



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

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

**APPAREL PATTERN DESIGN AND CONSTRUCTION
LEVEL 3
TA-021-3:2014**



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	Creative/special pattern design and construction	Activities to design and construct of creative/special paper pattern for products such as evening wear/ wedding gown, coat, traditional wear (cheongsam, kebaya, etc) and sportswear.
2	Design placement	Indication in positioning art (logo, patch, embroidery, etc), accessories and decorations on the pattern
3	Decoration design line	Graphic representation, especially a detailed plan (trim, stitching, etc) for construction or manufacture.
4	Garment sample	Garment which are developed in order to check accuracy of measurement before bulk production
5	Garment fitting	Activities to fit the garment on the model's body and check that the garment is well fitted as per measurement
6	Pattern design	Sketch/drawing of garment
7	Pattern construction	Garment details instruction such as double needle, single needle, clean finish, etc
8	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
9	Specialized Inner Garment Paper Pattern Design and Construction	Activities to design and construct of specialized inner garment paper pattern for products such as lingerie, (bra, panties,) swimming suit, etc.
10	Specialized Children Garment Paper Pattern Design and Construction	Activities to design and construct specialized children garment paper pattern for products such as infant, toddler and junior garment.

STANDARD PRACTICE
NATIONAL OCCUPATIONAL SKILLS STANDARD (NOSS) FOR
APPAREL PATTERN DESIGN AND CONSTRUCTION

LEVEL 3

1. INTRODUCTION

1.1 Occupation Overview

Apparel Pattern Design and Construction is the process of creating advanced level paper pattern templates to produce copies of various garment products such as evening wear/ wedding gown, coat, traditional wear (cheongsam, kebaya, etc) and sportswear. The pattern can be constructed manually or by using computers and drafting devices. Due to the design complexity of the pattern for these products, in this document the pattern is referred to as creative/special paper pattern. Apparel manufacturers either create the patterns according to buyer construction requirements or create their own patterns based on market trends/demands.

Apparel Pattern design and construction personnel's tasks begin with studying buyer order requirements. Apart from designing and constructing complex paper pattern, the personnel is also responsible for carrying out garment fitting in order to ensure optimum amount of ease in garment movement. Garment fitting is also carried out to ensure that the seam lines follow the general silhouette of the body and garment appearance.

The personnel should be able to propose improvement/corrective actions on the discrepancies of the measurement and carried out supervisory functions such as preparing job schedule/duty roster, monitor pattern approval timeline, appraise subordinate performance and conduct in house training for subordinate professional development.

In order to perform these activities competently, the apparel pattern design and construction personnel requires knowledge in pattern designing and construction (manually or using computer), types of garment, types of fabrics, mathematics and operation supervision. These personnel also require good hand-eye coordination, normal colour vision, good communication skills in order to liaise with designer, buyer/ merchandiser and should always be prepared to embrace the latest technology in pattern design and construction.

According to the Occupational Analysis findings, Apparel Pattern Design and Construction is under the subsector of Apparel Manufacturing. The industry identifies pattern designing and construction as a critical job area to support textile and apparel industry's need.

Consequently, the development of this Apparel Pattern Design and Construction 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 Design and Construction 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:

- Sijil Kemahiran Malaysia/ Malaysian Skill Certificate Level 2 (Pattern Making) ;*
- Minimum 12 months experience in relevant Textile and Apparel industries;
- Physically, emotionally and mentally fit and;
- Possess good eye sight (not colour blind)

2. OCCUPATIONAL STRUCTURE

Apparel Pattern Design and Construction (Level 3) personnel come under sub-sector Apparel Manufacturing. Figure 1.1 and 1.2 show the structured career path and job areas of Design and Construction (Level 3) 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	SENIOR MARKER PLANNER	CUTTING SUPERVISOR	EMBROIDERY SUPERVISOR	SEWING SUPERVISOR	FINISHING SUPERVISOR			
LEVEL 2	PATTERN MAKER	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 Design and Construction for Sector Textile & Apparel 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 Design and Construction for Sector Textile & Apparel 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 3 (Apparel Pattern Design and Construction).

5. JOB COMPETENCIES

5.1 Core Competencies

The Apparel Pattern Design and Construction (Level 3) personnel must be competent in performing the following core competencies:

- Creative/Special Paper Pattern Design and Construction
- Pattern Grading and Marker Making
- Garment Fitting
- Pattern Measurement Quality Control
- Pattern Construction Supervision

5.2 Elective Competencies

Optionally, the Apparel Pattern Design and Construction (Level 3) personnel are also competent in performing the following elective competencies:-

- Specialized Inner Garment Paper Pattern Design and Construction
- Specialized Children Garment Paper Pattern Design and Construction

6. WORKING CONDITIONS

6.1 Working environment

Apparel Pattern Design and Construction 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 and 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 Design and Construction 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, other related occupations with respect to employment opportunities are:

- Senior Marker Planner
- Embroidery Supervisor
- Cutting Supervisor
- Sewing Supervisor
- Finishing Supervisor
- Fabric Creative & Art Assistant Designer

Other related industries with respect to employment opportunities are:

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

7.2. International Market

There is a potential for pattern making personnel to work in 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 Garment 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

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 pattern making is regarded as a craft. As for career advancement, most competent Apparel Pattern Design and Construction 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 functions

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
- 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
- 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

- 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
info@gmac-cambodia.org
- Cotton Incorporated
488 Madison Avenue
New York, NY 10022-5702
Tel: (212) 4138300
Fax: (212) 4138377

10. ACKNOWLEDGEMENTS

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:

- i. Trans Pacific Industries Sdn Bhd
- ii. Tai Wah Garments Industry Sdn Bhd
- iii. 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.

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

11. NOSS DEVELOPMENT COMMITTEE MEMBERS

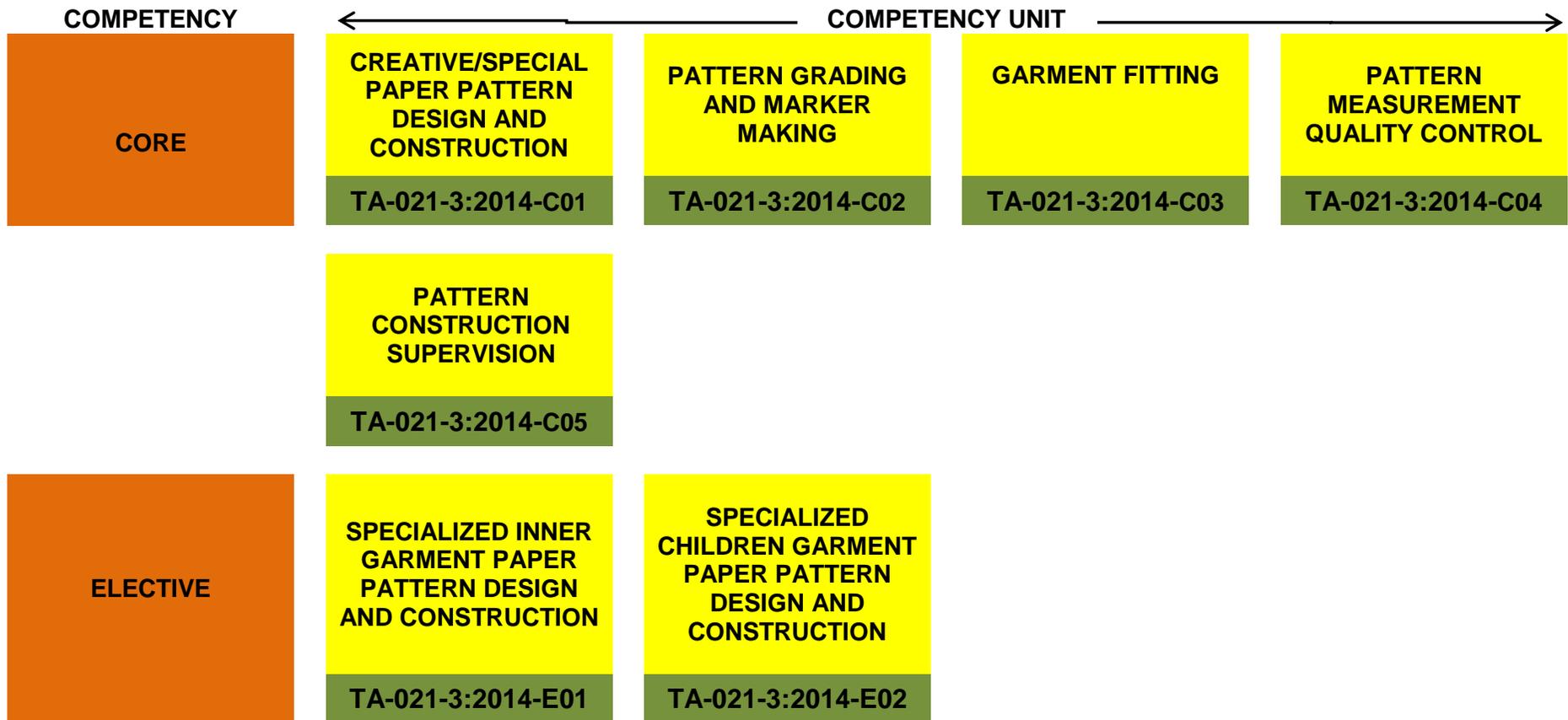
APPAREL PATTERN DESIGN AND CONSTRUCTION

LEVEL 3

PANEL		
1.	Mr. Lau Boon Puh	Director Chairman of Training Committee for MATAAC 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 (MATAAC) Batu Pahat, Johor
FACILITATOR		
11.	Mrs. Siti Salmah Binti Mohd Nor	
CO-FACILITATOR		
12.	Ms. Regina Leong	Malaysian Textile and Apparel Centre (MATAAC)
DOCUMENTOR		
13.	Ms. Maggie Chean	Malaysian Textile and Apparel Centre (MATAAC)

COMPETENCY PROFILE CHART (CPC)

SECTOR	TEXTILE & APPAREL		
SUB SECTOR	APPAREL MANUFACTURING		
JOB AREA	SAMPLE DEVELOPMENT SECTION		
NOSS TITLE	APPAREL PATTERN DESIGN AND CONSTRUCTION		
JOB LEVEL	THREE (3)	JOB AREA CODE	TA-021-3:2014



COMPETENCY PROFILE (CP)

Sub-Sector	APPAREL MANUFACTURING
Job Area	SAMPLE DEVELOPMENT SECTION
NOSS Title	APPAREL PATTERN DESIGN AND CONSTRUCTION
Level	THREE (3)

