the true right and the left was the true left.

Front-R

Front-L

Front Panel-R
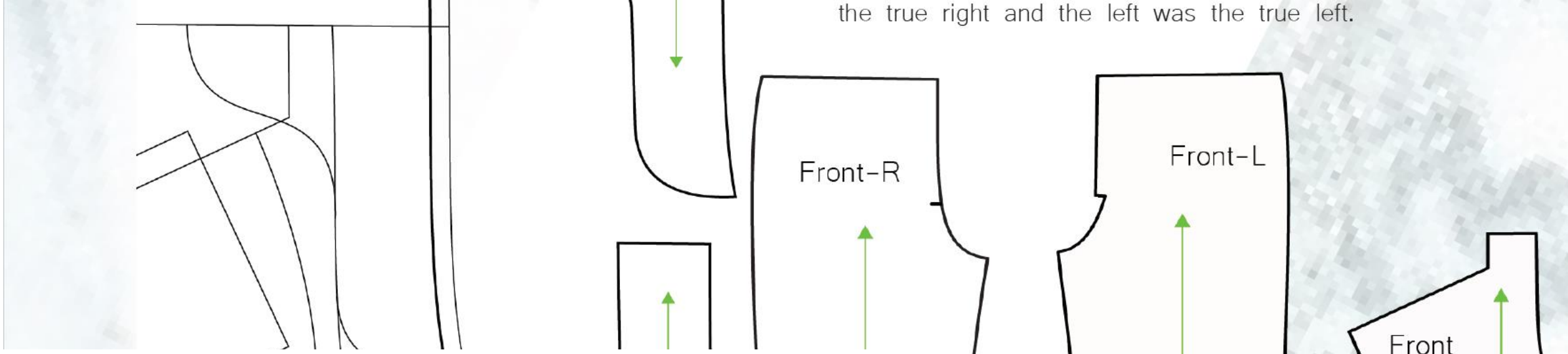
ADAPTIVE TEACHING OF DIGITAL PATTERN CUTTING

SHARON BLACKFORD & ASHLEY DUNCAN

WHO ARE WE?

SHARON BLACKFORD

Senior CAD/CAM Lecturer SDT

ASHLEY DUNCAN

Lecturer in Fashion CAD/CAM

ual : london college
: of fashion

ADAPTIVE DIGITAL PATTERN CUTTING

The Dilemma…

How do you teach a software when the students can't access the software?

This presentation will detail, explore and analyse the strategies and transformations made to both practice and delivery in order to facilitate inclusion and parity for all students during COVID digital pattern cutting sessions.

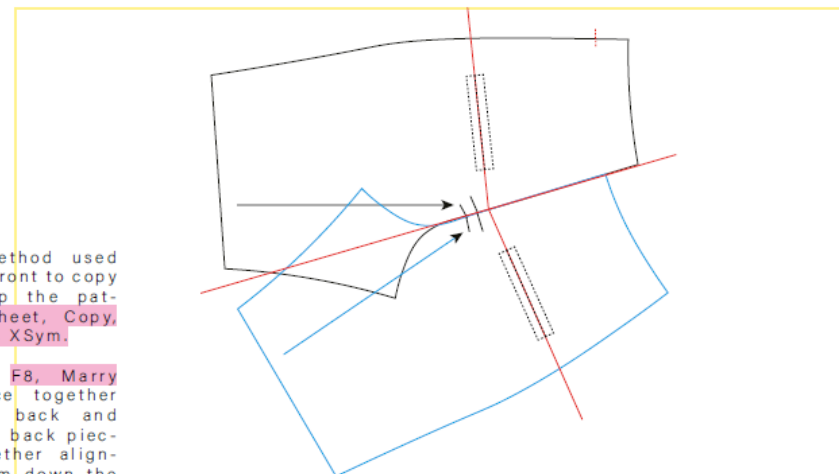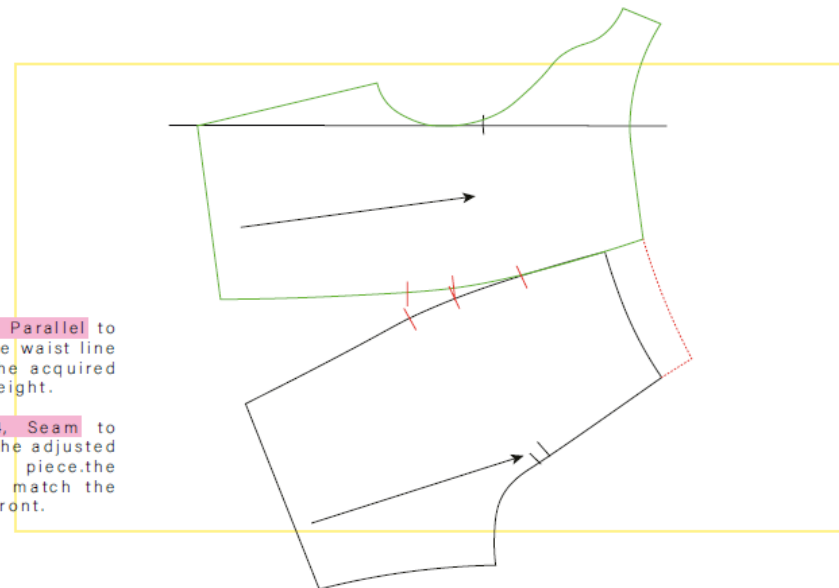USE F1, Parallel to move the waist line up to the acquired height.

USE F4, Seam to create the adjusted pattern piece.the back to match the front.

