

GUJARAT TECHNOLOGICAL UNIVERSITY (GTU)**Competency-focused Outcome-based Green Curriculum-2021 (COGC-2021)**

Semester - II

Course Title: Pattern Making

(Course Code:4325102)

Diploma programme in which this course is offered	Semester in which offered
Computer Aided Costume Designing and Dress Making	Second

1. RATIONALE

Today's fashion industry is versatile and rapidly changing in trends and therefore quick response of production is very much essential. Flat pattern technique and Drafting are the important techniques employed in fashion garment industry since its inception. Therefore, a steep demand of professional and technically educated workforce of advanced pattern designing is one of the basic human resources of garment production industry. Aim of introducing this is to prepare students with a professional approach of flat pattern and drafting techniques, relevant to today's fashion garment making industry. Introduction of this course is a step forward in educating students in synchronization with the needs of today's garment industry.

2. COMPETENCY

The course content should be taught and implemented with the aim to develop different types of skills leading to the achievement of the following competency:

- **Create innovative pattern using appropriate basic blocks and pattern making techniques.**

3. COURSE OUTCOMES (COs)

The practical exercises, the underpinning knowledge and the relevant soft skills associated with the identified competency are to be developed in the student for the achievement of the following COs:

- Use flat pattern and drafting method of pattern making.
- Create innovative pattern using flat pattern and drafting techniques.
- Design various types of sleeves, collars, cuffs and skirts.
- Construct different types of sleeves, collars and skirts.

4. TEACHING AND EXAMINATION SCHEME

Teaching Scheme (In Hours)			Total Credits (L+T+P/2)	Examination Scheme				
				Theory Marks		Practical Marks		Total Marks
L	T	P	C	CA	ESE	CA	ESE	
0	0	4	2	00	00	50*	50	100

(*):For this practical only course, 50 marks under the practical CA has two components i.e. the assessment of micro-project, which will be done out of 10 marks and the remaining 40 marks

are for the assessment of practical. This is designed to facilitate attainment of COs holistically, as there is no theory ESE.

Legends: *L*-Lecture; *T*- Tutorial/Teacher Guided Theory Practice; *P* -Practical; *C* – Credit, *CA* - Continuous Assessment; *ESE* -End Semester Examination.

5. SUGGESTED PRACTICAL EXERCISES

The following practical outcomes (PrOs) are the sub-components of the COs. They are crucial for that particular CO at the 'Precision Level' of Dave's Taxonomy related to 'Psychomotor Domain'.

Sr. No.	Practical Outcomes (PrOs)	Unit No.	Approx. Hrs. required
1	Prepare upper basic block as per measurement.	I	02*
2	Prepare basic block of sleeve as per measurement.	I	02*
3	Shift One, two & three dart by pivot method (3 samples).	4315102 (Unit – VII)	02*
4	Shift One, two & three dart by slash method. (3 samples).	4315102 (Unit – VII)	02*
5	Combine two darts and three darts by pivot method. (2 samples)	4315102 (Unit – VII)	02*
6	Combine two darts and three darts by slash method. (2 samples)	4315102 (Unit – VII)	02*
7	Divide one dart and two darts by pivot method. (2 samples)	4315102 (Unit – VII)	02*
8	Divide one dart and two darts by slash method. (2 samples)	4315102 (Unit – VII)	02*
9	Combine dart and convert into seams. (2 samples)	4315102 (Unit – VII)	02*
10	Combine dart and convert into gathers. (2 samples)	4315102 (Unit – VII)	02*
11	Combine dart and convert into yoke. (2 samples)	4315102 (Unit – VII)	02*
12	Design sleeves for women garments (05 drawings)	I	02*
13	Prepare set in sleeves through slash method. (Construct any one) <ul style="list-style-type: none"> • Leg-O-Mutton sleeve • Gathers at top & bottom (puff sleeve) • Petal. • Bell 	I	04*
14	Prepare non-set-in sleeves through adaptation from basic Block of women garment. (Construct any one) <ul style="list-style-type: none"> • Kimono • Raglan pointed 	I	04*