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
1. Creative/Special Paper Pattern Design and Construction	TA-021-3 :2014-C01	<p>Creative/Special Paper Pattern Design and Construction competency unit specifies the competency required to design and construct creative/special paper pattern in accordance with buyer requirements (design construction specification, measurement, Bill of Materials (BOM), etc) and pattern technique (2D, 3D, etc).</p> <p>The outcome of this competency is to produce creative/special paper pattern for products such as evening wear/ wedding gown, coat, traditional wear (cheongsam, kebaya, etc) and sportswear.</p> <p>The person who is competent in creative/special paper pattern</p>	<p>1. Check creative/special paper pattern design and construction requirements</p> <p>2. Carry out creative/special paper pattern design and construction preparation</p>	<p>1.1 Creative/special design garment information (types such as evening wear/wedding gown , coat, traditional wear, sportswear design garment, shape such as corset and tight fitting design) identified according to buyer requirements</p> <p>1.2 Job order (sample delivery date, sizes, etc) confirmed</p> <p>1.3 Buyer specifications/ instructions/ constructions interpreted according to buyer requirements</p> <p>1.4 Fabric requirements (types, structure, etc) identified</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 Pattern design technique (2D,3D, etc) identified</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
		<p>design and construction should be able to comprehend the sewing method/ technique, fabric constructions (knit/ woven, structure, shrinkage, etc), buyer construction specifications, Bill Of Materials (BOM), pattern technique (2D, 3D, etc) and company Standard Operating Procedure (SOP).</p> <p>She/he should be able to check creative/special paper pattern design and construction requirements, carry out creative/special paper pattern design and construction preparation, carry out creative/special design calculation, carry out creative/special paper pattern construction, carry out creative/special paper pattern design and construction documentations and upkeep workstation.</p>	<p>3. Carry out creative/special design calculation</p> <p>4. Carry out creative/special paper pattern construction</p>	<p>2.4 Sewing method (e.g. clean finishing, overlocking, etc) identified according to garment parts (armhole, collar, neck seam, etc.)</p> <p>2.5 Seam allowances determined</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 Creative/special design calculation documented according to documentation procedure</p> <p>4.1 Pattern drawn/sketched according to buyer specifications and creative/special drawing technique</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 creative/special design line</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)</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
			<p>5. Carry out creative/special paper pattern design and construction documentations</p> <p>6. Upkeep workstation</p>	<p>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 Creative/special paper pattern design activities 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. Pattern Grading And Marker Making	TA-021-3 :2014-C02	<p>Pattern Grading And Marker Making competency unit specifies the competency to develop paper pattern in various sizes and marker. The patterns of different sizes are produced from master pattern. It can be performed manually or automatically by a computerized system.</p> <p>The outcome of this competency is to create various sizes of paper pattern according to grading rules and to arrange marker according to buyer order ratio.</p> <p>The person who is competent in pattern grading and marker making should be able to comprehend the buyer construction specifications, BOM, sample consumption calculation and company Standard Operating Procedure (SOP).</p> <p>She/he should be able to check buyer construction requirements, carry out pattern</p>	<p>1. Check pattern grading and marker making requirements</p> <p>2. Carry out pattern grading and marker making preparation</p> <p>3. Carry out pattern grading</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 Sample specification reviewed</p> <p>1.5 Measuring data reviewed according to buyer measuring manual</p> <p>2.1 Workstation organized</p> <p>2.2 Grading tools (calculator, digitizer, etc) equipment (plotter/printer, computer & peripherals, etc) and materials arranged</p> <p>2.3 Grading software (gerber, lectra, etc) selected according to company system availability</p> <p>2.4 Grading rule (jump size measurement) identified</p> <p>2.5 Marker ratio calculation executed according to buyer order quantity</p> <p>3.1 Base size confirmed according to buyer requirements</p> <p>3.2 Number of sizes to be developed/ created confirmed according to buyer place/order sizes</p> <p>3.3 Pattern grading executed according</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
		grading and marker making preparation, carry out pattern grading, examine pattern grading output, carry out paper pattern documents storage activities and create pattern model/ marker.	<p>4. Examine pattern grading output</p> <p>5. Carry out paper pattern documents storage activities</p>	<p>to grading rule</p> <p>4.1 Nested pattern output checked according to various sample size (pattern grain line, notches marking and accuracy, etc)</p> <p>4.2 Sewing seam allowances accuracy checked</p> <p>4.3 Print/logo placement accuracy checked</p> <p>4.4 Panel accuracy with the pattern checked</p> <p>4.5 Grade rule error/ discrepancies detected</p> <p>4.6 Improved grade rule proposed to buyer for further action</p> <p>4.7 Pattern grading altered/corrected according to buyer specification approval/consent</p> <p>5.1 Paper pattern format (softcopy/hardcopy) confirmed</p> <p>5.2 Pattern grading output (accuracy, types, etc.) confirmed</p> <p>5.3 Pattern filing stored and labelled/indexed according to company storage system (electronic/manually) and Standard Operating Procedure (SOP)</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
			6. Create pattern model/ marker	6.1 Number of cut pieces indicated according to paper pattern 6.2 Panel colour way/ fabrication indicated according to paper pattern 6.3 Information of matching panel indicated according to buyer fabrication requirements 6.4 Pattern model/marker created according to company grading software 6.5 Fabric consumption calculated according to buyer requirements ratio

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
3. Garment Fitting	TA-021-3 :2014-C03	<p>Garment Fitting competency unit specifies the competency required to fit the garment on the model's body and check that the garment is well fitted as per measurement. Fitting should take care of the major alterations in the bodice. The left and right side patterns should be the same. The paper patterns should also be altered on the basis of changes made in the garment.</p> <p>The outcome of this competency is to ensure the garment has optimum amount of ease in movement and the seam lines follow the general silhouette of the body and the appearance as per buyer requirements (design construction specifications, measurement, etc).</p> <p>The person who is competent in garment fitting should be able to comprehend the buyer construction specifications, BOM, and company Standard Operating Procedure (SOP).</p>	<ol style="list-style-type: none"> 1. Check garment fitting requirements 2. Carry out garment fitting preparation 3. Carry out garment fitting activities 	<ol style="list-style-type: none"> 1.1 Job order (sample delivery date, sizes, etc) confirmed in accordance with buyer requirements 1.2 Approval criteria (fit sample, size set sample, salesman sample, development sample, etc) identified 1.3 Fitting measurement specification identified according to buyer specification/ instruction/ constructions 1.4 Fabric requirements (types, structure, etc) identified according to buyer requirements 1.5 Sample specifications reviewed according to buyer measuring manual 2.1 Fitting room/area organized 2.2 Dummy model selected 2.3 Completed sample (e.g.: finished garment) obtained 2.4 Fitting tools (paper pattern, pins/needles, chalk, measuring tape, etc) prepared 3.1 Garment fitting executed according to buyer requirements 3.2 Discrepancies in garment appearance (measurement, design placement, etc) obtained and documented

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
		<p>She/he should be able to check garment fitting requirements, carry out garment fitting preparation, carry out garment fitting activities, provide garment construction/ specifications alteration advice and carry out buyer final approval acquisition</p>	<p>4. Provide garment construction/ specification alteration advice</p> <p>5. Carry out buyer final approval acquisition</p>	<p>3.3 Pattern measurement adjusted /pattern altered or reported to authorised/relevant personnel for improvement</p> <p>4.1 Measurement alteration and construction (fold over finishing, cut and sewn finishing, etc) method recommended/advised to authorised personnel</p> <p>4.2 Source of discrepancies/root cause of problem investigated</p> <p>4.3 Counter measure for sample improvement recommended to authorised personnel/buyer</p> <p>5.1 Buyer feedback (comment/ complimentary, inquiry, etc) gathered</p> <p>5.2 Buyer feedback analyzed</p> <p>5.3 Feedback findings such as discrepancies compiled for buyer</p> <p>5.4 Constructions improvement /rectification of discrepancies proposed for buyer acceptance</p> <p>5.5 Buyer approval documented according to company/ buyer quality manual</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
4. Pattern Measurement Quality Control	TA-021-3 :2014-C04	<p>Pattern Measurement Quality Control competency unit specifies the competency required to check and control pattern measurements such as garment construction shrinkage allowance (type of fabric, wash and construction) added to the pattern.</p> <p>The outcome of this competency is to ensure the pattern measurement is in accordance with buyer requirements (design construction specification, measurement, etc).</p> <p>The person who is competent in pattern measurement quality control should be able to comprehend buyer constructions specifications, Bill of Materials (BOM) and company Standard Operating Procedure (SOP).</p> <p>She/he should be able to assess pattern measurement quality control requirements, carry out pattern quality improvement/ alteration, verify pre-production</p>	<p>1. Assess pattern measurement quality control requirements</p> <p>2. Carry out pattern quality improvement/ alteration</p> <p>3. Verify pre-production paper pattern</p>	<p>1.1 Final confirmation from buyer for bulk production obtained and assured</p> <p>1.2 Outcome of pattern quality from Pre-production (PP) review meeting gathered</p> <p>1.3 Production instructions/ design specification sheet confirmed</p> <p>1.4 Job sheet (order batch, order quantity, order sizes, construction method, styling, etc) confirmed according to buyer requirements</p> <p>2.1 Pattern quality issues / matters confirmed and analysed according to shrinkage added to pattern</p> <p>2.2 Pattern quality issues responded/adjusted/altered according to buyer measurement tolerance</p> <p>3.1 Approved paper pattern for pre-production obtained</p> <p>3.2 Pattern measurement quality (accuracy, tolerance, etc) approval before bulk production confirmed according to buyer final feedback</p> <p>3.3 Pre-production paper pattern submitted/delivered for marker arrangement according to production schedule</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
		paper pattern and prepare pattern measurement quality control activities documentations	4. Prepare pattern measurement quality control activities documentations	<p>4.1 Pattern measurement quality control matters and corrective actions taken compiled according to buyer quality standards/ company quality control procedure</p> <p>4.2 Pattern measurement quality control document formatted and generated according to company standard operating procedure</p> <p>4.3 Pattern measurement quality control alerted/notified to relevant personnel/ department</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
5. Pattern Construction Supervision	TA-021-3 :2014-C05	<p>Pattern Construction Supervision competency unit specifies the competency required to supervise daily activities in paper pattern design and construction operation in accordance with regulatory/ statutory body's requirements, buyer specifications and expectation and company Standard Operation Procedure (SOP).</p> <p>The outcome of this competency is to ensure efficient operation and maximise company performance in pattern design and construction.</p> <p>The person who is competent in pattern construction supervision should be able to comprehend interpersonal skills, buyer constructions specification and company Standard Operating Procedure (SOP).</p> <p>She/he should be able to ensure work place safety, assure facilities, equipment and tools functionality and operability,</p>	<ol style="list-style-type: none"> 1. Ensure work place safety 2. Assure facilities, equipment and tools functionality 3. Prepare duty roster/ job schedule 	<ol style="list-style-type: none"> 1.1 Work place safety, health and environment monitored 1.2 Housekeeping activities supervised in accordance with company procedure and regulatory/statutory bodies requirements 1.3 Workstation and facilities (table, chair, lights) arrangement adjusted according to ergonomic department requirements 1.4 Waste disposal supervised in accordance with regulatory/statutory bodies requirements 2.1 Facilities, equipment and tools availability identified 2.2 Facilities, equipment and tools functionality checked in accordance with manufacturer manuals and specification 2.3 Malfunction/irregularities of facilities, equipment and tools documented and reported to superior for further action 3.1 Scope of work and job descriptions identified 3.2 Number of personnel identified 3.3 Job capacity (number of styling, type of pattern) confirmed 3.4 Jobs assigned in accordance with

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
		prepare duty roster/ job schedule, carry out pattern materials inventory check, monitor pattern approval timeline, carry out subordinate appraisal and conduct in house training.	<p>4. Carry out pattern materials inventory check</p> <p>5. Monitor pattern approval timeline</p> <p>6. Carry out subordinate appraisal</p>	<p>job functions</p> <p>3.5 Duty roster planned, scheduled, formatted and generated</p> <p>4.1 Inventory items (materials, paper, stationeries, cardboard, etc) identified</p> <p>4.2 Inventory checking schedule identified</p> <p>4.3 Paper volume/quantity checked</p> <p>4.4 Inventory check results documented according to documentation procedure</p> <p>5.1 Delivery/buyer order date achieved</p> <p>5.2 Pattern approval within timeline ensured</p> <p>5.3 Corrective action/counter measure for not meeting expectation/approval issues executed or proposed/recommended to superior for further action</p> <p>6.1 Appraisal objective (area for improvement, better communication, skills gap, etc) identified</p> <p>6.2 Subordinate appraised in accordance with appraisal procedure, company Key Performance Index (KPI) and objective</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
			7. Conduct in house training	<p>6.3 Appraisal results documented, and recommendation made according to company policies</p> <p>7.1 Training programme identified and selected in accordance with Training Needs Analysis (TNA) results and buyer needs</p> <p>7.2 Training programme details (type of training, participant, date, time, venue) identified</p> <p>7.3 Training facilities (audio visual, rooms, materials, etc) prepared in accordance with training programme</p> <p>7.4 Training executed according to training delivery mode (lecture, demonstration/ observation, practical, etc.)</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
6. Specialized Inner Garment Paper Pattern Design and Construction	TA-021-3 :2014-E01	<p>Specialized Inner Garment Paper Pattern Design and Construction competency unit specifies the competency required to design and construct specialized inner garment paper pattern in accordance with buyer requirements (design construction specifications, measurement, Bill of Materials (BOM), etc) and pattern technique (2D, 3D, etc).</p> <p>The outcome of this competency is to produce specialized inner garment paper pattern for products such as lingerie, (bra, panties,) swimming suit, etc.</p> <p>The person who is competent in specialized inner garment paper pattern design and construction should be able to comprehend sewing methods/ techniques, fabric constructions (knit/ woven, structure, shrinkage, etc), buyer construction specifications, Bill Of Materials (BOM), pattern technique (2D, 3D, etc) and company Standard Operating</p>	<ol style="list-style-type: none"> 1. Check specialized inner garment paper pattern design and construction requirements 2. Carry out specialized inner garment paper pattern design and construction preparation 	<ol style="list-style-type: none"> 1.1 Specialized inner garment information (types such as lingerie such as bras, panties and any swimming suit, shape such as corset and tight fitting design etc) identified according to buyer requirements 1.2 Job order (sample delivery date, sizes, etc) confirmed 1.3 Buyer specification/ instructions/ constructions interpreted according to buyer requirements 1.4 Fabric and trims requirements (types, structure, lace, elastic, etc) identified 1.5 Measuring data reviewed according to buyer measuring manual 2.1 Workstation organized 2.2 Tools, equipment (specialized sewing machine such as zig- zag, flat seam) and materials (stabilizing/elastic tape, mould cup, etc.) obtained and arranged 2.3 Pattern design technique (2D,3D, etc) identified 2.4 Sewing method (e.g. zig- zag, flat seam) identified according to seam allowances (e.g. French/flat seams)