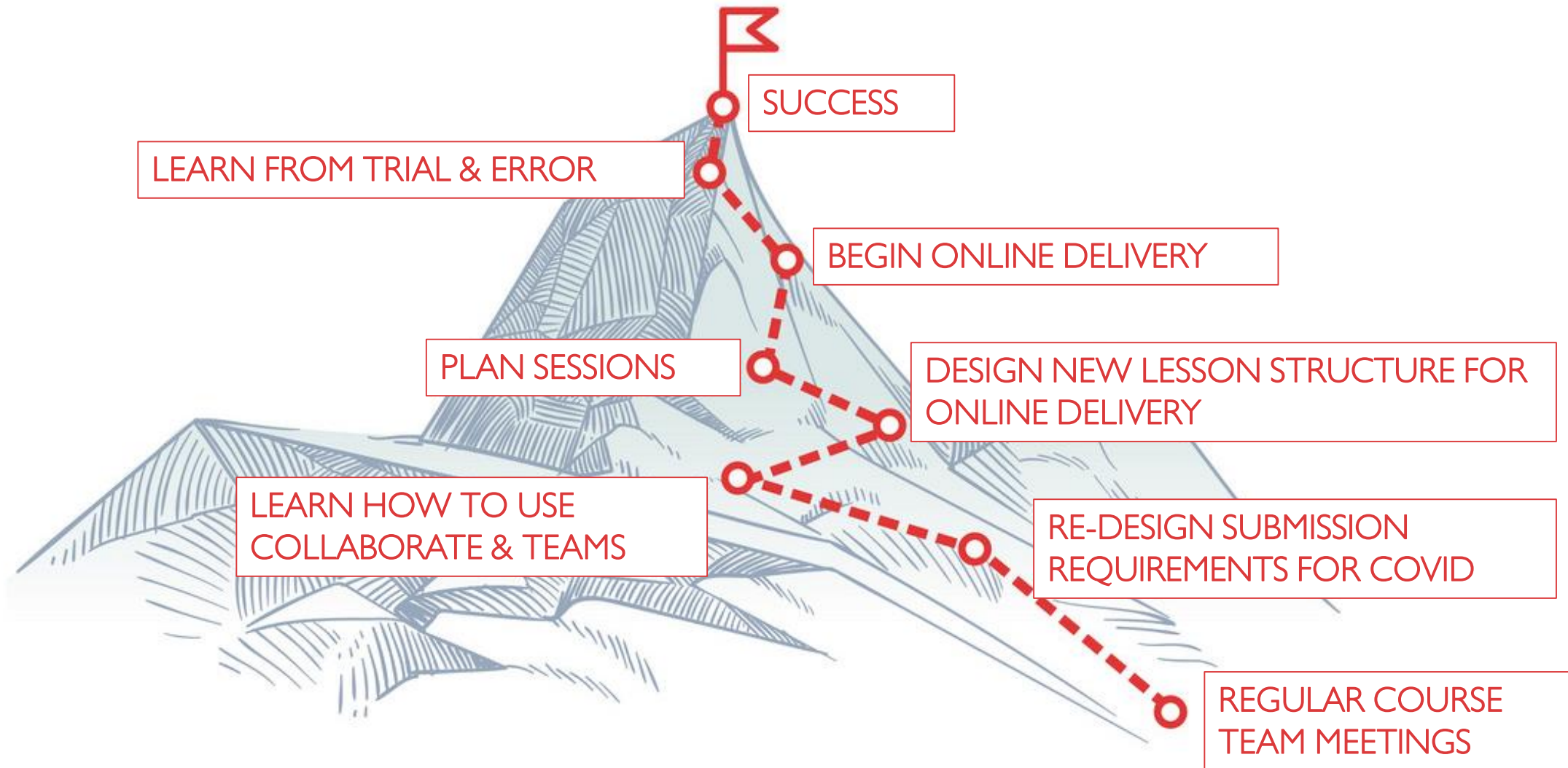USE method used on the front to copy and flip the pattern. Sheet, Copy, F2, XSym.

Go to F8, Marry to place together altered back and original back pieces together aligning them down the centre crotch. F8 Pivot to rotate the pieces to match.

Use F1, Bezier and Straight to draw in the pocket opening to show its position.

F3, Reshape.

9

THE JOURNEY OF LOCKDOWN

SUCCESS

LEARN FROM TRIAL & ERROR

BEGIN ONLINE DELIVERY

PLAN SESSIONS

DESIGN NEW LESSON STRUCTURE FOR ONLINE DELIVERY

LEARN HOW TO USE COLLABORATE & TEAMS

RE-DESIGN SUBMISSION REQUIREMENTS FOR COVID

REGULAR COURSE TEAM MEETINGS

ual: london college of fashion

WHAT DO THE STUDENTS HAVE ACCESS TO?

- No access to site

- Located worldwide

- We assume all students have access to a laptop or desktop computer.

- Student licences for Lectra are available, but not all students have access due to laptop compatibility.

- No Student licences to Optitex or Gerber.

- No access to specialist hardware related to the software delivery.

- Access to the Adobe Suite.

ual: london college of fashion

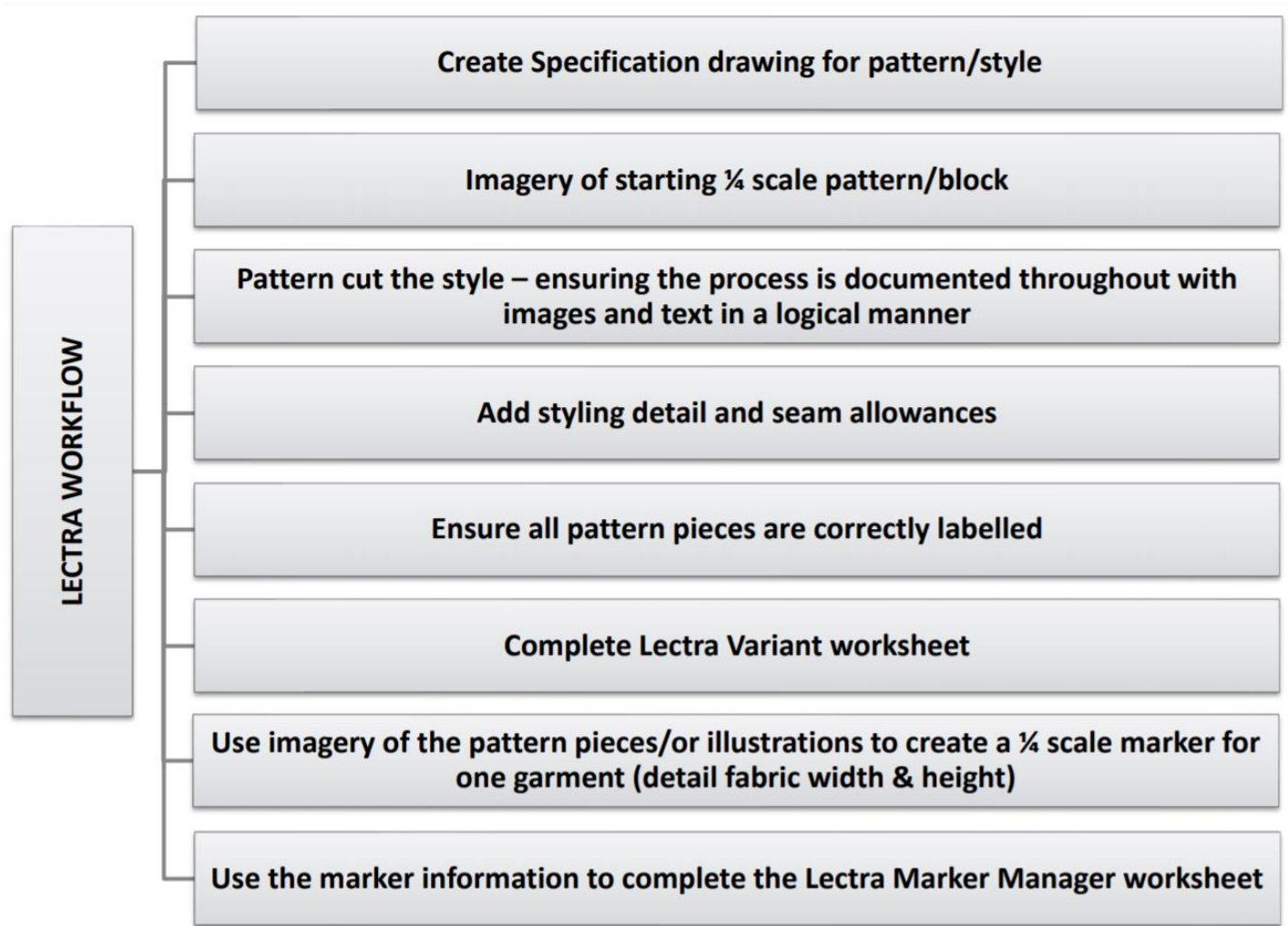MA PGT

ADAPTING TO A CHANGED ENVIRONMENT

- Conscious not to shy away from the software knowing students would still be required to use the software on their return to site.

