest, etc) as per design calculation  <u>Safety:</u> i. Not applicable			
4. Carry out paper pattern construction	i. Product/buyer requirements (size specification, type of fabric, etc) ii. Pattern block tracing technique iii. Pattern sketching/drawing technique iv. Pattern measuring method v. Pattern cutting technique vi. Design line			32	Lecture Discussion	i. Product/buyer requirements (size specification, type of fabric, etc) confirmed and listed ii. Pattern block tracing or sketching/drawing technique applied iii. Pattern measuring method employed iv. Pattern cutting technique applied

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
	(princess cut, pleat, dart, etc) vii. Fabric direction (grain line) viii. Pattern output checking method ix. Pattern output (seam allowances, notches, panel matching, etc) x. Cut panels details (size, panel name, etc) xi. Pattern name/styling labelling method					v. Design line such as princess cut, pleat, dart followed and fabric direction (grain line) determined according to buyer/design requirements vi. Pattern output checking method employed vii. Pattern output (seam allowances, notches, panel matching, etc) confirmed
		i. Check product/buyer requirements ii. Trace pattern block or draw/sketch pattern iii. Measure pattern iv. Cut pattern v. Follow design line vi. Identify fabric direction vii. Check pattern output viii. Label cut panels and pattern name/styling	<u>Attitude:</u> i. Meticulous, detailed and thorough in pattern	80	Demonstration Observation	viii. Cut panels details (size, panel name, etc) and pattern name/styling labelling method employed

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
			sketching/ drawing ii. Precise in pattern data measuring iii. Thorough in ensuring the accuracy of measurement  <u>Safety:</u> i. Adhere to safety requirements in handling sharp tools such as scissors			
5. Carry out paper pattern design documentations	i. Job completion status (e.g. work in progress) ii. Paper pattern design records (completion date, number of completed pattern, type of pattern, etc) iii. Paper pattern design activities (drawing/sketching, measuring, cutting, checking, etc) iv. Documentation procedure and			8	Lecture Discussion	i. Job completion status such as work in progress (WIP) confirmed ii. Paper pattern design records (completion date, number of completed pattern, type of pattern, etc) gathered iii. Paper pattern design activities (drawing/sketching , measuring, cutting, checking,

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
	format					etc) listed and demonstrated iv. Documentation procedure and format followed
		i. Check job completion status ii. Compile paper pattern design records iii. Document paper pattern design activities	<u>Attitude:</u> i. Meticulous, detailed and thorough in paper pattern design documentations  <u>Safety:</u> i. Not applicable	16	Demonstration Observation	
6. Upkeep workstation	i. Tools and materials storage procedure ii. Materials replenishment procedure iii. Paper waste disposal procedure iv. Regulatory/statutory bodies requirements (safe and green environmental)			8	Lecture Discussion	i. Used tools and materials arranged and kept in place according to category ii. Depleted materials replenished iii. Paper waste disposal procedure followed in



Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
						accordance with regulatory/ statutory bodies requirements
		i. Arrange used tools and materials ii. Keep tools and materials at designated area/place iii. Replenish depleted materials Dispose paper waste	<u>Attitude:</u> i. Meticulous and thorough in up keeping work station  <u>Safety:</u> i. Adhere to safety rules and regulations	16	Demonstration Observation	

## Employability Skills

Core Abilities	Social Skills
<ul style="list-style-type: none"> <li>01.01 Identify and gather information</li> <li>01.02 Document information, procedures or processes</li> <li>01.03 Utilize basic IT applications</li> <li>02.01 Interpret and follow manuals, instructions and SOP's</li> <li>02.02 Follow telephone/ telecommunication procedures</li> <li>02.03 Communicate clearly</li> <li>02.04 Prepare brief reports and checklists using standard forms</li> <li>02.05 Read/interpret flowcharts and pictorial information</li> <li>02.08 Prepare pictorial and graphic information</li> <li>03.01 Apply cultural requirements to the workplace</li> <li>03.02 Demonstrate integrity and apply ethical practices</li> <li>03.03 Accept responsibility for own work and work area</li> <li>03.04 Seek and act constructively upon feedback about performance</li> <li>03.05 Demonstrate safety skills</li> <li>03.06 Respond appropriately to people and situations</li> <li>03.07 Resolve interpersonal conflicts</li> <li>04.01 Organize own work activities</li> <li>04.02 Set and revise own objectives and goals</li> <li>04.03 Organize and maintain own workplace</li> <li>04.05 Demonstrate initiative and flexibility</li> <li>06.02 Comply with and follow chain of command</li> <li>06.03 Identify and highlight problems</li> </ul>	<ul style="list-style-type: none"> <li>1. Communication skills</li> <li>2. Conceptual skills</li> <li>3. Interpersonal skills</li> <li>4. Multitasking and prioritizing</li> <li>5. Self-discipline</li> <li>6. Teamwork</li> <li>7. Learning skills</li> <li>8. Leadership skills</li> </ul>