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
		<p>Procedure (SOP).</p> <p>She/he should be able to check specialized inner garment paper pattern design and construction requirements, carry out specialized inner garment paper pattern design and construction preparation, carry out specialized inner garment design calculation, carry out specialized inner garment paper pattern construction, and carry out specialized inner garment paper pattern design and construction documentations and upkeep workstation.</p>	<p>3. Carry out specialized inner garment design calculation</p> <p>4. Carry out specialized inner garment paper pattern construction</p>	<p>3.1 Buyer specifications / measurement data confirmed according to measurement manual (inches/centimetre, measuring method, etc)</p> <p>3.2 Design specifications of specialized inner garment calculated according to buyer construction requirements</p> <p>3.3 Specialized inner garment calculation documented according to documentation procedure</p> <p>4.1 Pattern block traced or drawn/sketched according to buyer specifications and specialized inner garment drawing technique</p> <p>4.2 Pattern measured according to measuring manual and buyer requirements (size specification, type of fabric, etc)</p> <p>4.3 Calculation of elastic stretchable determined for elastic length</p> <p>4.4 Pattern cutting executed according to specialized inner garment design line and fabric direction (grain line)</p> <p>4.5 Pattern output (seam allowances, notches, panel matching, etc) checked according to buyer construction design</p> <p>4.6 Cut panels (size, panel name, etc) labelled according to company</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
			<p>5. Carry out specialized inner garment paper pattern design and construction documentations</p> <p>6. Upkeep workstation</p>	<p>standard procedure</p> <p>4.7 Pattern name/styling identified and labelled according to company standard procedure</p> <p>5.1 Job completion confirmed</p> <p>5.2 Specialized inner garment paper pattern design activities 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
7. Specialized Children Garment Paper Pattern Design and Construction	TA-021-3 :2014-E02	<p>Specialized Children Garment Paper Pattern Design and Construction competency unit specifies the competency required to design and construct specialized children garment paper pattern in accordance with buyer requirements (design construction specification, measurement, Bill of Materials (BOM), etc) and pattern technique and safety requirements for items such as button, non lead materials, draw cord, zipper, etc).</p> <p>The outcome of this competency is to produce specialized children garment paper pattern for products such as infant, toddler and junior garment.</p> <p>The person who is competent in specialized children garment paper pattern design and construction should be able to comprehend sewing methods/ techniques, fabric constructions (knit/ woven, structure, shrinkage, etc), buyer construction specifications, Bill</p>	<ol style="list-style-type: none"> 1. Check specialized children garment paper pattern design and construction requirements 2. Carry out specialized children garment paper pattern design and construction preparation 	<ol style="list-style-type: none"> 1.1 Specialized children garment design information (types such as infant, toddler, junior, etc) identified according to buyer requirements 1.2 Job order (sample delivery date, sizes, etc) confirmed 1.3 Buyer specification/ instruction/ constructions interpreted according to buyer requirements 1.4 Fabric requirements (types, structure, etc) identified 1.5 Measuring data reviewed according to buyer measuring manual 1.6 Safety requirements for items such as button, non lead materials, draw cord, zipper, etc) identified according to buyer requirements/ country standards 2.1 Workstation organized 2.2 Tools, equipment (zig -zag machines, flat seam machines, etc) and materials obtained and arranged 2.3 Pattern design technique (diaper panties, jumpsuit, etc) identified 2.4 Sewing method (e.g. zig-zag, flat seam, etc) identified according to garment parts (armhole, collar, neck seam, etc.) 2.5 Seam allowances determined

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
		<p>Of Materials (BOM), pattern technique (jumpsuit, diaper panties, etc) and company Standard Operating Procedure (SOP).</p> <p>She/he should be able to check specialized children garment paper pattern design and construction requirements, carry out specialized children garment paper pattern design and construction preparation, carry out specialized children garment design calculation, carry out specialized children garment paper pattern construction, carry out specialized children garment paper pattern design and construction documentations and upkeep workstation.</p>	<p>3. Carry out specialized children garment design calculation</p> <p>4. Carry out specialized children garment paper pattern construction</p>	<p>3.1 Buyer specification / measurement data confirmed according to measurement manual (inches/ centimetre, measuring method, etc)</p> <p>3.2 Design specification of specialized children garment calculated according to buyer constructions requirements</p> <p>3.3 Specialized children garment design calculation documented according to documentation procedure</p> <p>4.1 Pattern block traced or drawn/sketched according to buyer specification and specialized children garment drawing technique</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 specialized children garment design line and fabric direction (grain line)</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>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
			<p>5. Carry out specialized children garment paper pattern design and construction documentations</p> <p>6. Upkeep workstation</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 Specialized children garment paper pattern design activities 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>

CURRICULUM OF COMPETENCY UNIT (CoCU)

Sub Sector	APPAREL MANUFACTURING						
Job Area	SAMPLE DEVELOPMENT SECTION						
NOSS Title	APPAREL PATTERN DESIGN AND CONSTRUCTION						
Competency Unit Title	CREATIVE/SPECIAL PAPER PATTERN DESIGN AND CONSTRUCTION						
Learning Outcome	<p>The person who is competent in this competency unit shall be able to design and construct creative/special paper patterns for products such as evening wear/ wedding gown, coat, traditional wear (cheongsam, kebaya, etc) and sportswear in accordance with product/buyer requirements (design construction specification, measurement, Bill of Materials (BOM), etc) and pattern technique (2D, 3D, etc).</p> <p>Upon completion of this competency unit, trainees will be able to:</p> <ul style="list-style-type: none"> • Check creative/special paper pattern design and construction requirements • Carry out creative/special pattern design and construction preparation • Carry out creative/special design calculation • Carry out creative/special paper pattern construction • Carry out creative/special paper pattern design and construction documentations • Upkeep workstation 						
Competency Unit Code	TA-021-3:2014-C01	Level	3	Training Duration	390 Hours	Credit Hours	39.0
Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria	
1. Check creative/special design requirements	i. Garment information: <ul style="list-style-type: none"> • Types of creative/special pattern design (evening wear/ wedding gown, coat, traditional wear (cheongsam, kebaya, etc) and sportswear. • Creative 			24	Lecture Discussion	i. Garment information such as type (evening wear/ wedding gown, coat, traditional wear (cheongsam, kebaya, etc) and sportswear) and creative/special garment shape determined and listed according to	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> garment shape (corset, tight fitting design, etc) ii. Job order (sample delivery date, sizes, etc) iii. Product/buyer specification (Silhouette of garment) /instruction/ constructions iv. Types of fabric (knit/woven, structure, shrinkage, etc) v. Trim/accessories (lace, cording, emboss , button, zipper, etc) vi. Measuring data (chest, shoulder, waist, sleeve, etc) vii. Measuring manual (inches/ centimeter, measuring method, etc) 					<ul style="list-style-type: none"> product/buyer requirements ii. Job order (sample delivery date, sizes, etc) determined iii. Product/buyer specification (Silhouette of garment) /instruction/ constructions defined and described/ explained iv. Type of fabric (knit/woven, structure, shrinkage, etc) and trim/accessories (lace, cording, emboss , button, zipper, etc) determined and listed v. Measuring data (chest, shoulder, waist, sleeve, etc) confirmed according to measuring manual
		<ul style="list-style-type: none"> i. Identify garment information ii. Check job order iii. Interpret Product/buyer specification/ 		52	Demonstration Observation Assignment/ Project	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
		instruction/ constructions iv. Identify types of fabric v. Identify trim/accessories vi. Review measuring data	<u>Attitude:</u> i. Patient in interpreting and clarifying Product/buyer requirements ii. Meticulous and thorough in verifying pattern design and construction specification iii. Resourceful in reviewing measuring data <u>Safety:</u> i. Not applicable			
2. Carry out creative/special pattern design and construction preparation	i. Workstation setup (drafting table-height, width, adjustable chair, lightings, etc) ii. Type of tools (ruler, measuring tape,			8	Lecture Discussion	i. Workstation setup readiness (drafting table height, width, adjustable chair, lightings, etc) confirmed

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
	scissors, needles, etc) iii. Type of equipment (computer and peripherals, plotter, digitizers, etc) iv. Dummy model (half/whole body) v. Type of materials (various size of paper, cardboard, etc) vi. Garment parts (armhole, collar, neck seam, etc.) vii. Pattern design technique (2D,3D, etc) viii. Sewing method (e.g. clean finishing, overlocking, etc) ix. Preparation procedure					ii. Tools (ruler, measuring tape, scissors, needles, etc) , equipment (computer and peripherals, plotter, digitizers, etc), dummy models (half/whole body) and materials (various size of paper, cardboard, etc) listed and functions described according to pattern requirements iii. Sewing method (e.g. clean finishing, overlocking, etc) determined
		i. Check workstation setup readiness ii. Arrange tools, equipment and materials iii. Identify garment parts iv. Identify pattern design technique v. Identify sewing method		16	Demonstration Observation Assignment/ Project	iv. Preparation procedure followed

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
			<p><u>Attitude:</u></p> <ul style="list-style-type: none"> i. Resourceful in locating tools, equipment and materials ii. Organize tools, equipment and materials systematically iii. Adhere to work flow <p><u>Safety:</u></p> <ul style="list-style-type: none"> i. Sharp tools such as scissors always tied up to work station and needles kept in place ii. Always work with proper lighting at workstation 			
3. Carry out creative/special design calculation	<ul style="list-style-type: none"> i. Product/buyer construction specification ii. Type of measuring data : <ul style="list-style-type: none"> • Half garment measure (chest, hip, waist, etc) 			24	Lecture Discussion	<ul style="list-style-type: none"> i. Product/buyer construction specification confirmed ii. Type of measuring data such as half/full garment measure and

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> • Full garment measure (shoulder, neck seam, collar, etc) • Garment wash shrinkage (stone wash, enzyme wash, etc) iii. Design specification (e. g size measurement) iv. Design calculation method (division of 2 or 4) v. Design calculation output vi. Documentation procedure					garment wash shrinkage confirmed and listed according to measurement manual iii. Design calculation method employed according to product/buyer constructions requirements iv. Design calculation output documented according to documentation procedure
		i. Check product/buyer construction specification ii. Check measurement data iii. Follow design specification iv. Execute design calculation v. Document creative/special design calculation output	<u>Attitude:</u> i. Patient and precise in	56	Demonstration Observation Assignment/ Project	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
			interpreting product/buyer specifications ii. Meticulous, details 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 creative/special paper pattern construction	i. Creative/special pattern specifications ii. Creative/special pattern sketching/drawing technique iii. Creative/special pattern measuring method iv. Creative/special pattern cutting technique v. Design line (princess cut, pleat, dart, etc) vi. Fabric			48	Lecture Discussion	i. Product/buyer requirements (size specification, type of fabric, etc) confirmed and listed ii. Pattern sketching/drawing technique applied iii. Pattern measuring method employed iv. Pattern cutting technique applied v. Design line followed and fabric direction (grain line) determined