- Understanding the medium; recreating the user experience of Lectra for online delivery by capitalising on prior Lectra learning.

- Design digital content to ensure student engagement and attainment (PowerPoints & demos).

- Resources developed to support this mode of learning:

  - Crib sheets/handouts

  - Worksheets

  - ¼ and ½ scale blocks
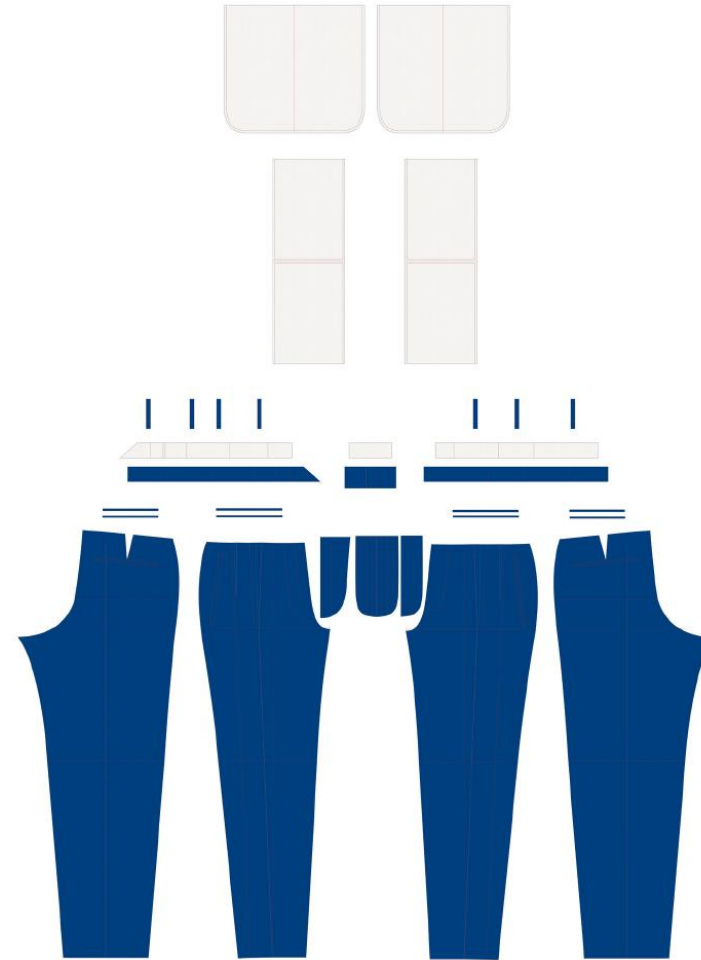
RE-DESIGNING THE SUBMISSION REQUIREMENTS

- Technical Sketch of garment

- Evidence of the block being used.

- Develop a proposed workflow of how the pattern would be created using the software.

- Evidence of a final production pattern

- Lectra worksheets – Variant, Marker Manager.

- ¼ scale lay-plan created on illustrator.

LECTRA WORKFLOW

- Create Specification drawing for pattern/style
- Imagery of starting ¼ scale pattern/block
- Pattern cut the style – ensuring the process is documented throughout with images and text in a logical manner
- Add styling detail and seam allowances
- Ensure all pattern pieces are correctly labelled
- Complete Lectra Variant worksheet
- Use imagery of the pattern pieces/or illustrations to create a ¼ scale marker for one garment (detail fabric width & height)
- Use the marker information to complete the Lectra Marker Manager worksheet

ual: london college of fashion

LECTRA LEARNING RESOURCES

CAD/CAM

Scaling Patterns / Importing Manual Pattern into Illustrator
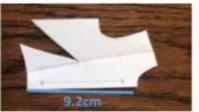
If you have access to a scanner this would be the preferred method of input as the image should already be to scale.

1. Start by taking a photo of your manual pattern, It can be any size, E.G full-scale, half, quarter etc.
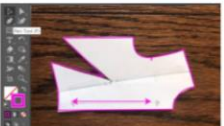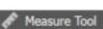
Block | New Pattern
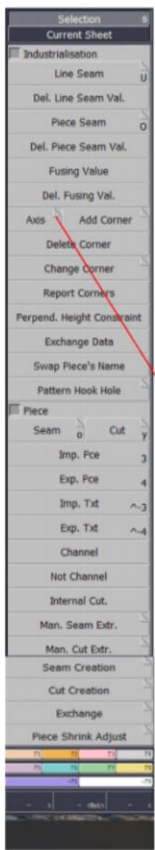
TIP: Tape pieces down to ensure they are accurate.

9.2cm

2. Find a straight line on the manual pattern and manually measure the length. For this example we will use the CF. The CF measures 9.2cm as this is a quarter scale block.

The full scale pattern CF measures 36.7cm, to achieve quarter scale from original scale, divide the original measurement by 4. E.G. 36.7 / 4 = 9.2.

3. Open the image/images in illustrator and use the pen tool to draw around the pattern piece.

4. In illustrator, go to Window > Info. Then open the measure tool in the left tool box. (You may need to search for this, click on the dots at the bottom of the toolbar).

Measure Tool | Edit Toolbar...

5. Zoom in and click on the measure tool, click and drag your cursor along the line to measure E.G. CF. The width is the measurement of that line.

6. Now ensure your pattern CF measure correctly by using transform.

CAD/CAM

Lectra Crib Sheet -F4

Line seam: Define a seam value to be applied to one or several contour lines of the flat pattern.

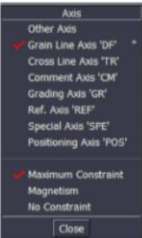**Axis:** Add a grain line to a piece or other types of axis e.g. text

Add Corner: Apply a special corner to the intersection of the seams on an angle e.g. mitered, mirrored etc.

Change Corner: Assign a corner type or modify the type of existing corner.

Seam: Create a new pattern by extracting areas between draft/style lines.

Internal Cut: Enables creation of an internal cut following a geometry which exists on the piece.

Exchange: Exchanges the selected seam lines into cut lines and vice versa. Normally needs to be used if you have digitized a piece in.

CAD/CAM

Lectra Crib Sheet – Commonly Used Drop Down Menus

Toggles

ENGAGEMENT WITH LEARNING RESOURCES

Student Lectra Variant

Lectra Variant Template

ENGAGEMENT WITH LEARNING RESOURCES

Marker Manager

Marker

TEAMS & COLLABORATE ULTRA

- Regular FPC team meetings on 'Teams' to plan what we are going to do, but also learn how to use teams.

- Engaging in the 'LCF Learning & Teaching Team' with Nick Almond & Sheldon Chow – Very Helpful.

- Watch videos uploaded on Canvas.

- Attended training sessions for Collaborate Ultra with Sheldon's team, as well as knowledge exchange within the school and course teams.