**Tools, Equipment and Materials (TEM)**

ITEMS	RATIO (TEM : Trainees)
1. Sample of instruction/ constructions documents (eg. Types of sample, sample delivery date, sizes, etc)	1:1
2. Drafting table/station	1:1
3. Adjustable chair	1:1
4. Pattern block / specification	1:1
5. Tools (ruler, measuring tape, scissors, etc)	1:1
6. Materials (various size of paper, cardboard, etc)	As per requirements
7. Dummy model (half/whole body for male and female)	1:20
8. Sample of company policies and various procedures manual (SOP, recording, documentation, etc)	1:1
9. Sample of Garment (shirts, pants or any other menswear/ ladies wear, etc)	1:20
10. Sample of garment parts of section (sleeve, neck seam, collar, etc)	1:20
11. Garment shape drawing (flare skirt, pencil skirt/ H line, A line skirt, etc)	1:1
12. Sample of fabrics (knits, woven, etc)	As per requirements
13. Sample of garment measuring manual (, shoulder, waist, sleeve, etc)	1:1

**References**

<ol style="list-style-type: none"><li>1. Aldrich Winifred, (2013), Metric Pattern Cutting for Menswear – UK – Blackwell Publishing, ISBN : 0-632-04113-7</li><li>2. Armstrong Helen Joseph , (2006) Pattern Making for Fashion Design – US – Pearson Prentice Hall, ISBN : 0-13-191866-4</li><li>3. CAD Systems, (1996), AccuMark Marker Making User's guide 1996 Gerber Garment Technology. Doc No. 077037000</li><li>4. Haggart Ann, (2006), Pattern Cutting for Lingerie, Beachwear &amp; Leisure Wear – UK – Blackwell Publishing ISBN 10: 1-4051-1858-X ISBN 13: 978-1-4051-1858-3</li><li>5. Janine Manslow Kathryn Mclelvey, (2002), Fashion Design Process, Innovation &amp; Practice- Blackwell ISBN: 0-632-05599-5</li><li>6. Stephens Frings Gini , (1996), Fashion From Concept to Customer – USA Prentice Hall International (UK) London, ISBN: 0-13-370891-8</li><li>7. Claris Flowers-Broderick,(2013), Custom Bodies Pattern <a href="http://pattern-making.com/">http://pattern-making.com/</a> [08/11/2013: 12.04 pm].</li></ol>
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## CURRICULUM OF COMPETENCY UNIT (CoCU)

Sub Sector		APPAREL MANUFACTURING						
Job Area		SAMPLE DEVELOPMENT SECTION						
NOSS Title		APPAREL PATTERN MAKING						
Competency Unit Title		DECORATION DESIGN PLACEMENT						
Learning Outcome		The person who is competent in this competency unit shall be able to position art (logo, patch, embroidery, etc), accessories and decorations on patterns in accordance with product/buyer requirements (design construction specifications, measurement, Bill of Materials (BOM), etc) and company Standard Operating Procedures. Upon completion of this competency unit, trainees will be able to: <ul style="list-style-type: none"><li>• Check design placement requirements</li><li>• Carry out design placement preparation</li><li>• Carry out art placement positioning</li><li>• Carry out decoration line design and accessories placement</li><li>• Check design placement panel.</li></ul>						
Competency Unit Code		TA-021-2:2014-C02	Level	2	Training Duration	60 Hours	Credit Hours	6.0
Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria		
1. Check design placement requirements	i. Job order (sample delivery date, sizes, etc) ii. Design placement (art, decoration line design and accessories) iii. Product/buyer specifications/ instruction/ constructions iv. Fabric requirements (types, structure, etc) v. Measuring data			4	Lecture Discussion	i. Job order (sample delivery date, sizes, etc) determined ii. Design placement (art, decoration line design and accessories) determined according to product/buyer requirements iii. Product/buyer specifications/ instructions/		

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
	(chest, shoulder, waist, sleeve, etc) vi. Measuring manual (inches/ centimetre, measuring method, etc)					<p>constructions defined</p> <p>iv. Fabric requirements (types, structure, etc) listed according to product/buyer requirements</p>
		<p>i. Obtain job order</p> <p>ii. Identify design placement</p> <p>iii. Interpret product/buyer specification/ instruction/ constructions</p> <p>iv. Identify fabric requirements</p> <p>v. Review measuring data</p>	<p><u>Attitude:</u></p> <p>i. Patient in interpreting and clarifying product/buyer requirements</p> <p>ii. Meticulous and thorough in checking design placement specification</p> <p>iii. Resourceful in reviewing measuring data</p>	8	Demonstration Observation	<p>v. Measuring data (chest, shoulder, waist, sleeve, etc) confirmed according to measuring manual</p>