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
	<p>direction(grain line)</p> <p>vii. Creative/special pattern output checking method</p> <p>viii. Cut panels details (size, panel name, etc)</p> <p>ix. Creative/special pattern name/styling labeling method</p>					<p>according to product/buyer/design requirements</p> <p>vi. Pattern output checking method employed</p> <p>vii. Pattern output (seam allowances, notches, panel matching, etc) confirmed</p>
		<p>i. Check creative/special pattern specifications</p> <p>ii. Draw/sketch creative/special pattern</p> <p>iii. Employ creative/special pattern measuring method</p> <p>iv. Cut creative/special pattern</p> <p>v. Follow design line</p> <p>vi. Identify fabric direction</p> <p>vii. Check creative/special pattern output</p> <p>viii. Label cut panels and creative/special pattern name/styling</p>	<p><u>Attitude:</u></p> <p>i. Meticulous,</p>	112	Demonstration Observation Assignment/ Project	<p>viii. Cut panels details (size, panel name, etc) and pattern name/styling labelling method employed</p>

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
			details and thorough in Pattern sketching/ drawing ii. Precise in pattern data measuring iii. Creative thinking in creative/ special paper pattern construction iv. Thorough in ensuring the accuracy of measurement <u>Safety:</u> i. Adhere to safety requirements in handling sharp tools such as scissors and needles			
5. Carry out creative/special paper pattern design documentations	i. Job completion status (e.g. work in progress) ii. Creative/special paper pattern design records			10	Lecture Discussion	i. Job completion status such as work in progress (WIP) confirmed ii. Paper pattern design records

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
	<p>(completion date, number of completed pattern, type of pattern, etc)</p> <p>iii. Creative/special paper pattern design activities (drawing/sketching, measuring, cutting, checking, etc)</p> <p>iv. Documentation procedure</p>	<p>i. Check job completion status</p> <p>ii. Compile creative/special paper pattern design records</p> <p>iii. Document creative/special paper pattern design activities</p>	<p><u>Attitude:</u></p> <p>i. Meticulous, details and thorough in paper pattern design documentations</p> <p><u>Safety:</u></p> <p>i. Not applicable</p>	16	Demonstration Observation Assignment/ Project	<p>(completion date, number of completed pattern, type of pattern, etc) gathered</p> <p>iii. Paper pattern design activities (drawing/sketching, measuring, cutting, checking, etc) listed and demonstrated</p> <p>iv. Documentation procedure and format followed</p>

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
6. Upkeep workstation	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> i. Used tools and materials arranged and kept in place according to category ii. Depleted materials replenished iii. Paper waste disposal procedure followed in accordance with regulatory/statutory bodies requirements
		<ul style="list-style-type: none"> i. Arrange used tools and materials ii. Keep tools and materials at designated area/place iii. Replenish depleted materials iv. Dispose paper waste 	<p><u>Attitude:</u></p> <ul style="list-style-type: none"> i. Meticulous and thorough in up keeping work station <p><u>Safety:</u></p> <ul style="list-style-type: none"> i. Adhere to safety rules and regulations 	16	Demonstration Observation Assignment/ Project	

Employability Skills

Core Abilities	Social Skills
01.07 Utilize database applications to locate and process information 01.10 Apply a variety of mathematical techniques 01.11 Apply thinking skills and creativity 02.11 Convey information and ideas to people 03.15 Liaise to achieve identified outcomes 03.16 Identify and assess client/customer needs 04.07 Negotiate acceptance and support for objectives and strategies 05.02 Inspect and monitor work done and/or in progress	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. Computer and Peripherals	1:2
2. Fashion Computer Aided Design/Computer Aided Manufacturing (CAD/CAM)	1:10
3. Sample of instruction/ constructions documents (e.g. Types of sample, sample delivery date, sizes, etc)	1:1
4. Drafting table/station	1:1
5. Adjustable chair	1:1
6. Pattern block / specification	1:1
7. Tools set (calculator, ruler, measuring tape, scissors, needles, etc)	1:1
8. Equipment (Plotter, Digitizer, etc)	1:20
9. Materials (various size of paper, cardboard , etc)	As per requirements
10. Dummy model (half/whole body) for female and male	1:20
11. Sample of company policies and various procedures manual (SOP, recording, documentation, etc)	1:1
12. Garment drawing/sample (evening wear/ wedding gown, coat, traditional wear (cheongsam, kebaya, etc) and sportswear)	1:20
13. Sample of garment parts of section (sleeve, neck seam, collar, etc)	1:20
14. Garment shape drawing (corset, tight fitting design, etc)	1:1
15. Sample of fabrics (knits, woven, trim,etc)	As per requirements
16. Sample of garment measuring manual (e.g. chest, shoulder, waist, sleeve)	1:1

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CURRICULUM OF COMPETENCY UNIT (CoCU)

Sub Sector	APPAREL MANUFACTURING						
Job Area	SAMPLE DEVELOPMENT SECTION						
NOSS Title	APPAREL PATTERN DESIGN AND CONSTRUCTION						
Competency Unit Title	PATTERN GRADING AND MARKER MAKING						
Learning Outcome	<p>The person who is competent in this competency unit shall be able to develop various sizes of paper pattern according to grading rules and to arrange marker according to size breakdown. Upon completion of this competency unit, trainees will be able to:</p> <ul style="list-style-type: none"> • Check pattern grading and marker making requirements • Carry out pattern grading and marker making preparation • Carry out pattern grading • Examine pattern grading output • Carry out paper pattern documents storage activities • Create pattern model/ marker 						
Competency Unit Code	TA-021-3:2014-C02	Level	3	Training Duration	410 Hours	Credit Hours	41.0
Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria	
1. Check pattern grading and marker making requirements	<ul style="list-style-type: none"> i. Job order (sample delivery date, sizes, ratio, etc) ii. Product/buyer specification/ instruction/ constructions iii. Types of fabric (knits/woven, etc) iv. Sample specification (e.g. size measurement) v. Measuring data vi. Buyer measuring manual/instructions 			16	Lecture Discussion	<ul style="list-style-type: none"> i. Job order (sample delivery date, sizes, etc) determined ii. Buyer specification (Silhouette of garment) /instruction/ constructions defined and described/ explained iii. Type of fabrics determined and listed 	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
	(e.g. point of measurement)	<ul style="list-style-type: none"> i. Check job order ii. Interpret buyer specification/ instruction/ constructions iii. Identify types of fabric iv. Review sample specification and measuring data 	<p><u>Attitude:</u></p> <ul style="list-style-type: none"> i. Patient in interpreting and clarifying buyer requirements ii. Meticulous and thorough in verifying pattern grading and marker making requirements iii. Resourceful in reviewing measuring data <p><u>Safety:</u></p> <ul style="list-style-type: none"> i. Not Applicable 	32	Demonstration Observation Assignment/ Project	iv. Measuring data (chest, shoulder, waist, sleeve, etc) confirmed according to point of measurement

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
2. Carry out pattern grading and marker making preparation	<ul style="list-style-type: none"> i. Workstation setup readiness ii. Tools (calculator, ruler, measurement tape, etc) iii. Equipment (plotter/printer, digitizer, computer & peripherals, etc) iv. Materials (paper, ink, etc) v. Grading software (fashion CAD/CAM such as Gerber, Lectra, etc) vi. Grading rule/jump size measurement (creation/adjustment measurement based on garment sizes) vii. Marker ratio calculation viii. Buyer order quantity 			8	Lecture Discussion	<ul style="list-style-type: none"> i. Workstation setup confirmed ii. Grading tools (calculator, digitizer, etc) , Equipment (plotter/printer, computer & peripherals, etc) And materials (paper, ink, etc) readiness confirmed iii. Grading software (fashion CAD/CAM such as Gerber, Lectra, etc) determined according to company availability iv. Grading rule/jump size measurement (creation/adjustment measurement based on garment sizes) determined and confirmed
		<ul style="list-style-type: none"> i. Check workstation setup readiness ii. Check grading tools, equipment and materials readiness iii. Select grading 		16	Demonstration Observation Assignment/ Project	<ul style="list-style-type: none"> v. Marker ratio calculated according to buyer order quantity

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
		system iv. Identify grading rule v. Execute marker ratio calculation	<u>Attitude:</u> i. Resourceful in locating tools, equipment and materials ii. Organize tools, equipment and materials systematically iii. Adhere to work flow when setup machine <u>Safety:</u> i. Sharp tools such as scissors always tied up to work station ii. Always work with sufficient lighting at workstation iii. Adhere to safety requirements when set-up of electrical equipment			

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
3. Carry out pattern grading	<ul style="list-style-type: none"> i. Master paper pattern (sample size) ii. Number of sizes to be developed/ created iii. Buyer place/order sizes iv. Grading rule/jump size measurement (creation/ adjustment measurement based on garment sizes) v. Pattern grading technique 			42	Lecture Discussion	<ul style="list-style-type: none"> i. Base size determined ii. Number of sizes to be developed/ created determined iii. Buyer place/order sizes assured iv. Grading rule assured v. Pattern grading technique applied
		<ul style="list-style-type: none"> i. Check master paper pattern (sample size) ii. Check number of sizes to be developed/ created iii. Check buyer place/order sizes iv. Follow grading rule v. Execute pattern grading 	<p><u>Attitude:</u></p> <ul style="list-style-type: none"> i. Meticulous, detailed and thorough in pattern grading 	96	Demonstration Observation Assignment/ Project	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
			ii. Follow pattern measuring data precisely iii. Proactive in ensuring the accuracy of measurement <u>Safety:</u> i. Not Applicable			
4. Examine pattern grading output	i. Various sample size (pattern grain line, notches marking and accuracy, etc) ii. Nested pattern output iii. Sewing seam allowances accuracy iv. Logo placement accuracy v. Panel accuracy vi. Grade rule error/ discrepancies vii. Improved grade rule viii. Buyer specification /consent before alteration ix. Pattern grading alteration process (if applicable)			16	Lecture Discussion	i. Various sample size (pattern grain line, notches marking and accuracy, etc) specified and listed ii. Nested pattern output assured iii. Sewing seam allowances accuracy assured iv. Logo placement accuracy assured v. Panel accuracy assured vi. Grade rule error/ discrepancies determined vii. Improved grade rule listed and recommended viii. Buyer specification

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
						/consent acquired before alteration ix. Pattern grading alteration process explained and demonstrated
		<ul style="list-style-type: none"> i. Identify various sample size ii. Check nested pattern output iii. Check sewing seam allowances accuracy iv. Check logo placement accuracy v. Check panel accuracy with the pattern vi. Detect grade rule error/discrepancies vii. Propose improved grade rule to buyer viii. Obtain buyer specification /consent ix. Alter pattern grading upon buyer consent 	<p><u>Attitude:</u></p> <ul style="list-style-type: none"> i. Meticulous, detailed and thorough in 	24	Demonstration Observation Assignment/ Project	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
			examining pattern output ii. Precise in obtaining pattern measuring data iii. Proactive in ensuring the accuracy of measurement (seam allowances, logo placement, etc) <u>Safety:</u> i. Adhere to safety requirements during handling electrical equipment such as plotter			
5. Carry out paper pattern documents storage activities	i. Paper pattern format (softcopy/hardcopy) ii. Pattern grading output (accuracy, types, etc.) iii. Pattern filing			8	Lecture Discussion	i. Paper pattern format (softcopy/hardcopy) assured ii. Pattern grading output (accuracy, types, etc.) assured

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> system (storing, labelling/indexing) iv. Company storage system (electronic/manually) v. Company Standard Operating Procedure (SOP) 					<ul style="list-style-type: none"> iii. Pattern filing system (storing, labelling/indexing) specified and function explained iv. Company storage system (electronic/manually) and Standard Operating Procedure (SOP) followed
		<ul style="list-style-type: none"> i. Check paper pattern format (softcopy/hardcopy) ii. Check pattern grading output iii. Store and label pattern iv. Adhere to company storage system and company Standard Operating Procedure 	<p><u>Attitude:</u></p> <ul style="list-style-type: none"> i. Systematic in storing paper pattern documents <p><u>Safety:</u></p> <ul style="list-style-type: none"> i. Not Applicable 	16	Demonstration Observation Assignment/ Project	
6. Create pattern model/ marker	<ul style="list-style-type: none"> i. Number of cut pieces ii. Panel colour way/ fabrication iii. Information of matching panel iv. Pattern 			40	Lecture Discussion	<ul style="list-style-type: none"> i. Number of cut pieces marked ii. Panel colour way/ fabrication marked iii. Information of matching panel marked