- Practice on Collaborate between us.

- Begin teaching – Trial & Error

- Have a meltdown…

This session may be recorded

Raise your hand to ask questions or of any audio or video problems
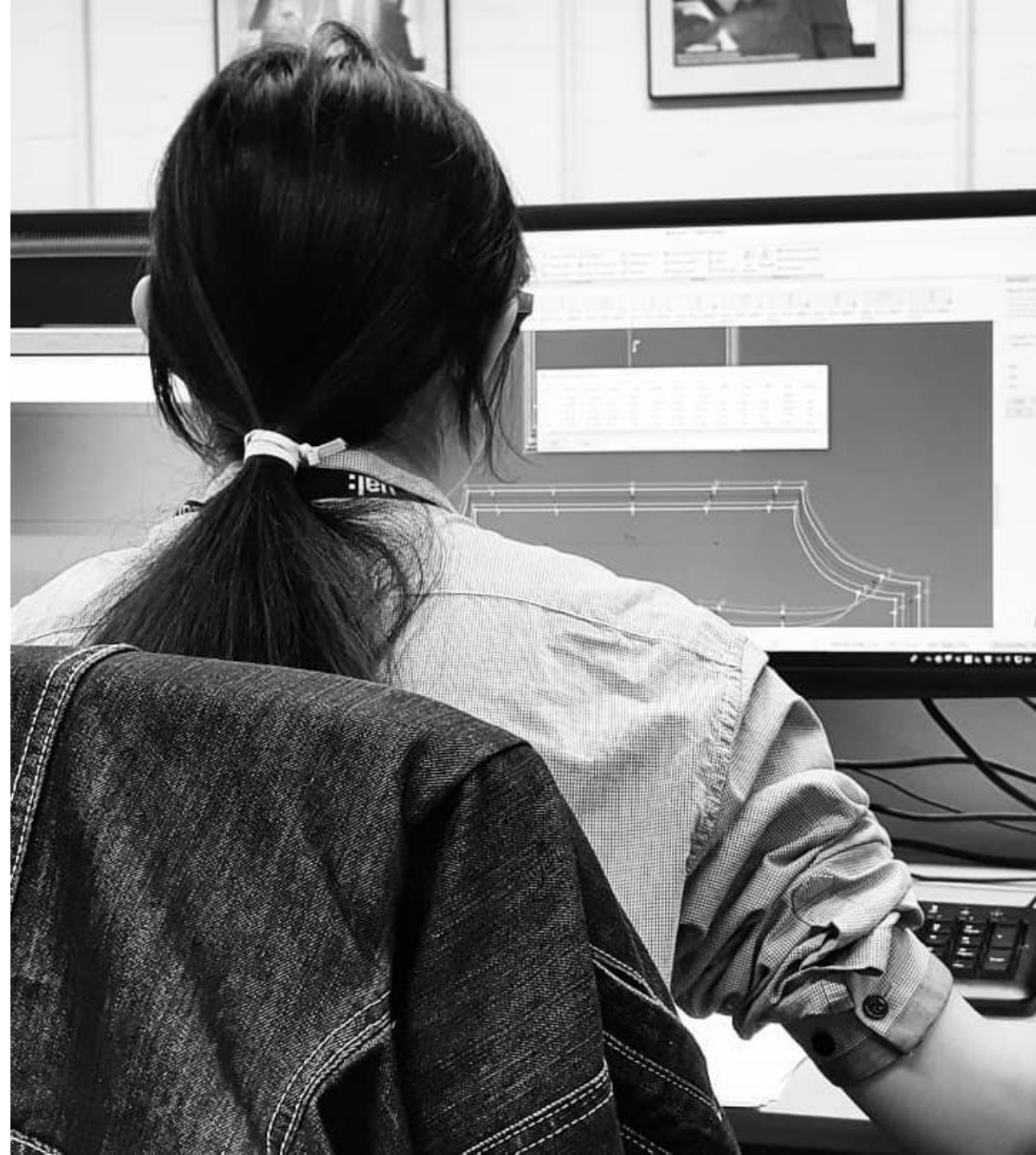
Change your status to provide simpl to step away during the session

Open the control panel on the botto Chat and session settings

ual: london college of fashion

BASIC LESSON STRUCTURE

- Maximum 2hrs long

- Themes of lessons we mostly manage to stick to which was on the original SOW.

- Begin with PowerPoint presentation

- Set students a task

- Software demo

NEW REALITIES

EXAMPLES OF ONLINE PRACTICE: WHITEBOARD

- Was great to engage the students and aid discussion

- It was inclusive as it is anonymous – therefore we found lots of the students engaged with the use of the whiteboard to:

  - Respond to questions

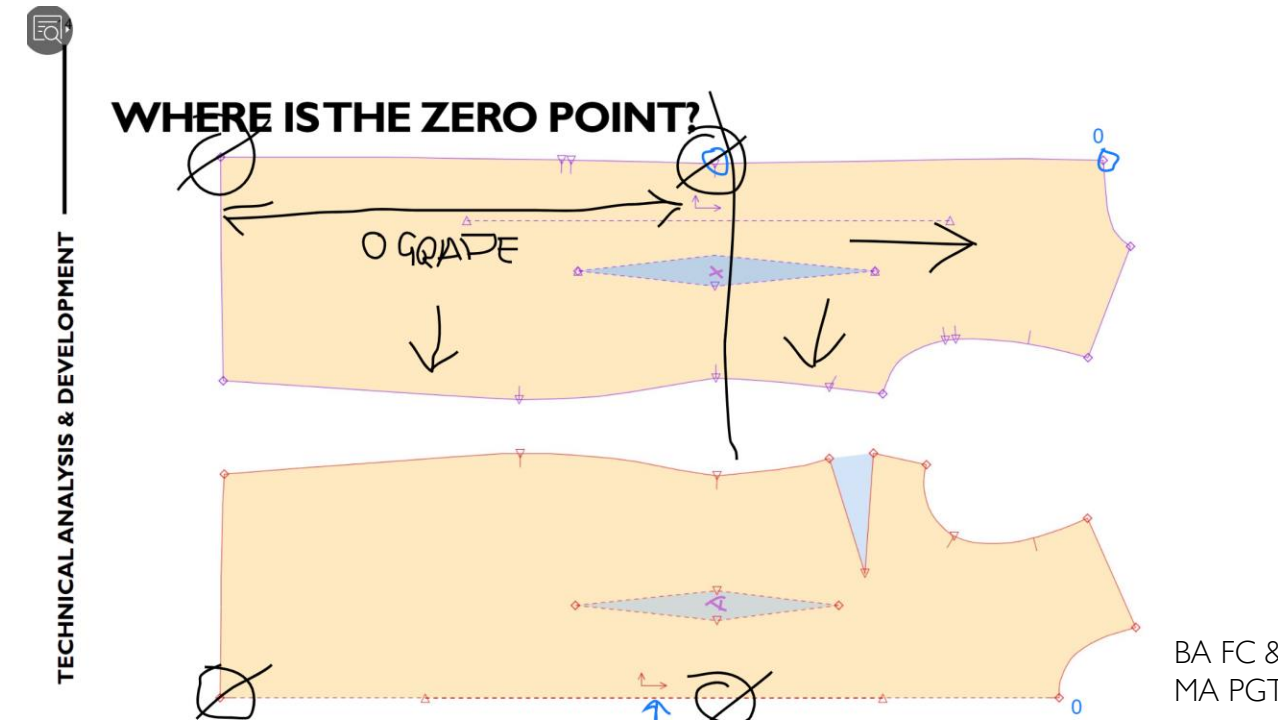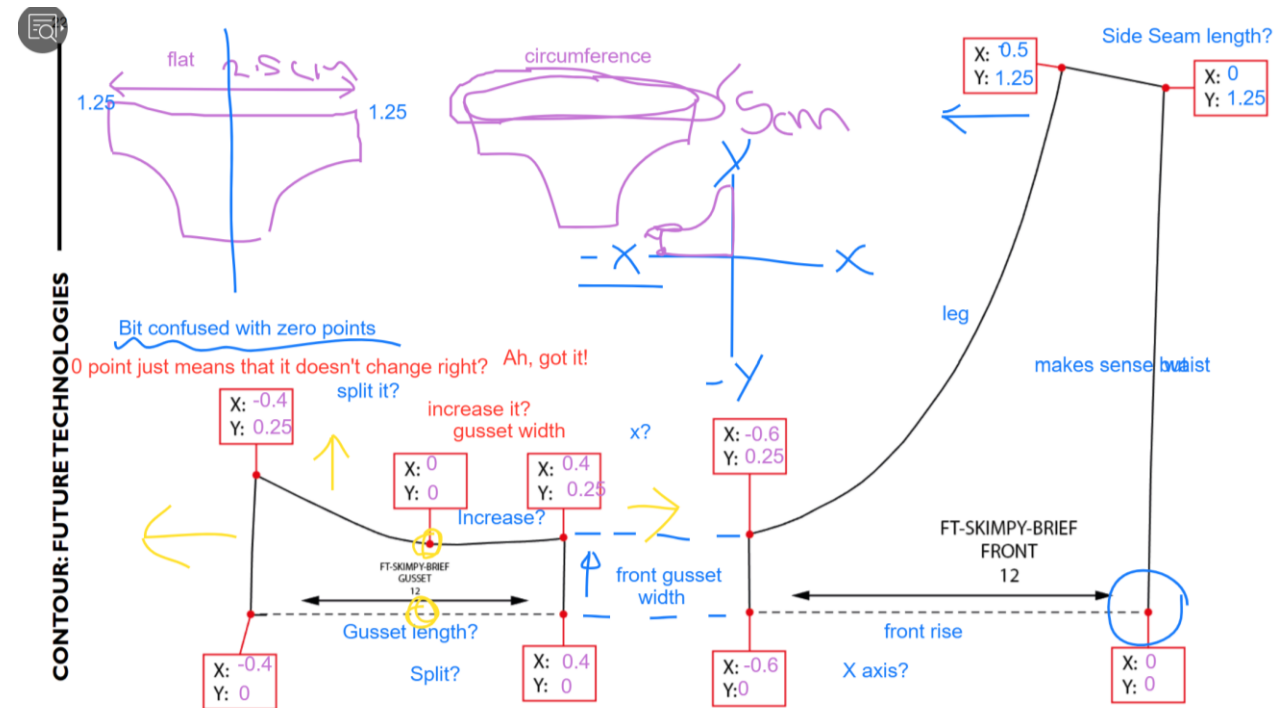 - Ask questions

  - Draw images to aid explanation

  - Give feedback.

EXAMPLES OF ONLINE PRACTICE: WHITEBOARD

- Was great to engage the students and aid discussion
- It was inclusive as it is anonymous – therefore we found lots of the students engaged with the use of the whiteboard to:
  - Respond to questions
  - Ask questions
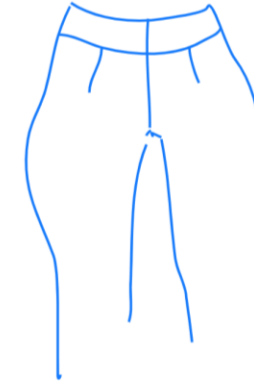 - Draw images to aid explanation
  - Give feedback.

Type here

(value 6cm)

Marry the patterns
Walking Pieces
close dart
Seam
If you pivot the dart down you will create a flare trouser
hence extraxt the waistband first

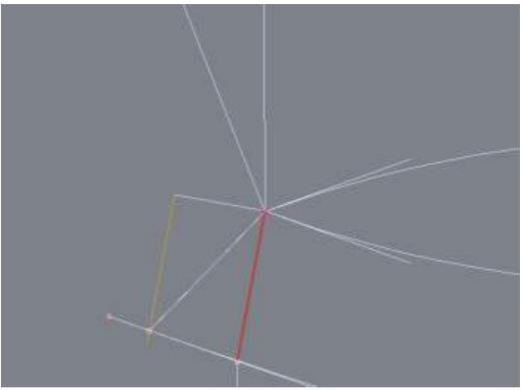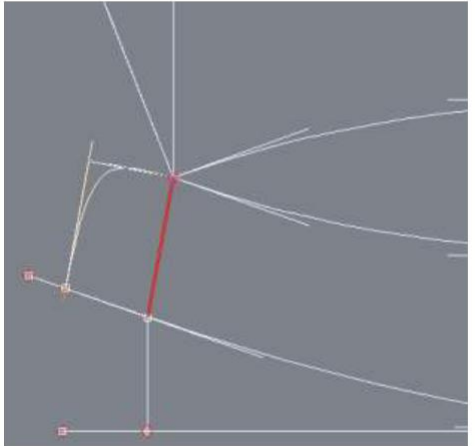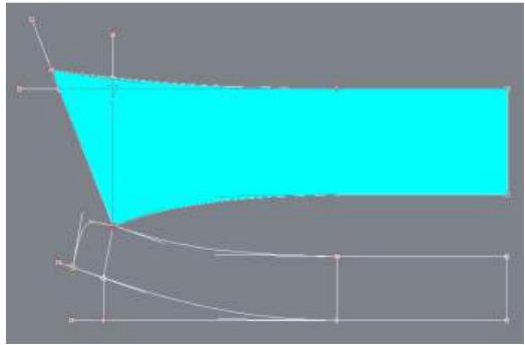**ual: london college of fashion**

Variant

Art	Piece Name	S	DH	DV	Tot. Nb. Pce.	Fabric	Mat-erial	ACD	Comment	Prod.	3D
1	Front		2		2	s			cut 1 pair self	1	1
2	Back		1		2	s			cut 1 pair	1	1
3	pocket		1		2	s			cut 1 pair	2	1
4	back waist	0 1	1		2 1 5	s			cut i self	1	1
5	right waist	1 1 0	1		2 1	s			Cut 1	1	1
6	left waist	1 0	1		2 1 1	sS			C cut 1	1	1
7	fly facing	1			1	s			cut 1	1	0
8	fly guard	1			1	L ?			CUT 1	1	0
9											
10											

EXAMPLES OF ONLINE PRACTICE: TASKS

- Used to encourage active learning and ensure engagement in the techniques being delivered.