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
			<u>Safety:</u> i. Not applicable			
2. Carry out design placement preparation	i. Workstation setup readiness (drafting table - height, width, adjustable chair/rubber mat, lightings, etc) ii. Types of tools (ruler, measuring tape, scissors, etc) iii. Types of materials (various size of paper, cardboard, etc) iv. Placement sewing method identified v. Preparation procedure			4	Lecture Discussion	i. Workstation setup readiness (drafting table - height, width, adjustable chair/rubber mat, lightings, etc) confirmed and listed ii. Tools (pattern block, ruler, measuring tape, scissors, etc) and materials (various size of paper, cardboard, etc) listed and functions described according to pattern requirements iii. Placement sewing method (basic seam allowance, etc) determined vi. Arrangement procedure followed
		i. Check workstation setup ii. Arrange tools, equipment and materials iii. Identify sewing method	<u>Attitude:</u> i. Resourceful in locating tools, equipment and materials ii. Systematic in organizing	8	Demonstration Observation	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
			tools, equipment and materials iii. Adhere to work flow  <u>Safety:</u> i. Sharp tools such as scissors always tied up to work station ii. Always work with proper lighting at workstation			
3. Carry out art placement positioning	i. Product/buyer requirements ii. Art specification (sizes ,colour, textures, etc) iii. Art placement measuring method iv. Art placement and measurement			4	Lecture Discussion	i. Art placement measured and identified according to measuring manual (edge of logo, centre of logo, etc) ii. Art position determined and marked according to measuring manual (location such as edge of logo, centre of logo)
		i. Check product/buyer requirements ii. Check art specification iii. Identify art position iv. Place art		8	Demonstration Observation	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
			<u>Attitude:</u> i. Meticulous, details and thorough in art placement positioning ii. Precise in following art placement measuring data iii. Thorough in ensuring the accuracy of placement  <u>Safety:</u> i. Adhere to safety requirements in handling sharp tools for cutting art design (logo)			
4. Carry out decoration line design and accessories placement	i. Decoration design line (trim, stitching, etc) ii. Trim placement (eyelet, button, button hole, etc) iii. Art decoration documents			4	Lecture Discussion	i. Decoration design line confirmed ii. Decoration line designed according to product/buyer requirements iii. Trim placement such as eyelet, button, button



Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
						hole, etc positioned according to product/buyer construction requirements iv. Art decoration documents updated
		i. Check decoration design line ii. Design decoration line iii. Position trim placement iv. Update art decoration documents	<u>Attitude:</u> i. Meticulous, detailed and thorough in decoration line design and accessories placement ii. Precise in following decoration line design and accessories measuring	8	Demonstration Observation	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
			data iii. Thorough in ensuring the accuracy of placement  <u>Safety:</u> i. Not applicable			
5. Check design placement panel	i. Art placement panel ii. Art placement improvement/corrective action iii. Buyer approval/consent iv. Art placement adjustment (e.g. placement gap between cut seam)			4	Lecture Discussion	i. Art placement panel confirmed ii. Art placement improvement/corrective action recommended iii. Buyer approval/consent assured iv. Art placement adjusted according to buyer approval/consent of the design placement proposal
		i. Check art placement panel ii. Propose Art placement improvement/corrective action iii. Obtain buyer approval/consent iv. Adjust Art placement	<u>Attitude:</u> i. Thorough in checking design placement panel	8	Demonstration Observation	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
			ii. Precise in following measuring data  <u>Safety:</u> i. Not applicable			

### Employability Skills

Core Abilities	Social Skills
01.01 Identify and gather information 01.02 Document information, procedures or processes 01.03 Utilize basic IT applications 02.01 Interpret and follow manuals, instructions and SOP's 02.02 Follow telephone/ telecommunication procedures 02.03 Communicate clearly 02.04 Prepare brief reports and checklists using standard forms 02.05 Read/interpret flowcharts and pictorial information 02.08 Prepare pictorial and graphic information 03.01 Apply cultural requirements to the workplace 03.02 Demonstrate integrity and apply ethical practices 03.03 Accept responsibility for own work and work area 03.04 Seek and act constructively upon feedback about performance 03.05 Demonstrate safety skills 03.06 Respond appropriately to people and situations 03.07 Resolve interpersonal conflicts 04.01 Organize own work activities 04.02 Set and revise own objectives and goals 04.03 Organize and maintain own workplace 04.05 Demonstrate initiative and flexibility 06.02 Comply with and follow chain of command 06.03 Identify and highlight problems	1. Communication skills 2. Conceptual skills 3. Interpersonal skills 4. Multitasking and prioritizing 5. Self-discipline 6. Teamwork 7. Learning skills 8. Leadership skills