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> model/marker v. Fabric consumption calculation method vi. Buyer requirements ratio 					<ul style="list-style-type: none"> iv. Pattern model/marker produced according to company grading system
		<ul style="list-style-type: none"> i. Indicate number of cut pieces ii. Indicate panel colour way/ fabrication iii. Indicate information of matching panel iv. Create pattern model/marker v. Calculate fabric consumption vi. Assure buyer requirements ratio 	<p><u>Attitude:</u></p> <ul style="list-style-type: none"> i. Meticulous, detailed and thorough in pattern model creation ii. Patient and creative in pattern parts arrangement iii. Creative and be careful in optimizing of fabric <p><u>Safety:</u></p> <ul style="list-style-type: none"> i. Not applicable 	96	Demonstration Observation Assignment/ Project	<ul style="list-style-type: none"> v. Fabric consumption calculation method employed vi. Buyer requirements ratio followed

Employability Skills

Core Abilities	Social Skills
01.07 Utilize database applications to locate and process information 01.10 Apply a variety of mathematical techniques 01.11 Apply thinking skills and creativity 02.11 Convey information and ideas to people 03.15 Liaise to achieve identified outcomes 03.16 Identify and assess client/customer needs 04.07 Negotiate acceptance and support for objectives and strategies 05.02 Inspect and monitor work done and/or in progress	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. Computer and Peripherals 2. Fashion Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) 3. Sample of instruction/ constructions documents (eg. Quantity of ratio, types of sample, sample delivery date, sizes, etc) 4. Adjustable/Non-adjustable chair 5. Master pattern and specification 6. Tools set (calculator, ruler, measuring tape, etc) 7. Equipment (plotter, digitizer, printer, etc) 8. Materials (various size of paper, cardboard , etc) 9. Sample of company policies and various procedures manual (SOP, recording, documentation, etc) 10. Sample of fabrics (knits, woven, trim, etc) 11. Sample of garment measuring manual (e.g. chest, shoulder, waist, etc)	1:2 1:10 1:1 1:1 1:1 1:1 1:20 As per requirements 1:1 1:1 As per requirements

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)

Sub Sector	APPAREL MANUFACTURING						
Job Area	SAMPLE DEVELOPMENT SECTION						
NOSS Title	APPAREL PATTERN DESIGN AND CONSTRUCTION						
Competency Unit Title	GARMENT FITTING						
Learning Outcome	<p>The person who is competent in this competency unit shall be able to fit the garment into the model and check that the garment is well fitted as well as to ensure the garment has optimum amount of ease in movement and the seam lines follow the general silhouette of the body and the appearance as per product/buyer requirements (design construction specification, measurement, etc). Upon completion of this competency unit, trainees will be able to:</p> <ul style="list-style-type: none"> • Check garment fitting requirements • Carry out garment fitting preparation • Carry out garment fitting activities • Provide garment construction/ specification alteration advice • Carry out buyer final approval acquisition 						
Competency Unit Code	TA-021-3:2014-C03	Level	3	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 fitting requirements	i. Job order (sample delivery date, sizes, etc) ii. Approval criteria (fit sample, size set sample, salesman sample, development sample, etc) iii. Fitting measurement specification iv. Types of fabric (knit/woven, structure, shrinkage, etc)			4	Lecture Discussion	i. Job order (sample delivery date, sizes, etc) confirmed ii. Approval criteria (fit sample, size set sample, salesman sample, development sample, etc) determined and listed iii. Fitting measurement	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
	v. Buyer measuring manual	i. Check job order ii. Obtain pattern sample iii. Identify approval criteria (fit sample, size set sample, salesman sample, development sample, etc) iv. Identify sample fitting measurement specification v. Review measuring manual	<u>Attitude:</u> i. Patient in interpreting and clarifying product/buyer requirements ii. Meticulous and thorough in verifying garment fitting requirements iii. Resourceful in reviewing measuring data <u>Safety:</u> i. Not Applicable	8	Demonstration Observation Assignment/ Project	specification confirmed iv. Types of fabric requirements (types, structure, etc) determined v. Buyer measuring manual reviewed

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
2. Carry out garment fitting preparation	<ul style="list-style-type: none"> i. Fitting room/area readiness ii. Dummy model (half/full body) iii. Completed sample (e.g.: finished garment) iv. Fitting tools (paper pattern, pins/needles, chalk, measuring tape, etc) 			4	Lecture Discussion	<ul style="list-style-type: none"> i. Fitting room/area readiness confirmed ii. Dummy model (half/full body) selected iii. Completed sample (e.g.: finished garment) obtained iv. Fitting tools (paper pattern, pins/needles, chalk, measuring tape, etc) arranged
		<ul style="list-style-type: none"> i. Check fitting room/area set up readiness ii. Select dummy model iii. Obtain completed sample iv. Arrange fitting tools 	<p><u>Attitude:</u></p> <ul style="list-style-type: none"> i. Resourceful in locating tools, equipment and materials ii. Organize fitting tools and materials systematically <p><u>Safety:</u></p> <ul style="list-style-type: none"> i. Sharp tools such as needles kept in place 	8	Demonstration Observation Assignment/ Project	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
			ii. Always work with proper lighting at fitting room/area			
3. Carry out garment fitting activities	<ul style="list-style-type: none"> i. Garment fitting method ii. Discrepancies in garment appearance (measurement, design placement, etc) iii. Pattern measurement adjustment /pattern alteration or reporting to authorised/ relevant personnel for improvement 			16	Lecture Discussion	<ul style="list-style-type: none"> i. Garment fitting method employed ii. Discrepancies in garment appearance (measurement, design placement, etc) recorded iii. Pattern measurement adjusted /pattern altered or reported to authorised/ relevant personnel for improvement
		<ul style="list-style-type: none"> i. Execute pattern fitting ii. Document discrepancies in measurement iii. Adjust pattern measurement /alter pattern / report discrepancies in measurement to authorised/ relevant 		32	Demonstration Observation Assignment/ Project	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
		personnel for improvement	<u>Attitude:</u> i. Meticulous, detailed and thorough in garment fitting activities ii. Follow pattern measuring data precisely iii. Proactive in ensuring the accuracy of measurement (garment appearance) <u>Safety:</u> i. Not Applicable			
4. Provide garment construction/ specification alteration advice	i. Measurement alteration and construction (fold over finishing, cut and sewn finishing, etc) method ii. Source of discrepancies/root cause of problem iii. Counter measure for sample improvement recommendation			8	Lecture Discussion	i. Measurement alteration and construction (fold over finishing, cut and sewn finishing, etc) method employed ii. Source of discrepancies/ root cause of problem determined and listed

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
		<ul style="list-style-type: none"> i. Recommend/advise measurement alteration and construction method to authorised personnel ii. Identify source of discrepancies/ investigate root cause of problem iii. Recommend counter measure for sample improvement to authorised personnel 	<p><u>Attitude:</u></p> <ul style="list-style-type: none"> i. Communicate effectively ii. Factual in advising on garment construction alteration/ improvement <p><u>Safety:</u></p> <ul style="list-style-type: none"> i. Not Applicable 	24	Demonstration Observation Assignment/ Project	iii. Recommendation /proposal for sample improvement specified and justification explained

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
5. Carry out buyer final approval acquisition	<ul style="list-style-type: none"> i. Buyer feedback (comment/complimentary) ii. Buyer comment (wavy, puckering, bulky, measurement discrepancies, etc) iii. Buyer feedback response iv. Buyer approval timeline v. Documentation procedure 			8	Lecture Discussion	<ul style="list-style-type: none"> i. Buyer feedback (comment/complimentary) obtained ii. Buyer comment listed and specified iii. Buyer feedback responded within timeline iv. Buyer final approval acquisition process followed up
		<ul style="list-style-type: none"> i. Compile buyer feedback (comment/complimentary) ii. Analyse buyer comment iii. Attend buyer feedback iv. Acquire buyer approval within timeline v. Document buyer approval 	<p><u>Attitude:</u></p> <ul style="list-style-type: none"> i. Attentive to buyer comments ii. Communicate clearly and effective when liaising with authorised personnel/ 	8	Demonstration Observation Assignment/Project	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
			department iii. Proactive in acquiring buyer approval within timeline <u>Safety:</u> i. Not Applicable			

Employability Skills

Core Abilities	Social Skills
01.07 Utilize database applications to locate and process information 01.11 Apply thinking skills and creativity 02.10 Prepare reports and instructions 02.11 Convey information and ideas to people 03.14 Facilitate and coordinate teams and ideas 03.15 Liaise to achieve identified outcomes 03.16 Identify and assess client/customer needs 04.07 Negotiate acceptance and support for objectives and strategies 05.02 Inspect and monitor work done and/or in progress	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. Completed garment	1:1
3. Fitting tools set (ruler, measuring tape, needles, chinks, etc)	As per requirements
4. Dummy model	1:20
5. Sample of company policies and various procedures manual (SOP, recording, documentation, etc)	1:1
6. Sample of fabrics (knits, woven, trim, etc)	1:1
7. Sample of garment measuring manual (e.g. chest, shoulder, waist, 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. Haggart Ann, (2006), Pattern Cutting for Lingerie, Beachwear & Leisure Wear – UK – Blackwell Publishing ISBN 10: 1-4051-1858-X
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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)

Sub Sector	APPAREL MANUFACTURING						
Job Area	SAMPLE DEVELOPMENT SECTION						
NOSS Title	APPAREL PATTERN DESIGN AND CONSTRUCTION						
Competency Unit Title	PATTERN MEASUREMENT QUALITY CONTROL						
Learning Outcome	<p>The person who is competent in this competency unit shall be able to check and control pattern measurements such as garment construction shrinkage allowance (type of fabric, wash and construction) added to the pattern to ensure pattern measurements comply with product/buyer requirements (design construction specification, measurement, etc). Upon completion of this competency unit, trainees will be able to:</p> <ul style="list-style-type: none"> • Carry out pattern measurement quality control requirements check • Carry out pattern quality improvement/ alteration • Verify pre-production paper pattern • Prepare pattern measurement quality control activities documentations 						
Competency Unit Code	TA-021-3:2014-C04	Level	3	Training Duration	110 Hours	Credit Hours	11.0
Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria	
1. Carry out pattern measurement quality control requirements check	i. Job sheet (order batch, order quantity, order sizes, construction method, styling, etc) ii. Final confirmation from buyer for bulk production iii. Outcome of pattern quality from Pre-production (PP) review meeting iv. Production instructions/ design specification sheet			8	Lecture Discussion	i. Job sheet (order batch, order quantity, order sizes, construction method, styling, etc) specified and listed ii. Final confirmation from buyer for bulk production confirmed iii. Outcome of pattern quality from Pre-production (PP)	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
		<ul style="list-style-type: none"> i. Check job sheet ii. Check final confirmation from buyer for bulk production iii. Compile outcome of pattern quality from Pre-production (PP) review meeting iv. Check production instructions/ design specification sheet 	<p><u>Attitude:</u></p> <ul style="list-style-type: none"> i. Patient in interpreting and clarifying product/buyer requirements ii. Meticulous and thorough in assessing pattern measurement quality control requirements iii. Resourceful in reviewing outcome of pattern quality from Pre-production meeting <p><u>Safety:</u></p> <ul style="list-style-type: none"> i. Not Applicable 	24	Demonstration Observation Assignment/ Project	<ul style="list-style-type: none"> review meeting gathered iv. Production instructions/ design specification sheet confirmed