- Tasks used to embed the understanding of the submission requirements

- Examples:
  - Collar workflow using Lectra functions
  - Complete variant worksheets
  - Complete marker manager worksheet
  - Pattern pieces used for 3D simulation
  - Grade plans

| Function	Description	Image
Bezier b	Finish collar extension. Draw an angled Bezier line from top of collar stand at the CF to intersect with bottom of the parallel line.	
Reshape r	Reshape the line to create curved edge of collar extension	
Seam	Seam the collar and stand pattern pieces.	

EXAMPLES OF ONLINE PRACTICE: BREAKOUT GROUPS

- Require a lot of planning

- Challenging to navigate and keep up students participation as it highlighted when students did not participate and there was nowhere to hide.

- A lot of support was required to facilitate the groups.

- The collar task went well and understanding was solidified.

COLLAR DRAFT WORKSHEET 1		
Function	**Description**	**Image**

CHALLENGES

- Knowing if the students are engaging.

- It can be difficult at times to gain student feedback

- When sharing our screen to demo the software it must be share screen, rather than application – otherwise not all of the functionalities can be seen, due to pop up windows.

- Requiring multiple devices or support, as when demoing software we are unable to see the chat box, so we relied on technical support to let us know if any students were asking questions.

- Connection issues and having to abandon lessons.
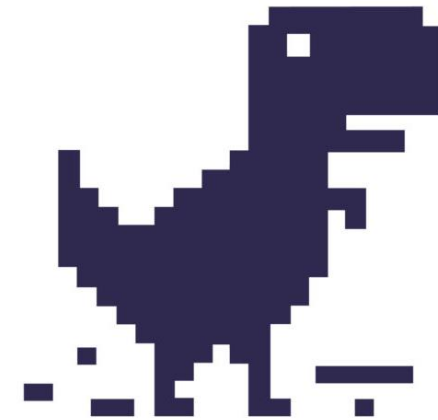
NEW PARADIGM

- New transformed method of delivering software that allows students to engage with Lectra or other software in an alternative way.

- Inclusive of all the students whether they have access to the software or not – so they can all engage with the technology.

- This mode of delivery would never have been considered if it wasn't for lockdown.

- Students were overall accepting of the changes and submitted good work.

  "it was really helpful to think about Lectra in an alternative way and apply to our own garments which we remember more than set tasks."
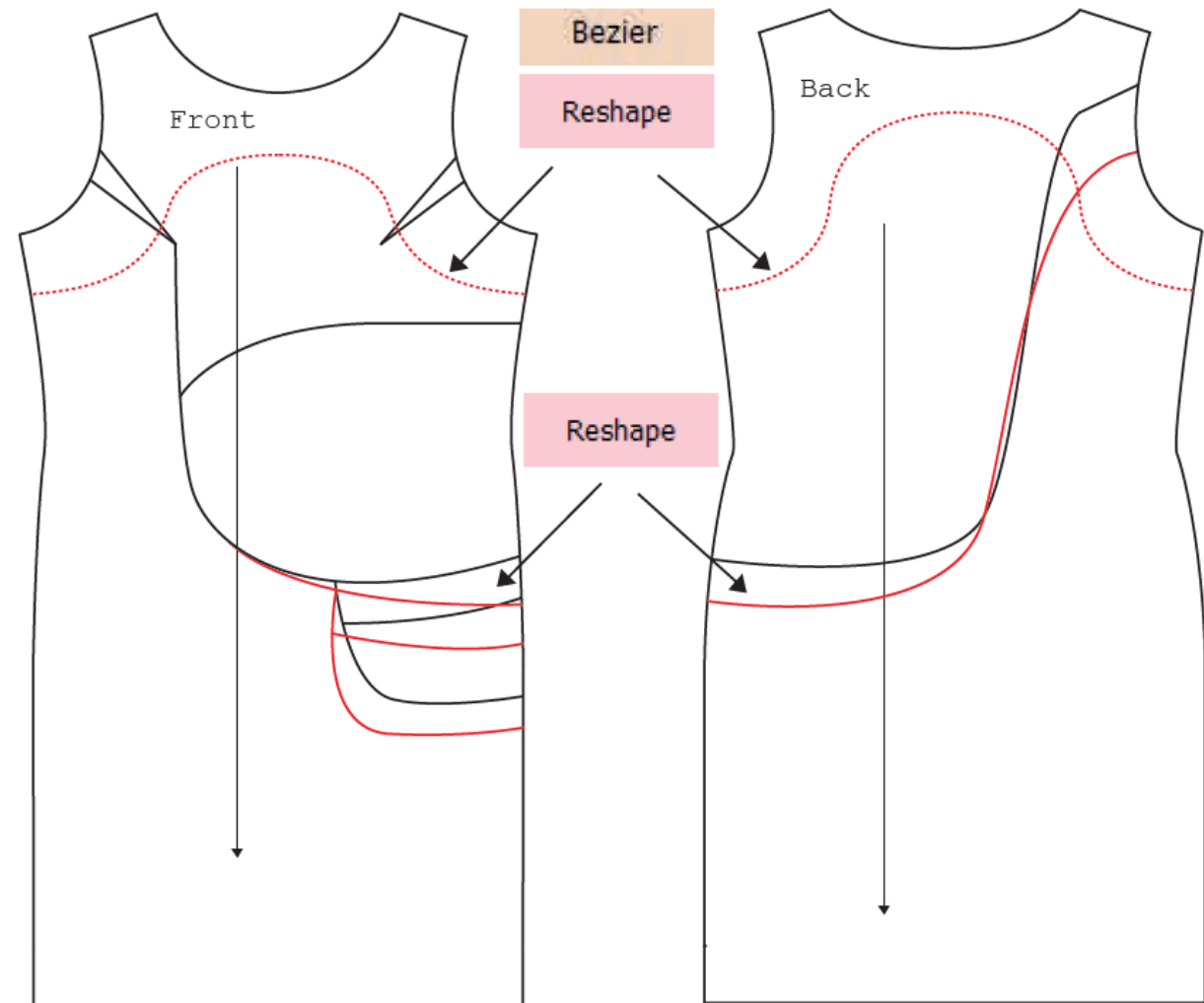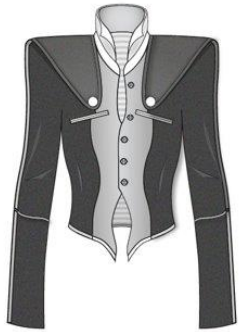
EXAMPLES OF STUDENT WORK