**Tools, Equipment and Materials (TEM)**

ITEMS	RATIO (TEM : Trainees)
1. Sample of instruction/ constructions documents (eg. Types of sample, sample delivery date, sizes, etc)	1:1
2. Drafting table/station	1:1
3. Adjustable chair	1:1
4. Pattern block / specification	1:1
5. Tools (ruler, measuring tape, scissors, etc)	1:1
6. Materials (various size of paper, cardboard, logo, glue, etc)	As per requirements
7. Sample of company policies and various procedures manual (SOP, recording, documentation, etc)	1:20
8. Sample of fabrics (knits, woven, etc)	1:1
9. Sample of garment measuring manual (e.g. design placement position)	1:1

**References**

1. Aldrich Winifred, (2013), Metric Pattern Cutting for Menswear – UK – Blackwell Publishing, ISBN : 0-632-04113-7
2. Armstrong Helen Joseph , (2006) Pattern Making for Fashion Design – US – Pearson Prentice Hall, ISBN : 0-13-191866-4
3. CAD Systems, (1996), AccuMark Marker Making User's guide 1996 Gerber Garment Technology. Doc No. 077037000
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5. Janine Manslow Kathryn Mclelvey, (2002), Fashion Design Process, Innovation & Practice- Blackwell ISBN: 0-632-05599-5
6. Stephens Frings Gini , (1996), Fashion From Concept to Customer – USA Prentice Hall International (UK) London, ISBN: 0-13-370891-8
7. Claris Flowers-Broderick,(2013), Custom Bodies Pattern <http://pattern-making.com/> [08/11/2013: 12.04pm].

## CURRICULUM OF COMPETENCY UNIT (CoCU)

Sub Sector		APPAREL MANUFACTURING						
Job Area		SAMPLE DEVELOPMENT SECTION						
NOSS Title		APPAREL PATTERN MAKING						
Competency Unit Title		GARMENT SAMPLE MEASUREMENT ASSURANCE						
Learning Outcome		The person who is competent in this competency unit shall be able to evaluate the measurement of semi finished and completed garment sample in order to ensure the semi finished and completed garment samples are constructed in accordance with paper pattern, product/buyer requirements (design construction specification, measurement, Bill of Materials (BOM), etc) and company Standard Operating Procedures. Upon completion of this competency unit, trainees will be able to: <ul style="list-style-type: none"><li>• Check garment sample measurement requirements</li><li>• Carry out garment sample measurement activities</li><li>• Report garment sample measurement results</li></ul>						
Competency Unit Code		TA-021-2:2014-C03	Level	2	Training Duration	120 Hours	Credit Hours	12.0
Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria		
1. Check garment sample measurement requirements	i. Garment information: <ul style="list-style-type: none"><li>• Types of simple/basic garments (shirt, pants or any other menswear/ ladies wear, etc)</li><li>• parts of section (sleeve, neck seam, collar, etc)</li><li>• garment shape (flare skirt, pencil skirt/ H line, A line</li></ul>			8	Lecture Discussion	i. Garment information such as types, parts of section and garment shape determined and listed according to product/buyer requirements ii. Job order (sample delivery date, sizes, etc) determined iii. Product/buyer specifications (Silhouette of		

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
	skirt, etc) ii. Job order (sample delivery date, sizes, etc) iii. Product/buyer specifications (Silhouette of garment) /instruction/ constructions iv. Types of fabric (knits, woven, etc) v. Measuring data (chest, shoulder, waist, sleeve, etc) vi. Measuring manual (inches/ centimeter, measuring method, etc)					garment) /instruction/ constructions defined and described/ explained iv. Types of fabric determined v. Measuring data (chest, shoulder, waist, sleeve, etc) confirmed according to measuring manual
		i. Identify garment information ii. Check job order iii. Interpret product/buyer specification/ instruction/ constructions vii. Identify types of fabric iv. Review measuring data	<u>Attitude:</u> i. Meticulous and thorough in checking garment	24	Demonstration Observation	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
			sample measurement specification ii. Resourceful in reviewing measuring data  <u>Safety:</u> i. Not applicable			
2. Carry out garment sample measurement activities	i. Semi finished or completed garment sample ii. Paper pattern and product/buyer requirements iii. Discrepancies on semi finished garment sample measurement iv. Buyer sketches of garment (design line, garment appearance, etc.) v. Measurement output (specification, design line, etc) vi. Documentation procedure			24	Lecture Discussion	i. Semi finished or completed garment sample confirmed ii. Paper pattern and product/buyer requirements listed and specified iii. Discrepancies on semi finished garment sample measurement determined iv. Accuracy of buyer sketches of garment (design line, garment appearance, etc.) determined
		i. Check semi finished or completed garment sample ii. Measure semi finished or		56	Demonstration Observation	v. Measurement output (specification, design line, etc) recorded