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
2. Carry out pattern quality improvement/ alteration	<ul style="list-style-type: none"> i. Pattern quality issues / matters (e.g. measurement discrepancies) ii. Improvement plan for pattern quality issues / matters iii. Pattern quality issues adjustment/ alteration based on product/buyer specification (e.g. measurement tolerance) 			16	Lecture Discussion	<ul style="list-style-type: none"> i. Pattern quality issues / matters (measurement discrepancies) gathered and reviewed ii. Improvement plan for pattern quality issues / matters specified and listed iii. Pattern quality issues responded/ adjusted/ altered according to product/buyer measurement tolerance
		<ul style="list-style-type: none"> i. Compile pattern quality issues / matters ii. Propose improvement plan for pattern quality issues / matters iii. Respond to/ adjust/ alter pattern quality issues 	<p><u>Attitude:</u></p> <ul style="list-style-type: none"> i. Meticulous and thorough in attending pattern quality issues ii. Communicate clearly and effectively when liaising with 	32	Demonstration Observation Assignment/ Project	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
			production authorised personnel/ department <u>Safety:</u> i. Not Applicable			
3. Verify pre-production paper pattern	i. Approved paper pattern for pre-production ii. Pattern measurement quality (accuracy, tolerance, etc) approval before bulk production iii. Pre-production paper pattern submission/delivery for marker			6	Lecture Discussion	i. Approved paper pattern for pre-production gathered ii. Pattern measurement quality (accuracy, tolerance, etc) approval assured before bulk production iii. Pre-production paper pattern submission/delivery for marker executed
		i. Compile approved paper pattern for pre-production ii. Validate pattern measurement quality approval iii. Submit/deliver pre-production paper pattern for marker	<u>Attitude:</u> i. Meticulous and thorough in providing pre-production	8	Demonstration Observation Assignment/ Project	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
			paper pattern <u>Safety:</u> i. Not Applicable			
4. Prepare pattern measurement quality control activities documentations	i. Product/buyer quality standards/ company quality control procedure ii. Pattern measurement quality control matters and corrective action iii. Pattern measurement quality control reporting procedure iv. Organization hierarchy/chart			8	Lecture Discussion	i. Pattern measurement quality control matters and corrective actions taken compiled according to product/buyer quality standards/ company quality control procedure ii. Pattern measurement quality control documentation produced and submitted to relevant personnel/ department according to organization flow.
		i. Check product/buyer quality standards/ company quality control procedure ii. Compile pattern measurement quality control matters and corrective actions taken iii. Create documents on pattern measurement quality control		8	Demonstration Observation Assignment/ Project	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
		iv. Deliver pattern measurement quality control documentation to relevant personnel/ department	<u>Attitude:</u> i. Meticulous and thorough in preparing report <u>Safety:</u> i. Not Applicable			

Employability Skills

Core Abilities	Social Skills
01.07 Utilize database applications to locate and process information 01.08 Utilize spreadsheets applications to locate and process information 01.10 Apply a variety of mathematical techniques 01.11 Apply thinking skills and creativity 02.11 Convey information and ideas to people 03.15 Liaise to achieve identified outcomes 03.16 Identify and assess client/customer needs 04.07 Negotiate acceptance and support for objectives and strategies 05.02 Inspect and monitor work done and/or in progress	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. Computer with internet and peripherals	1:2
2. Office facilities (printer, fax, machine, etc.)	1:20
3. Production instructions/ design specification sheet	1:1
4. Job sheet (order batch, order quantity, order	1:1
5. Sample of quality reports (e.g. pre-production review meeting notes)	1:1
6. Sample of company policies and various procedures manual (SOP, recording, documentation, etc)	1:1
7. Complete sample/garment	1:1
8. Whole set of paper pattern (individual panel/ nested panel)	1:1
9. Sample of paper pattern measurement quality documentations	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)

Sub Sector	APPAREL MANUFACTURING						
Job Area	SAMPLE DEVELOPMENT SECTION						
NOSS Title	APPAREL PATTERN DESIGN AND CONSTRUCTION						
Competency Unit Title	PATTERN CONSTRUCTION SUPERVISION						
Learning Outcome	<p>The person who is competent in this competency unit shall be able to supervise daily activities in pattern design and construction operation to ensure efficient operation and maximize company performance in pattern design and construction in accordance with regulatory/statutory body's requirements, product/buyer specifications and expectations and company Standard Operating Procedures (SOP). Upon completion of this competency unit, trainees will be able to:</p> <ul style="list-style-type: none"> • Ensure work place safety • Assure facilities, equipment and tools functionality • Prepare duty roster/ job schedule • Carry out pattern materials inventory check • Monitor pattern approval timeline • Carry out subordinate appraisal • Conduct in house training 						
Competency Unit Code	TA-021-3:2014-C05	Level	3	Training Duration	180 Hours	Credit Hours	18.0
Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria	
1. Ensure work place safety	i. Work place safety, health and environment ii. Pattern construction area housekeeping activities iii. Waste disposal iv. Regulatory/statutory bodies requirements v. Workstation and facilities (table,			4	Lecture Discussion	i. Work place safety, hygiene and maintenance checked and compliance assured in accordance with regulatory/statutory bodies requirements ii. Waste disposal	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
	chair, lights) arrangement					procedure followed in accordance with regulatory/ statutory bodies requirements
		<ul style="list-style-type: none"> i. Supervise work place safety, health and environment ii. Handle pattern construction area housekeeping activities iii. Handle waste disposal iv. Ensure arrangement workstation and facilities (table, chair, lights) v. Document work place safety, health and environment 	<p><u>Attitude:</u></p> <ul style="list-style-type: none"> i. Thorough in checking work place safety, hygiene and maintenance ii. Adhere to environmental requirements <p><u>Safety:</u></p> <ul style="list-style-type: none"> i. Not applicable 	8	Demonstration Observation Assignment/ Project	<ul style="list-style-type: none"> iii. Adjustable chair arrangement confirmed according to ergonomic department requirements
2. Assure facilities, equipment and tools functionality	<ul style="list-style-type: none"> i. Facilities, equipment and tools availability ii. Facilities, 			4	Lecture Discussion	<ul style="list-style-type: none"> i. Type of facilities and equipment listed and availability

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
	equipment and tools operating manuals iii. Malfunction /irregularities of facilities, equipment and tools iv. Documentation and reports to superior for further action					confirmed ii. Facilities and equipment functions specified and described in accordance with operating manuals
		i. Check type of facilities and equipment ii. Check facilities and equipment availability iii. Check facilities and equipment functions iv. Record malfunction/ irregularities of facilities and equipment v. Report malfunction/ irregularities of facilities and equipment to superior for further action	<u>Attitude:</u> i. Responsible in assuring facilities and equipment functionality & operability ii. Honest in	8	Demonstration Observation Assignment/ Project	iii. Facilities and equipment inventory checklist updated iv. Malfunction/ irregularities of facilities and equipment recording /reporting procedure followed in accordance with Standard Operating Procedure (SOP)

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
			reporting facilities and equipment status <u>Safety:</u> i. Not applicable			
3. Prepare duty roster/ job schedule	i. Scope of work and job specification ii. Availability and capability of personnel iii. Job capacity (number of styling, type of pattern, etc) iv. Assignment and personnel for duty v. Duty roster format vi. Standard Operating Procedure (SOP)			16	Lecture Discussion	i. Scope of work, job descriptions listed and described in accordance with Standard Operating Procedure ii. Number of available personnel specified iii. Job capacity listed in accordance with type of services
		i. Check scope of work, job descriptions ii. Confirm number of personnel iii. Check job capacity (number of appointment, type of services) iv. Assign personnel for duty v. Produce duty roster /jobs schedule		24	Demonstration Observation Assignment/ Project	iv. Assignments confirmed and personnel to undertake job functions listed v. Duty roster scheduled, formatted and generated in accordance with SOP
			<u>Attitude:</u> i. Meticulous			

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
			<ul style="list-style-type: none"> and thorough in preparing duty roaster ii. Resourceful in identifying availability, capability, skills and experiences of personnel iii. Non-biased in assigning job schedule 			
4. Carry out pattern materials inventory check	<ul style="list-style-type: none"> i. Type of materials in operation (stationeries, , paper, dummy model, etc) ii. Pattern materials level iii. Quantity for material replenishment iv. Inventory system(LIFO/FIFO) v. Material replenishment procedure, method and technique 			8	Lecture Discussion	<ul style="list-style-type: none"> i. Type of materials in operation such as stationeries, papers, dummy model, etc listed ii. Inventory level determined and recorded iii. Depleted materials replenished iv. Material replenishment procedure followed in accordance with inventory system
		<ul style="list-style-type: none"> i. Check types of pattern materials ii. Check pattern materials level iii. Identify quantity of 		16	Demonstration Observation Assignment/ Project	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
		pattern materials for replenishment iv. Replenish materials	<u>Attitude:</u> i. Details and thorough in checking inventory ii. Responsible in maintaining pattern materials at par level iii. Honest and sincere in handling pattern materials inventory			
5. Monitor pattern approval timeline	i. Delivery/buyer order date ii. Pattern approval within timeline iii. Corrective action/counter measure for not meeting expectation/ approval issues iv. Improvement plan proposal to higher authority for further action			16	Lecture Discussion	i. Delivery/buyer order date confirmed ii. Pattern approval within timeline assured iii. Corrective action/counter measure for not meeting expectation/ approval issues listed and implemented iv. Improvement plan

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
		<ul style="list-style-type: none"> i. Check delivery/buyer order date ii. Ensure pattern approval within timeline iii. Execute corrective actions/counter measures for not meeting expectations/ approval issues with superior consent iv. Propose/ recommend improvement plan to higher authority for further action 	<p><u>Attitude:</u></p> <ul style="list-style-type: none"> i. Effective time management and interpersonal skills ii. Responsible in monitoring pattern approval timeline iii. Persistence and consistence in monitoring timeline 	40	Demonstration Observation Assignment/ Project	proposal recommended to higher authority for further action

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
6. Carry out subordinate appraisal	<ul style="list-style-type: none"> i. Appraisal objective (area for improvement, better communication, skills gap, etc) ii. Company Key Performance Index (KPI) iii. Appraisal schedule (quarterly/half yearly/annually) iv. Appraisal documentation (subordinate profiles appraisal form ,etc) v. Subordinate performance records(disciplines, client feedback (compliment/ complaints) vi. Appraisal procedure and technique vii. Recording procedure viii. Reporting procedure Standard Operating Procedure 			8	Lecture Discussion	<ul style="list-style-type: none"> i. Appraisal objective (area for improvement, better communication, skills gap, etc) confirmed ii. Company Key Performance Index (KPI) explained in accordance with company policies iii. Appraisal schedule (quarterly/half yearly/annually) determined iv. Appraisal documentation compiled, arranged and purposes explained v. Subordinate details (qualification, working performance, disciplinary, client feedback) evaluated
		<ul style="list-style-type: none"> i. Check appraisal objective ii. Check appraisal schedule from authorized personnel/parties 		10	Demonstration Observation Assignment/ Project Role Play	<ul style="list-style-type: none"> vi. Appraisal, recording and reporting procedure

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
		<ul style="list-style-type: none"> iii. Obtain appraisal documentation iv. Confirm subordinate to be appraised v. Appraise subordinates vi. Record appraisal results vii. Recommend promotion/areas for continuous improvement viii. Report appraisal results to superior/ authorised personnel 	<p><u>Attitude:</u></p> <ul style="list-style-type: none"> i. Non-biased in conducting personnel appraisal ii. Communicate clearly and precisely when conducting appraisal iii. Integrity observed in appraising personnel iv. Objective results driven in evaluating 			<ul style="list-style-type: none"> followed vii. Appraisal technique applied in accordance with company Standard Operating Procedure (SOP) and regulatory/ statutory bodies requirements

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
			personnel performance			
7. Conduct in house training	i. Training Needs Analysis (TNA) ii. Types of training programmes such as: <ul style="list-style-type: none"> • Technical • Soft skills • On Job training (OJT) iii. Training details (objective , participant, schedule (date, time, venue), etc) iv. Training facilities (audio visual, rooms, materials/ modules, etc) v. Training methods (hands on, role play, demonstrations, etc)			8	Lecture Discussion	i. Type of training programme such as Technical, Soft skills and On Job training (OJT) determined according to service requirements and TNA ii. Training programme details such as type of training, training objective and training schedule listed iii. Training facilities specified and equipment such as projector/audio visual aids operated according to type of training programme
		i. Obtain Training Needs Analysis (TNA) from authorised personnel/ department ii. Select training programme iii. Check training programme details		10	Demonstration Observation Assignment/ Project Role Play	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
		iv. Assure training facilities readiness v. Execute training programme	<u>Attitude:</u> i. Objective results driven in conducting training programme ii. Systematic and organized in preparing training facilities			