FPC Year 2

TECHNICAL FILE - LECTRA

Garment of choice

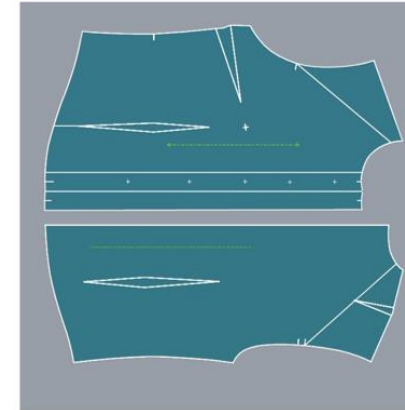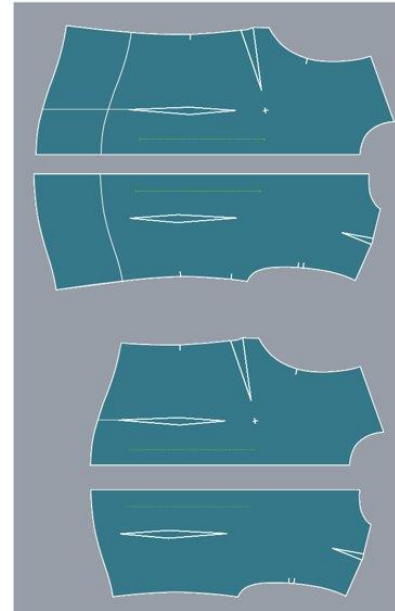| Open Model | Open Modaris from Desktop File < Open Model < Shirt basic block |
Grain Line Axis 'DF'	Add grain line on each piece.
Parallel	Reduce the lenght of the front by 20 cm, creating a parallel line of the front and back hem.
Seam	Seam out the pieces excluding the lower area

Developed	Measure 3 cm down along the neck line front and back.
Straight	Draw a line from that 3 cm point to the notch along the armhole, front and back.
Notch	Place a notch along this line
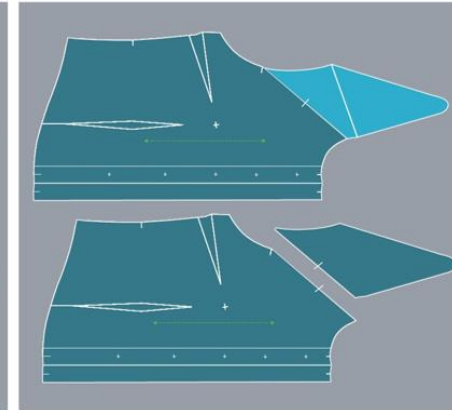
| Straight | Draw the new shape of the shoulder. Draw a crossing line from the neckline point. Then a second line that will join the shoulder point and the end of the latter line. |
| Tangent Arc | click the tip of the triangle to make it rounded. |
| Seam | Seam out the trinagle and the area close to the shoulder including the notches Seam out the front separately |

* DISCLAIMER : All the images have been created on Illustator

EXAMPLES OF STUDENT WORK

FPC Year 3

WS21SH01
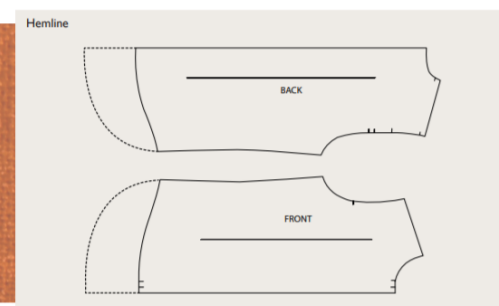Gather Blouse

Begin with shirt block for (oversized fit).
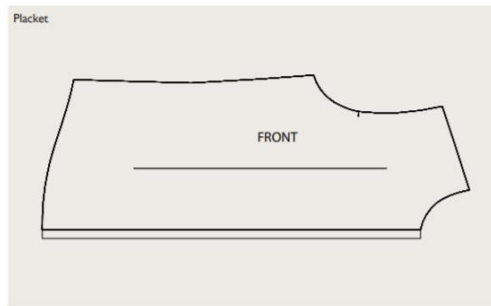
Placket

FRONT

F1> parallel> -1.5 - Offset CF by 1.5.
Zoom in on CF neck point.
F3> adjust 2 lines> click end of parallel line, then click on neckline- Close the gap in the line.
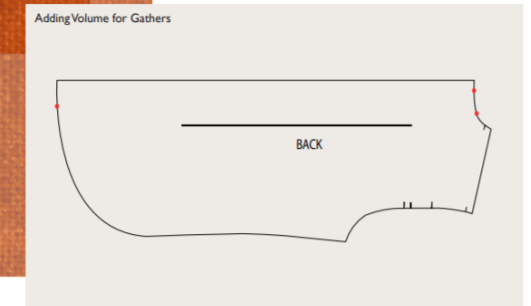Repeat process for the other side.

FRONT

F1> bezier, turn handles on and reshape hem.
F1> seam
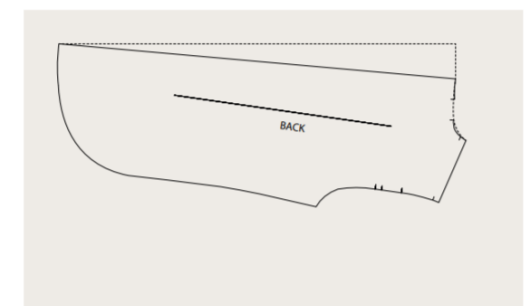F2> rotation 2pts> rotate so that the grain line is straight

Hemline

BACK

FRONT

For the curved hem on the left front and the back use F1> bezier, turn handles on and reshape to create curved hem.

Adding Volume for Gathers

BACK

F1> add points where volume is to be added at neck and hem.
F3> pin ends- so that they don't move when stretch is added. Activate 'print'.

BACK

F3> stretch- click on point to pivot from then then the point to open up. Drag mouse to open up the pattern.
F1> add point whilst holding shift, to create a curve point. F3> reshapes to reshape curve point.
Delete notches just created, keeping just the end ones- this 24cm will be gathered.
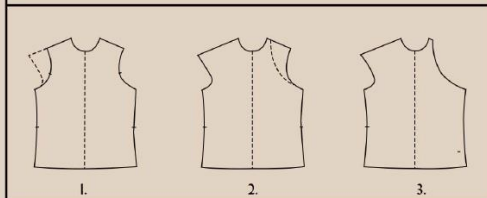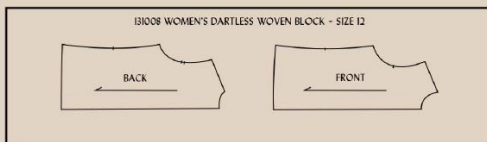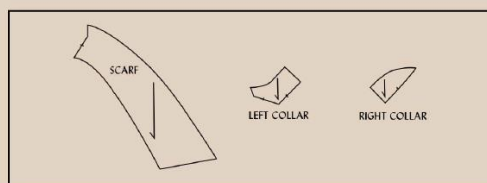F3> merge notches at hem then delete

EXAMPLES OF STUDENT WORK

FPC Final Year

To start creating the top of look 5, I needed to form the shape of the lapel drape on a mannequin and then digitize the pieces since I was not able to achieve the natural drape solely on CAD using a block

FUNCTIONS USED

Sym 2Pts | Bezier | Seam

SCARF

LEFT COLLAR   RIGHT COLLAR

131008 WOMEN'S DARTLESS WOVEN BLOCK - SIZE 12

BACK   FRONT

1.   2.   3.