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
		completed garment sample iii. Detect discrepancies on semi finished garment sample measurement iv. Compare buyer sketches with completed garment v. Document measurement output	<u>Attitude:</u> i. Meticulous, detailed and thorough in measuring garment sample ii. Precise in measuring data iii. Thorough in ensuring the accuracy of measurement  <u>Safety:</u> i. Not applicable			according to documentation procedure
3. Report garment sample measurement results	i. Measurement output (specification, design line, etc) ii. Product/buyer specification data			2	Lecture Discussion	i. Measurement output (specification, design line, etc) accuracy confirmed



Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
	(e.g. tolerance variance) documentation iii. Sample size iv. Garment sample measurement results v. Process flow vi. Organization hierarchy/chart					according to product/buyer specification requirements ii. Product/buyer specification data (e.g. tolerance variance) recorded according to sample size iii. Garment sample measurement results prepared and delivered to authorised personnel/ department according to process flow and company hierarchy
		i. Compile measurement output ii. Document buyer specification data iii. Circulate garment sample measurement results to authorised personnel/ department	<u>Attitude:</u> i. Meticulous, detailed and thorough in reporting garment sample measurement results  <u>Safety:</u> i. Not applicable	6	Demonstration Observation	

## Employability Skills

Core Abilities	Social Skills
<ul style="list-style-type: none"> <li>01.01 Identify and gather information</li> <li>01.02 Document information, procedures or processes</li> <li>01.03 Utilize basic IT applications</li> <li>02.01 Interpret and follow manuals, instructions and SOP's</li> <li>02.02 Follow telephone/ telecommunication procedures</li> <li>02.03 Communicate clearly</li> <li>02.04 Prepare brief reports and checklists using standard forms</li> <li>02.05 Read/interpret flowcharts and pictorial information</li> <li>02.08 Prepare pictorial and graphic information</li> <li>03.01 Apply cultural requirements to the workplace</li> <li>03.02 Demonstrate integrity and apply ethical practices</li> <li>03.03 Accept responsibility for own work and work area</li> <li>03.04 Seek and act constructively upon feedback about performance</li> <li>03.05 Demonstrate safety skills</li> <li>03.06 Respond appropriately to people and situations</li> <li>03.07 Resolve interpersonal conflicts</li> <li>04.01 Organize own work activities</li> <li>04.02 Set and revise own objectives and goals</li> <li>04.03 Organize and maintain own workplace</li> <li>04.05 Demonstrate initiative and flexibility</li> <li>06.02 Comply with and follow chain of command</li> <li>06.03 Identify and highlight problems</li> </ul>	<ul style="list-style-type: none"> <li>1. Communication skills</li> <li>2. Conceptual skills</li> <li>3. Interpersonal skills</li> <li>4. Multitasking and prioritizing</li> <li>5. Self-discipline</li> <li>6. Teamwork</li> <li>7. Learning skills</li> <li>8. Leadership skills</li> </ul>

**Tools, Equipment and Materials (TEM)**

ITEMS	RATIO (TEM : Trainees)
1. Sample of instruction/ constructions documents (eg. Types of sample, sample delivery date, sizes, etc)	1:1
2. Drafting table/station	1:1
3. Adjustable chair	1:1
4. Tools (ruler, measuring tape, etc)	1:1
5. Sample of company policies and various procedures manual (SOP, recording, documentation, etc)	1:1
6. Sample of semi finished or completed garment	1:1
7. Sample of garment measuring manual	1:1

**References**

1. Aldrich Winifred, (2013), Metric Pattern Cutting for Menswear – UK – Blackwell Publishing, ISBN : 0-632-04113-7
2. Armstrong Helen Joseph , (2006) Pattern Making for Fashion Design – US – Pearson Prentice Hall, ISBN : 0-13-191866-4
3. CAD Systems, (1996), AccuMark Marker Making User's guide 1996 Gerber Garment Technology. Doc No. 077037000
4. Haggart Ann, (2006), Pattern Cutting for Lingerie, Beachwear & Leisure Wear – UK – Blackwell Publishing ISBN 10: 1-4051-1858-X ISBN 13: 978-1-4051-1858-3
5. Janine Manslow Kathryn McElvey, (2002), Fashion Design Process, Innovation & Practice- Blackwell ISBN: 0-632-05599-5
6. Stephens Frings Gini , (1996), Fashion From Concept to Customer – USA Prentice Hall International (UK) London, ISBN: 0-13-370891-8
7. Claris Flowers-Broderick,(2013), Custom Bodies Pattern <http://pattern-making.com/> [08/11/2013: 12.04 pm].