Employability Skills

Core Abilities	Social Skills
01.07 Utilize database applications to locate and process information 01.08 Utilize spreadsheets applications to locate and process information 01.10 Apply a variety of mathematical techniques 01.11 Apply thinking skills and creativity 02.09 Prepare flowcharts 02.10 Prepare reports and instructions 02.11 Convey information and ideas to people 03.09 Manage and improve performance of individuals 03.10 Provide consultation and counselling 03.11 Monitor and evaluate performance of human resources 03.12 Provide coaching/on-the job training 03.13 Develop and maintain team harmony and resolve conflicts 03.14 Facilitate and coordinate teams and ideas 03.15 Liaise to achieve identified outcomes 03.16 Identify and assess client/customer needs	1. Communication skills 2. Conceptual skills 3. Interpersonal skills 4. Multitasking and prioritizing 5. Self-discipline 6. Teamwork 7. Learning skills 8. Leadership skills

Core Abilities	Social Skills
03.17 Identify staff training needs and facilitate access to training 04.06 Allocate work 04.07 Negotiate acceptance and support for objectives and strategies 05.01 Implement project/work plans 05.02 Inspect and monitor work done and/or in progress 06.07 Develop and maintain networks	

Tools, Equipment and Materials (TEM)

ITEMS	RATIO (TEM : Trainees)
1. Computer with internet, Management Information System (MIS) and peripherals	1:2
2. Office facilities (printer, fax, machine, etc.)	1:20
3. Facilities (Drafting table/station, adjustable chair /rubber mat, etc)	1:1
4. Tools set (cutting, measuring, sewing, etc)	1:1
5. Equipment (plotter, digitizer, printer, computer, software and peripherals, etc)	1:20
6. Lockstitch sewing machine	1:2
7. Overlock sewing machine	1:5
8. Dummy model for female and male	1:20
9. Pattern materials (various size of paper, cardboard , etc)	1:1
10. Sample of instruction/ constructions documents (eg. Quantity of ratio, types of sample, sample delivery date, sizes, etc)	1:1
11. Sample of company policies and various procedures manual (SOP, recording, documentation, etc)	1:1
12. Sample of fabrics (knits, woven, trim, etc)	1:1
13. Sample of garment measuring manual (e.g. chest, shoulder, waist, etc)	1:20
14. Sample of work flow chart	1:1
15. Sample of duty roster format	1:1
16. Training facilities (Audio Visual, rooms , materials/ modules, etc)	1:20
17. Sample of Company Key Performance Index (KPI) document	1:1
18. Sample appraisal documentation (subordinates list, subordinate profiles, appraisal form, etc)	1:1

References

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Claris Flowers-Broderick,(2013), Custom Bodies Pattern <http://pattern-making.com/> [08/11/2013: 12.04 pm].

CURRICULUM OF COMPETENCY UNIT (CoCU)

Sub Sector	APPAREL MANUFACTURING						
Job Area	SAMPLE DEVELOPMENT SECTION						
NOSS Title	APPAREL PATTERN DESIGN AND CONSTRUCTION						
Competency Unit Title	SPECIALIZED INNER GARMENT PAPER PATTERN DESIGN AND CONSTRUCTION						
Learning Outcome	<p>The person who is competent in this competency unit shall be able to design and construct specialized inner garment paper patterns for products such as lingerie (bra, panties) and swimming suits in accordance with product/buyer requirements (design construction specification, measurement, Bill of Materials (BOM), etc) and pattern technique (2D, 3D, etc). Upon completion of this competency unit, trainees will be able to:</p> <ul style="list-style-type: none"> • Check specialized inner garment paper pattern design and construction requirements • Carry out specialized inner garment paper pattern design and construction preparation • Carry out specialized inner garment design calculation • Carry out specialized inner garment paper pattern construction • Carry out specialized inner garment paper pattern design and construction documentations • Upkeep workstation 						
Competency Unit Code	TA-021-3:2014-E01	Level	3	Training Duration	390 Hours	Credit Hours	39.0
Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria	
1. Check specialized inner garment paper pattern design and construction requirements	i. Garment information: <ul style="list-style-type: none"> • Types of specialized inner garment pattern design (lingerie (bra, panties, etc) and swimming suit etc. • Specialized inner garment shape (corset, 			24	Lecture Discussion	i. Garment information such as type and specialized inner garment shape determined and listed according to buyer requirements ii. Job order (sample delivery date, sizes, etc) determined	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
	tight fitting design, etc) ii. Job order (sample delivery date, sizes, etc) iii. Buyer specification (Silhouette of garment) /instruction/ constructions iv. Types of fabric (knit/woven, structure, shrinkage, etc) v. Trim/accessories (lace, cording, emboss , button, zipper, etc) vi. Measuring data (chest, shoulder, waist, sleeve, etc) vii. Measuring manual (inches/ centimeter, measuring method, etc)					iii. Buyer specification (Silhouette of garment) /instruction/ constructions defined and described/ explained iv. Types of fabric (knit/woven, structure, shrinkage, etc) and trim/accessories (lace, cording, emboss , button, zipper, etc) determined and listed v. Measuring data (chest, shoulder, waist, sleeve, etc) confirmed according to measuring manual
		i. Identify garment information ii. Check job order iii. Interpret buyer specification/ instruction/ constructions iv. Identify types of fabric and trim/		52	Demonstration Observation Assignment/ Project	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
		accessories v. Review measuring data	<u>Attitude:</u> i. Patient in interpreting and clarifying buyer requirements ii. Meticulous and thorough in verifying pattern design and construction specification iii. Resourceful in reviewing measuring data <u>Safety:</u> i. Not Applicable			
2. Carry out specialized inner garment paper pattern design and construction preparation	i. Workstation setup readiness (drafting table - height, width, adjustable chair/rubber mat, lightings, etc) ii. Types of tools: (pattern block, ruler, measuring tape, scissors, etc) iii. Types of equipment (specialized sewing			8	Lecture Discussion	i. Workstation setup readiness (drafting table-height, width, adjustable chair, lightings, etc) confirmed ii. Tools (pattern block, ruler, measuring tape, scissors, needles, etc) , equipment (

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
	machine such as zig-zag, flat seam) iv. Types of materials (various size of paper, cardboard, stabilizing/elastic tape, mould cup, etc) v. Dummy model (half/whole body) vi. Types of seam allowances (e.g. French/flat seam) vii. Pattern design technique (2D,3D, etc) viii. Sewing method (e.g. clean finishing, overlocking, etc) ix. Preparation procedure					sewing machine with implements, etc), dummy model and materials (various size of paper, cardboard, etc) listed and functions described according to pattern requirements iii. Sewing method (e.g. clean finishing, overlocking, etc) determined according to seam allowances iv. Preparation procedure followed
		i. Check workstation setup readiness ii. Arrange tools, equipment and materials iii. Select dummy model iv. Identify types of seam allowances v. Identify pattern design technique vi. Identify sewing method		16	Demonstration Observation Assignment/ Project	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
			<p><u>Attitude:</u></p> <ul style="list-style-type: none"> i. Resourceful in locating tools, equipment and materials ii. Systematic in organizing tools, equipment and materials iii. Adhere to work flow <p><u>Safety:</u></p> <ul style="list-style-type: none"> i. Adhere to safety requirements in handling sharp tools such as scissors always tied up to work station and needles kept in place ii. Always work with proper lighting at workstation 			

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
3. Carry out specialized inner garment design calculation	i. Buyer construction specifications ii. Types of measuring data : <ul style="list-style-type: none"> • Half garment measure (chest, hip, waist, etc) • Full garment measure (shoulder, neck seam, collar, etc iii. Design specifications (size measurement) iv. Design calculation output v. Documentation procedure			24	Lecture Discussion	i. 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 buyer constructions requirements iv. Design calculation output documented according to documentation procedure
		i. Check buyer construction specifications ii. Check measurement data iii. Follow design specification iv. Execute design calculation v. Document specialized inner garment design calculation	<u>Attitude:</u> i. Patient and precise in	56	Demonstration Observation Assignment/ Project	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
			interpreting 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 specialized inner garment paper pattern construction	i. Specialized inner garment pattern specifications ii. Specialized inner garment pattern tracing, sketching/drawing technique iii. Specialized inner garment pattern measuring method iv. Calculation of elastic stretchable v. Specialized inner garment pattern cutting technique vi. Design line (gather,			48	Lecture Discussion	i. Buyer requirements (size specification, type of fabric, etc) confirmed and listed ii. Pattern tracing/sketching/drawing technique applied iii. Pattern measuring method employed iv. Pattern cutting technique applied v. Specialized inner garment design line followed and

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> pleat, dart, etc) vii. Fabric direction (grain line) viii. Specialized inner garment pattern output checking method ix. Cut panels details (size, panel name, etc) x. Specialized inner garment pattern name/styling 					<ul style="list-style-type: none"> 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
		<ul style="list-style-type: none"> i. Check specialized inner garment pattern specifications ii. Trace pattern or draw/sketch specialized inner garment pattern iii. Employ specialized inner garment pattern measuring method iv. Determine calculation of elastic stretchable v. Cut specialized inner garment pattern vi. Follow design line vii. Identify fabric direction 		112	Demonstration Observation Assignment/ Project	<ul style="list-style-type: none"> 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
		viii. Check specialized inner garment pattern output ix. Label cut panels and specialized inner garment pattern name/styling	<u>Attitude:</u> i. Meticulous, detailed and thorough in pattern sketching/drawing ii. Precise in data pattern measuring iii. Creative thinking in inner garment paper pattern construction iv. Thorough in ensuring the accuracy of measurement <u>Safety:</u> i. Adhere to safety requirements in handling sharp tools such as			

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
			scissors and needles			
5. Carry out specialized inner garment paper pattern design and construction documentations	<ul style="list-style-type: none"> i. Job completion status (e.g. work in progress) ii. Compile specialized inner garment paper pattern design records (completion date, number of completed pattern, type of pattern, etc) iii. Specialized inner garment paper pattern design activities (tracing/drawing/ sketching, measuring, cutting, checking, etc) iv. Documentation procedure 			10	Lecture Discussion	<ul style="list-style-type: none"> i. Job completion status 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, etc) listed and explained iv. Documentation procedure and format followed
		<ul style="list-style-type: none"> i. Check job completion status ii. Compile specialized inner garment paper pattern design records iii. Document specialized inner garment paper pattern design activities 		16	Demonstration Observation Assignment/ Project	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
			<u>Attitude:</u> Meticulous, detailed and thorough in paper pattern design documentations <u>Safety:</u> i. Not Applicable			
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 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 iv. Dispose paper waste	<u>Attitude:</u> i. Meticulous and thorough	16	Demonstration Observation Assignment/Project	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
			in up keeping work station <u>Safety:</u> i. Adhere to safety rules and regulations			

Employability Skills

Core Abilities	Social Skills
01.07 Utilize database applications to locate and process information 01.10 Apply a variety of mathematical techniques 01.11 Apply thinking skills and creativity 02.11 Convey information and ideas to people 03.15 Liaise to achieve identified outcomes 03.16 Identify and assess client/customer needs 04.07 Negotiate acceptance and support for objectives and strategies 05.02 Inspect and monitor work done and/or in progress	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. Computer and Peripherals	1:2
2. Fashion Computer Aided Design/Computer Aided Manufacturing (CAD/CAM)	1:10
3. Sample of instruction/ constructions documents (eg. Types of sample, sample delivery date, sizes, etc)	1:1
4. Drafting table/station	1:1
5. Adjustable chair	1:1
6. Pattern block / specification	1:1
7. Mould cup	1:20
8. Tools set (calculator, ruler, measuring tape, scissors, needles, etc)	1:1
9. Equipment (Plotter, Digitizer, etc)	1:20
10. Materials (various size of paper, cardboard , etc)	As per requirements
11. Dummy model (half/whole body) for female and male	1:20
12. Sample of company policies and various procedures manual (SOP, recording, documentation, etc)	1:1
13. Garment drawing/sample (lingerie, swimming suit, etc)	1:20
14. Sample of garment parts of section (sleeve, neck seam, collar, etc)	1:20
15. Garment shape drawing (corset, tight fitting design, etc)	1:1
16. Sample of fabrics (knits, woven, trim, etc)	As per requirements
17. Sample of garment measuring manual (e.g. chest, shoulder, waist, sleeve)	1:1