I began drafting the body of the blouse starting from using the dartless woven block. To alter the shapes of the shoulders and armholes on the front, I started by simply mirroring the front and back block patterns by using the F5 SYM2PTS function. I used the FI BEZIER function to define the new curves using precise anchor points, then used the F4 SEAM function to extract the shapes to create a new pattern. I repeated this process fot the back of the bodice as well.

4.

FRONT   BACK

FUNCTIONS USED

Bezier | Seam | Reshape

FRONT

1.   2.   3.   4.

BACK

1.   2.   3.   4.
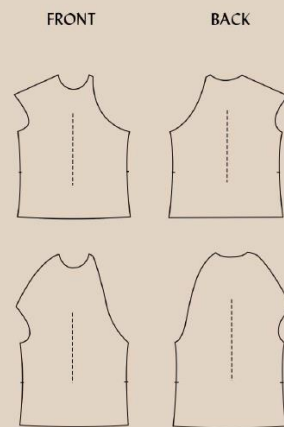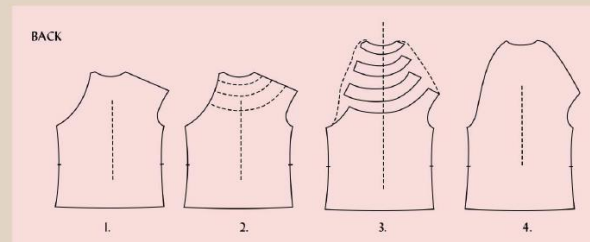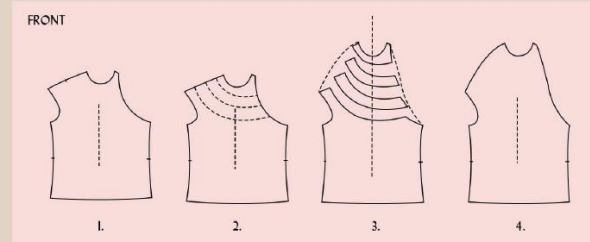
To add the volume needed to create the gathers for my top, I slashed and spread the front and back by adding curved lines using the FI BEZIER function. I then used the F4 SEAM function to separate the pieces and align them along the grain, distancing them 5cm apart. I used the BEZIER tool again to draw in the new lines, and then corrected the shape by utilizing the F3 RESHAPE function

5.

ual: london college of fashion

EXAMPLES OF STUDENT WORK

FPC Final Year

Pattern construction

Pattern construction

F1/ Use the straight line tool and bezier toll to extend the width of the trousers, then seam the pattern. Do this to the front and back trouser

F5/pivoting dart/click on dart point then click on dart leg closest to the centre front/ then dart leg closest to the side seam / click on slider point/ in pop up box type 100

london college
of fashion
ual:

THE FUTURE

- Embrace and capitalise on the discomfort of being beginners to enhance our practice.

- The new normal: teaching the software online in a virtual space

- We have gained invaluable, enduring knowledge, insights and new practice from the COVID online teaching experience.

- Keep asynchronous delivery to help mitigate problems with teaching the software online.

- Utilise tasks and resources developed for COVID in future digital pattern cutting delivery.
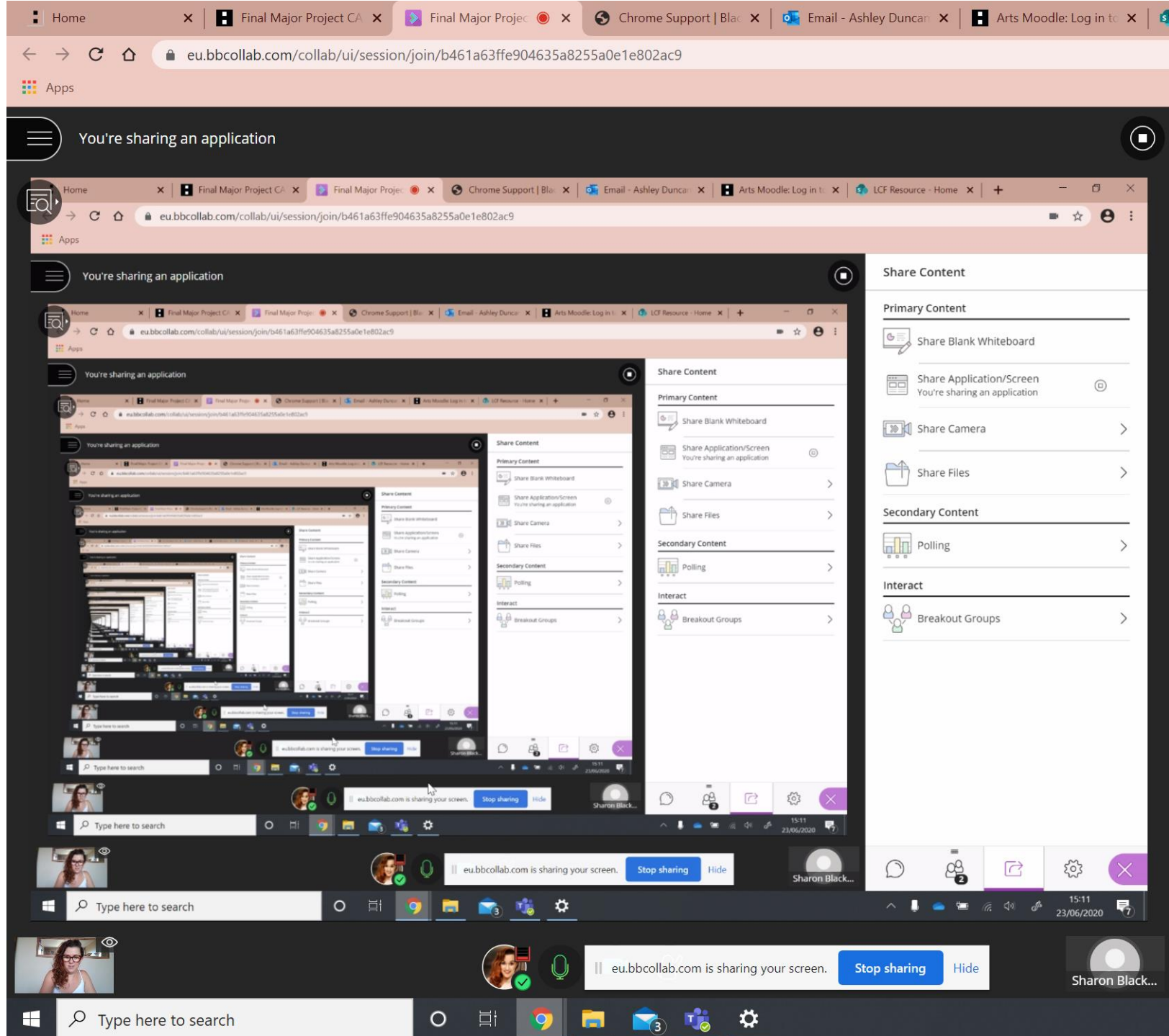

ual: london college of fashion

MA PGT

ANY QUESTIONS?

👤 **SHARON BLACKFORD**

✉ s.blackford@fashion.arts.ac.uk

👤 **ASHLEY DUNCAN**

✉ ashley.duncan@fashion.arts.ac.uk

ual london college of fashion