## CURRICULUM OF COMPETENCY UNIT (CoCU)

<b>Sub Sector</b>		<b>APPAREL MANUFACTURING</b>					
<b>Job Area</b>		<b>SAMPLE DEVELOPMENT SECTION</b>					
<b>NOSS Title</b>		<b>APPAREL PATTERN MAKING</b>					
<b>Competency Unit Title</b>		<b>GARMENT SAMPLE DEVELOPMENT</b>					
<b>Learning Outcome</b>		<p>The person who is competent in this competency unit shall be able to cut and make garment sample for fitting references in accordance with paper pattern, sample making process, product/buyer requirements (design construction specifications, measurement, Bill of Materials (BOM), etc) and company Standard Operating Procedures. Upon completion of this competency unit, trainees will be able to:</p> <ul style="list-style-type: none"> <li>• Check garment sample development requirements</li> <li>• Carry out garment sample development preparation</li> <li>• Carry out cutting activities</li> <li>• Carry out sewing activities</li> <li>• Carry out sample finishing activities</li> </ul>					
<b>Competency Unit Code</b>		TA-021-2:2014-C04	<b>Level</b>	2	<b>Training Duration</b>	100 Hours	<b>Credit Hours</b> 10.0
<b>Work Activities</b>	<b>Related Knowledge</b>	<b>Related Skills</b>	<b>Attitude/Safety/Environment</b>	<b>Training Hours</b>	<b>Delivery Mode</b>	<b>Assessment Criteria</b>	
1. Check garment sample development requirements	i. Job order (sample delivery date, sizes, quantity, etc) ii. Product/buyer specification/instruction/constructions iii. Types of fabric (types, structure, etc) iv. Trim/accessories (lace, button,			2	Lecture Discussion	i. Job order (sample delivery date, sizes, quantity, etc) listed and determined ii. Product/buyer specifications (Silhouette of garment) /instruction/constructions defined and	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
	eyelets, etc) v. Measuring data (chest, sleeve, neck, etc) vi. Measuring manual (inches, centimetre, method, etc) vii. Job styling information					described/ explained iii. Measuring data (chest, shoulder, waist, sleeve, etc) confirmed according to measuring manual
		i. Check job order ii. Interpret product/buyer specification/ instruction/ constructions iii. Identify types of fabric and trim/accessories iv. Review measuring data	<u>Attitude:</u> i. Patient in interpreting buyer requirements ii. Meticulous and thorough in checking sample development requirements iii. Resourceful in reviewing	6	Demonstration Observation	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
			measuring data  <u>Safety:</u> i. Not applicable			
2. Carry out garment sample development preparation	i. Workstation setup readiness ii. Tools sets (ruler, measuring tape, scissors/handle cutter, needles etc) iii. Materials (fabrics, threads, fasteners, etc) iv. Equipment: <ul style="list-style-type: none"> <li>• Single needle/ Lockstitch sewing machine</li> <li>• Overlock sewing machine</li> </ul> v. Dummy model (half/whole body) vi. Sewing method (such as clean finishing, overlocking, etc) vii. Preparation procedure			4	Lecture Discussion	i. Workstation setup (drafting table height, width, adjustable chair/rubber mat, lightings, etc) confirmed ii. Tools (pattern block, ruler, measuring tape, scissors, etc) and materials (various size of paper, cardboard, etc) listed and functions described according to pattern requirements iii. Sewing method (basic seam allowance, etc) determined iv. Arrangement procedure

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
		i. Check workstation setup readiness ii. Arrange tools, equipment and materials iii. Select dummy model iv. Identify sewing method	<u>Attitude:</u> i. Resourceful in locating tools, equipment and materials ii. Systematic in organizing tools, equipment and materials iii. Adhere to work flow  <u>Safety:</u> i. Adhere to safety requirements in handling sharp tools and sewing machine such as scissors are always tied up to work station and needle	6	Demonstration Observation	followed