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2. Armstrong Helen Joseph , (2006) Pattern Making for Fashion Design – US – Pearson Prentice Hall, ISBN : 0-13-191866-4
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CURRICULUM OF COMPETENCY UNIT (CoCU)

Sub Sector	APPAREL MANUFACTURING						
Job Area	SAMPLE DEVELOPMENT SECTION						
NOSS Title	APPAREL PATTERN DESIGN AND CONSTRUCTION						
Competency Unit Title	SPECIALIZED CHILDREN GARMENT PAPER PATTERN DESIGN AND CONSTRUCTION						
Learning Outcome	<p>The person who is competent in this competency unit shall be able to design and construct specialized children garment paper patterns for products such as infant, toddler and junior garments in accordance with product/buyer requirements (design construction specification, measurement, Bill of Materials (BOM), etc) and pattern technique and safety requirements (button, non lead materials, draw cord, zipper, etc). Upon completion of this competency unit, trainees will be able to:</p> <ul style="list-style-type: none"> • Check specialized children garment paper pattern design and construction requirements • Carry out specialized children garment paper pattern design and construction preparation • Carry out specialized children garment design calculation • Carry out specialized children garment paper pattern construction • Carry out specialized children garment paper pattern design and construction documentations • Upkeep workstation 						
Competency Unit Code	TA-021-3:2014-E02	Level	3	Training Duration	390 Hours	Credit Hours	39.0
Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria	
1. Check specialized children garment paper pattern design and construction requirements	i. Garment information: <ul style="list-style-type: none"> • Types of specialized children garment pattern design (diapers panties, jumpsuit, etc) • Specialized children garment shape (infant, toddler, junior, 			24	Lecture Discussion	i. Garment information such as type and specialized children garment shape determined and listed according to product/buyer requirements ii. Job order (sample delivery date,	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
	etc) ii. Job order (sample delivery date, sizes, etc) iii. Product/buyer specification (Silhouette of garment) /instruction/ constructions iv. Types of fabric (knit/woven, structure, shrinkage, etc) v. Trim/accessories (button, lace, cording, emboss flower, etc) vi. Measuring data (chest, shoulder, waist, sleeve, etc) vii. Measuring manual (inches/ centimeter, measuring method, etc)					sizes, etc) determined iii. Product/buyer specification (Silhouette of garment) /instruction/ constructions defined and described/ explained iv. Types of fabric (knit/woven, structure, shrinkage, etc) and trim/accessories (button, lace, cording, emboss flower, etc) determined and listed according to product/buyer requirements 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 iv. Identify types of		52	Demonstration Observation Assignment/ Project	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
		fabric and trim/accessories v. Review measuring data	<u>Attitude:</u> i. Patient in interpreting and clarifying product/buyer requirements ii. Meticulous and thorough in verifying pattern design and construction specification iii. Resourceful in reviewing measuring data <u>Safety:</u> i. Not Applicable			
2. Carry out specialized children garment paper pattern design and construction preparation	i. Workstation setup readiness (drafting table-height, width, adjustable chair/rubber mat, lightings, etc) ii. Types of tools (pattern block, ruler, measuring tape, scissors, etc) iii. Types of equipment (specialized sewing			8	Lecture Discussion	i. Workstation setup readiness (drafting table - height, width, adjustable chair/rubber mat, lightings, etc) confirmed ii. Tools (pattern block, ruler, measuring tape, scissors, etc) ,

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
	<p>machine such as zig- zag, flat seam)</p> <p>iv. Types of materials (various size of paper, cardboard, stabilizing/elastic tape, , etc)</p> <p>v. Dummy model (infant, toddler, junior)</p> <p>vi. Types of seam allowances (e.g. French/flat seam)</p> <p>vii. Pattern design technique (2D,3D, etc)</p> <p>viii. Sewing method (e.g. zig-zaq, flat seam, etc)</p> <p>ix. Preparation procedure</p>					<p>equipment (specialized sewing machine such as zig- zag, flat seam), dummy model (infant, toddler, junior) and materials (various size of paper, cardboard, etc) listed and functions described according to pattern requirements</p> <p>iii. Sewing method (e.g. clean finishing, overlocking, etc) determined</p>
		<p>i. Check workstation</p> <p>ii. Arrange tools, equipment and materials</p> <p>iii. Select dummy model</p> <p>iv. Identify types of seam allowances</p> <p>v. Identify pattern design technique</p> <p>vi. Identify sewing method</p>	<p><u>Attitude:</u></p> <p>i. Resourceful in</p>	16	Demonstration Observation Assignment/ Project	<p>iv. Preparation procedure followed</p>

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
			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 such as scissors always tied up to work station and needles kept in place ii. Always work in proper lighting at workstation			
3. Carry out specialized children garment design calculation	i. Product/buyer construction specification ii. Type of measuring data : <ul style="list-style-type: none"> • Half garment 			24	Lecture Discussion	i. Product/buyer construction specification confirmed ii. Type of measuring data such as

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
	measure (chest, hip, waist, etc) <ul style="list-style-type: none"> • Full garment measure (shoulder, neck seam, collar, etc) • Garment wash shrinkage (stone wash, enzyme wash, etc) iii. Design specification iv. Calculation method (division of 2 or 4) v. Design calculation output vi. Documentation procedure					half/full garment measure confirmed and listed according to measurement manual iii. Design calculation method employed according to product/buyer constructions requirements iv. Design calculation output documented according to documentation procedure
		i. Check product/buyer construction specification ii. Check measurement data iii. Follow design specification iv. Execute design calculation v. Document specialized children garment design calculation	<u>Attitude:</u> i. Patient and precise in interpreting product/buyer	56	Demonstration Observation Assignment/ Project	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
			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 specialized children garment paper pattern construction	i. Specialized children garment pattern specifications ii. Specialized children garment pattern tracing/ sketching/ drawing technique iii. Specialized children garment pattern measuring method iv. Specialized children garment pattern cutting technique v. Design line (gather, pleat, dart, etc) vi. Fabric direction (grain line) vii. Specialized children garment pattern			48	Lecture Discussion	i. Product/buyer requirements (size specification, type of fabric, etc) confirmed and listed ii. Pattern sketching/drawing technique applied iii. Pattern measuring method employed iv. Pattern cutting technique applied v. Specialized inner garment design line followed and fabric direction (grain line) determined

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> output checking method viii. Cut panels details (size, panel name, etc) ix. Specialized children garment pattern name/styling 					<ul style="list-style-type: none"> according to buyer/design requirements vi. Pattern output checking method employed vii. Pattern output (seam allowances, notches, panel matching, etc) confirmed
		<ul style="list-style-type: none"> i. Check specialized children garment pattern specification ii. Draw/sketch specialized children garment pattern iii. Employ specialized children garment pattern measuring method iv. Cut specialized children garment pattern v. Follow design line vi. Identify fabric direction vii. Check specialized children garment pattern output viii. Label cut panels and specialized children garment pattern name/styling 	<p><u>Attitude:</u></p> <ul style="list-style-type: none"> i. Meticulous, detailed and 	112	Demonstration Observation Assignment/ Project	<ul style="list-style-type: none"> 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
			thorough in Pattern sketching/ drawing ii. Precise in following pattern data measuring iii. Creative thinking in specialized children garment paper pattern construction iv. Thorough in ensuring the accuracy of measurement <u>Safety:</u> i. Adhere to safety requirements in handling sharp tools such as scissors and needles properly			
5. Carry out specialized children garment	i. Job completion status (e.g. work in progress) ii. Specialized children			10	Lecture Discussion	i. Job completion status confirmed ii. Paper pattern design records

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environment	Training Hours	Delivery Mode	Assessment Criteria
paper pattern design and construction documentations	garment paper pattern design records (completion date, number of completed pattern, type of pattern, etc) iii. Specialized children garment paper pattern design activities (drawing/sketching, measuring, cutting, checking, etc) iv. Documentation procedure					(completion date, number of completed pattern, type of pattern, etc) gathered iii. Paper pattern design activities (drawing/sketching, measuring, cutting, checking, etc) listed and explained iv. Documentation procedure and format followed
		i. Check job completion status ii. Compile specialized children garment paper pattern design records iii. Document specialized children garment paper pattern design activities	<u>Attitude:</u> i. Meticulous, detailed and thorough in paper pattern design documentations	16	Demonstration Observation Assignment/ Project	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environment	Training Hours	Delivery Mode	Assessment Criteria
			<u>Safety:</u> i. Not Applicable			
6. Upkeep workstation	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> i. Used tools and materials arranged and kept in place according to category ii. Depleted materials replenished iii. Paper waste disposal procedure followed in accordance with regulatory/statutory bodies requirements
		<ul style="list-style-type: none"> i. Arrange used tools and materials ii. Keep tools and materials at designated area/place iii. Replenish depleted materials iv. Dispose paper waste 	<u>Attitude:</u> <ul style="list-style-type: none"> i. Meticulous and thorough in up keeping work station <u>Safety:</u> <ul style="list-style-type: none"> i. Adhere to safety rules and regulations 	16	Demonstration Observation Assignment/ Project	

Employability Skills

Core Abilities	Social Skills
01.07 Utilize database applications to locate and process information 01.10 Apply a variety of mathematical techniques 01.11 Apply thinking skills and creativity 02.11 Convey information and ideas to people 03.15 Liaise to achieve identified outcomes 03.16 Identify and assess client/customer needs 04.07 Negotiate acceptance and support for objectives and strategies 05.02 Inspect and monitor work done and/or in progress	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. Computer and Peripherals	1:2
2. Fashion Computer Aided Design/Computer Aided Manufacturing (CAD/CAM)	1:10
3. Sample of instruction/ constructions documents (e.g. Types of sample, sample delivery date, sizes, etc)	1:1
4. Drafting table/station	1:1
5. Adjustable chair	1:1
6. Pattern block / specification	1:1
7. Tools set (calculator, ruler, measuring tape, scissors, needles, etc)	1:1
8. Equipment (Plotter, Digitizer, etc)	1:20
9. Materials (various size of paper, cardboard , etc)	As per requirements
10. Dummy model (half/whole body) for infant/toddler/junior	1:20
11. Sample of company policies and various procedures manual (SOP, recording, documentation, etc)	1:1
12. Sample of safety requirements guidelines (button, draw cord, colour code, etc)	1:1
13. Garment drawing/sample (dryper panties, jumpsuit, etc)	1:20
14. Sample of garment parts of section (sleeve, neck seam, collar, etc)	1:20
15. Garment shape drawing (infant, toddler, junior, etc)	1:1

16. Sample of fabrics (knits, woven, trim, etc) 17. Sample of garment measuring manual (e.g. chest, shoulder, waist, sleeve)	As per requirements 1:1
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References

<ol style="list-style-type: none"> 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 Mcelvey, (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 6. Claris Flowers-Broderick,(2013), Custom Bodies Pattern http://pattern-making.com/ [08/11/2013: 12.04 pm].

Training Hours Summary

SECTOR : **TEXTILE & APPAREL**
SUB SECTOR : **APPAREL MANUFACTURING**
JOB AREA : **SAMPLE DEVELOPMENT SECTION**
NOSS TITLE : **APPAREL PATTERN DESIGN AND CONSTRUCTION**
JOB LEVEL : **THREE (3)**

CU NO.	CORE	RK (30%)	RS (70%)	TOTAL HOURS
TA-021-3:2014-C01	CREATIVE/SPECIAL PAPER PATTERN DESIGN AND CONSTRUCTION	122	268	390
TA-021-3:2014-C02	PATTERN GRADING AND MARKER MAKING	130	280	410
TA-021-3:2014-C03	GARMENT FITTING	40	80	120
TA-021-3:2014-C04	PATTERN MEASUREMENT QUALITY CONTROL	38	72	110
TA-021-3:2014-C05	PATTERN CONSTRUCTION SUPERVISION	64	116	180
Total Training Hours		394	816	1210
CU NO.	ELECTIVE			
TA-021-3:2014-E01	SPECIALIZED INNER GARMENT PAPER PATTERN DESIGN AND CONSTRUCTION	122	268	390
TA-021-3:2014-E02	SPECIALIZED CHILDREN GARMENT PAPER PATTERN DESIGN AND CONSTRUCTION	122	268	390
Total Training Hours		244	536	780

Notes: RK- Related Knowledge, RS- Related Skills