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
			guide attached to machine ii. Always work with proper lighting at workstation			
3. Carry out cutting activities	i. Job styling (such as reference number of design) ii. Quantity of panel (number of cut pieces panel for whole garment) iii. Fabric direction (grain line) on panel iv. Fabric cutting process, method and technique			4	Lecture Discussion	i. Job styling confirmed ii. Quantity of panel confirmed iii. Fabric direction on panel confirmed iv. Cutting technique applied
		i. Check job styling ii. Check quantity of panel iii. Check fabric direction on panel iv. Execute cutting activities	<u>Attitude:</u> i. Meticulous, detailed and thorough in fabric cutting	8	Demonstration Observation	



Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
			<ul style="list-style-type: none"> <li>ii. Follow pattern grain line, colour way, etc as per constructed pattern</li> <li>iii. Proactive in clarifying the accuracy of pattern (colour way, grain line, etc)</li> </ul> <p><u>Safety:</u></p> <ul style="list-style-type: none"> <li>i. Adhere to safety requirements in handling sharp tools such as scissors/ handle cutter</li> <li>ii. Wear Personal Protective Equipment (PPE)</li> </ul>			

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
4. Arrange sewing sample activities	<ul style="list-style-type: none"> <li>i. Cut panels details (number of panel, with/without art placement, type of panel, etc)</li> <li>ii. Basic sewing construction (clean finish, over locking, etc)</li> <li>iii. Sewing flows and method</li> <li>iv. Type of machines with/without attachments</li> </ul>			8	Lecture Discussion	<ul style="list-style-type: none"> <li>i. Cut panels details (number of panel, with/without art placement, type of panel, etc) confirmed according to job order</li> <li>ii. Sewing construction method confirmed according to garment sample sewing requirements</li> </ul>

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
		<ul style="list-style-type: none"> <li>i Check cut panels details</li> <li>ii Identify sewing construction</li> <li>iii Produce sewing construction</li> </ul>	<p><u>Attitude:</u></p> <ul style="list-style-type: none"> <li>i. Meticulous, detailed and thorough in sewing activities</li> <li>ii. Precise in following constructed pattern such as seam allowance , design placement and sewing method</li> </ul> <p><u>Safety:</u></p> <ul style="list-style-type: none"> <li>i. Adhere to safety requirements in handling sharp tools such as scissors/ handle cutter</li> <li>ii. Wear</li> </ul>	48	Demonstration Observation	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
			Personal Protective Equipment (PPE) such as goggles/protector, hair band/cap during sewing activities iii. Adhere to safety requirements such as needle guide attached at the machine			

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
5. Carry out sample finishing activities	i. Completed sample quality (measurement, constructions, etc) ii. Type of fabrics iii. Sample finishing activities (trimming, ironing, etc) iv. Work area cleaning method v. Tools, equipment and materials storage area			6	Lecture Discussion	i. Completed sample quality examined ii. Sample finishing activities (trimming, ironing, etc) executed /confirmed according to type of fabric iii. Work area cleaning method employed iv. Tools, equipment and materials kept in place according to Standard Operating Procedure v. Status of constructed garment sample reported to

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
		i Check completed sample quality ii Check type of fabric iii Execute/check sample finishing activities iv Clean work area from materials waste and v Store used tools, equipment and materials	<u>Attitude:</u> i Meticulous, detailed and thorough in checking completed sample ii Precise in following completed sample pattern iii Adhere to sample development timeline  <u>Safety:</u> i Adhere to	8	Demonstration Observation	superior according to job order requirements

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
			safety requirements in handling sharp tools (scissors, snipper, etc) and electrical equipment (iron)			

## Employability Skills

Core Abilities	Social Skills
<ul style="list-style-type: none"> <li>01.01 Identify and gather information</li> <li>01.02 Document information, procedures or processes</li> <li>01.03 Utilize basic IT applications</li> <li>02.01 Interpret and follow manuals, instructions and SOP's</li> <li>02.02 Follow telephone/ telecommunication procedures</li> <li>02.03 Communicate clearly</li> <li>02.04 Prepare brief reports and checklists using standard forms</li> <li>02.05 Read/interpret flowcharts and pictorial information</li> <li>02.08 Prepare pictorial and graphic information</li> <li>03.01 Apply cultural requirements to the workplace</li> <li>03.02 Demonstrate integrity and apply ethical practices</li> <li>03.03 Accept responsibility for own work and work area</li> <li>03.04 Seek and act constructively upon feedback about performance</li> <li>03.05 Demonstrate safety skills</li> <li>03.06 Respond appropriately to people and situations</li> <li>03.07 Resolve interpersonal conflicts</li> <li>04.01 Organize own work activities</li> <li>04.02 Set and revise own objectives and goals</li> <li>04.03 Organize and maintain own workplace</li> <li>04.05 Demonstrate initiative and flexibility</li> <li>06.02 Comply with and follow chain of command</li> <li>06.03 Identify and highlight problems</li> </ul>	<ul style="list-style-type: none"> <li>1. Communication skills</li> <li>2. Conceptual skills</li> <li>3. Interpersonal skills</li> <li>4. Multitasking and prioritizing</li> <li>5. Self-discipline</li> <li>6. Teamwork</li> <li>7. Learning skills</li> <li>8. Leadership skills</li> </ul>



**Tools, Equipment and Materials (TEM)**

ITEMS	RATIO (TEM : Trainees)
1. Sample of instruction/ constructions documents (eg. types of sample, sample delivery date, sizes, etc)	1:1
2. Cutting table/board	1:5
3. Adjustable/non-adjustable chair	1:1
4. Tools sets (ruler, measuring tape, scissors, needles etc)	1:1
5. Materials (fabrics, threads, fasteners, etc)	As per requirements
6. Lockstitch sewing machine	1:2
7. Overlock sewing machine	1:5
8. Dummy model (half/whole body for female and male)	1:20
9. Sample of company policies and various procedures manual (SOP, recording, documentation, etc)	1:1
10. Sample of garment drawing(shirts pants or any other menswear/ ladies wear, etc)	1:1
11. Garment shape drawing (flare skirt, pencil skirt H line, A line skirt, etc)	1:20
12. Sample of fabrics (knits, woven, etc)	As per requirements
13. Sample of garment measuring manual (e.g. chest, shoulder, waist, sleeve, etc)	1:1

**References**

1. Aldrich Winifred – 2013 Metric Pattern Cutting for Menswear – UK – Blackwell Publishing, ISBN : 0-632-04113-7
2. Armstrong Helen Joseph – 2006 Pattern Making for Fashion Design – US – Pearson Prentice Hall, ISBN : 0-13-191866-4
3. CAD Systems 1996, AccuMark Marker Making User's guide 1996 Gerber Garment Technology. Doc No. 077037000
4. Janine Manslow Kathryn Mclelvey, 2002, Fashion Design Process, Innovation & Practice- Blackwell ISBN: 0-632-05599-5
5. Stephens Frings Gini , 1996 Fashion From Concept to Customer – USA Prentice Hall International (UK) London, ISBN: 0-13-370891-8

## Training Hours Summary

SECTOR : TEXTILE & APPAREL  
SUB SECTOR : APPAREL MANUFACTURING  
JOB AREA : SAMPLE DEVELOPMENT SECTION  
NOSS TITLE : APPAREL PATTERN MAKING  
JOB LEVEL : TWO (2)

CU NO	CORE	RK (30% )	RS (70%)	TOTAL HOURS
TA-021-2:2014-C01	PAPER PATTERN DESIGN AND CONSTRUCTION	102	228	330
TA-021-2:2014-C02	DECORATION DESIGN PLACEMENT	20	40	60
TA-021-2:2014-C03	GARMENT SAMPLE MEASUREMENT ASSURANCE	34	86	120
TA-021-2:2014-C04	GARMENT SAMPLE DEVELOPMENT	24	76	100
Total Training Hours		180	430	610

Notes: RK- Related Knowledge, RS- Related Skills

SUMMARY OF TRAINING DURATION FOR  
APPAREL PATTERN MAKING LEVEL 2

NO. ID	COMPETENCY UNIT TITLE	WORK ACTIVITIES	RELATED KNOWLEDGE (A)	RELATED SKILLS (B)	HOURS (A) + (B)	TOTAL (HRS)
1	PAPER PATTERN DESIGN AND CONSTRUCTION	Check paper pattern design and construction requirements	24	40	64	320
		Carry out paper pattern design and construction preparation	8	14	22	
		Carry out pattern design calculation	24	60	84	
		Carry out paper pattern construction	32	80	112	
		Carry out paper pattern design and construction documentations	8	16	22	
		Upkeep workstation	8	16	22	
2	DECORATION DESIGN PLACEMENT	Check design placement requirements	4	8	12	60
		Carry out design placement preparation	4	8	12	
		Carry out art placement positioning	4	8	12	
		Carry out decoration line design and accessories placement	4	8	12	
		Check design placement panel.	4	8	12	
3	GARMENT SAMPLE MEASUREMENT ASSURANCE	Check garment sample measurement requirements	8	24	32	120
		Carry out garment sample measurement activities	24	56	80	
		Report garment sample measurement results	2	6	8	
4	GARMENT SAMPLE DEVELOPMENT	Check garment sample development requirements	2	6	8	100
		Carry out garment sample development preparation	4	6	10	
		Carry out cutting activities	4	8	12	
		Carry out sewing activities	8	48	56	
		Carry out sample finishing activities	6	8	14	
TOTAL HOURS						600