Sr. No.	Practical Outcomes (PrOs)	Unit No.	Approx. Hrs. required
	<ul style="list-style-type: none"> Square Dolman 		
15	Design flat and raised collars. (05 drawings)	I	02*
16	Prepare flat collars. (Construct any one) <ul style="list-style-type: none"> Peter-pan Sailor's collar Cape collar 	I	06*
17	Prepare raised collars. (Construct any one) <ul style="list-style-type: none"> Chinese collar (mandarin collar) Shirt Collar Polo collar 	I	06*
18	Design cuffs. (05 drawings)	I	02*
19	Design skirts. (05 drawings)	II	02*
20	Prepare lower basic block as per measurement.	II	02*
21	Prepare skirts through slash method and drafting method. (Construct any one) <ul style="list-style-type: none"> Skirt with fullness at bottom (Flared skirt) Skirt with fullness at top & bottom (Tiered skirt) Half umbrella (Half Circular) Full umbrella (Full Circular) Skirt with panels 	II	04*
	Minimum Practical Hours		56

Note

- More **Practical Exercises** can be designed and offered by the respective course teacher to develop the industry relevant skills/outcomes to match the Cos. The above table is only a suggestive list.
- The following are some **sample** 'Process' and 'Product' related skills (more may be added/deleted depending on the course) that occur in the above listed **Practical Exercises** of this course required which are embedded in the COs and ultimately the competency.

Sr.No.	Sample Performance Indicators for the PrOs	Weightage in %
1	Planning the process for creating the sample.	20
2	Constructing the sample as per given instruction.	50
3	Finishing of the sample.	20
4	Presentation of the sample.	10
Total		100

6. MAJOR EQUIPMENT/ INSTRUMENTS REQUIRED

These major equipment with broad specifications for the PrOs is a guide to procure them by the administrators to usher in uniformity of practical's in all institutions across the state.

Sr. No.	Equipment Name with Broad Specifications	PrO.No.
1.	Half Shuttle Sewing Machine	13,14,16,17,21
2.	Full Shuttle Sewing Machine	13,14,16,17,21

7. AFFECTIVE DOMAIN OUTCOMES

The following **sample** Affective Domain Outcomes (ADOs) are embedded in many of the above-mentioned COs and PrOs. More could be added to fulfil the development of this course competency.

- Work as a leader/a team member.
- Follow safety practices while using instruments and tools.
- Follow ethical practices.
- Maintain tools and instruments.

The ADOs are best developed through the laboratory/field-based exercises. Moreover, the level of achievement of the ADOs according to Krathwohl's 'Affective Domain Taxonomy' should gradually increase as planned below:

- 'Valuing Level' in 1st year
- 'Organization Level' in 2nd year.
- 'Characterization Level' in 3rd year.

8. UNDERPINNING THEORY

The major underpinning theory is given below based on the higher level UOs of Revised Bloom's taxonomy that are formulated for development of the COs and competency. If required, more such UOs could be included by the course teacher to focus on attainment of COs and competency.

Unit	Unit Outcomes(UOs) (4to6 UOs at different levels)	Topics and Sub-topics
Unit– I Garment Components	1a. Draft Upper Basic block for female. 1b. Differentiate various types of sleeves. 1c. Differentiate various types of collars. 1d. Differentiate various types of cuffs.	1.1 Drafting of Upper Basic Block for female. 1.2 Drafting of Basic Sleeves and types of sleeves. 1.2.1. Set in sleeves and its varieties. 1.2.2. Non-set-in sleeves and its varieties. 1.3 Drafting of Basic Shirt & Band Collar 1.4 Types of Collars. 1.4.1. Flat Collars and its varieties. 1.4.2. Raised Collars and its varieties.

		1.5 Varieties in neck-lines without Collars. 1.6 Varieties of cuffs- 1.6.1. Detachable cuff 1.6.2. Gauntlet cuff 1.6.3. Barrel cuff 1.6.4. Beret cuff 1.6.5. Rollup cuff 1.6.6. French cuff 1.6.7. Button loop cuff.
Unit– II Skirt.	2a. Draft basic block of skirt. 2b. Classify types of skirts 2c. Differentiate various types of skirts.	2.1 Drafting of Basic Lower Blocks 2.2 Classify various types of skirts according to its length. 2.3 Differentiate between straight and circular skirts.

9. SUGGESTED SPECIFICATION TABLE FOR QUESTION PAPER DESIGN

Unit No.	Unit Title	Teaching Hours	Distribution of Theory Marks			
			R Level	U Level	A Level	Total Marks
	Not Applicable					

Legends: R=Remember, U=Understand, A=Apply and above (Revised Bloom's taxonomy)

10. SUGGESTED STUDENT ACTIVITIES

Other than the classroom and laboratory learning, following are the suggested student-related **co-curricular** activities which can be undertaken to accelerate the attainment of the various outcomes in this course. Students should perform following activities in group and prepare reports of about 5 pages for each activity. They should also collect/record physical evidences for their (student's) portfolio which may be useful for their placement interviews:

- Assign internet-based assignments.
- Give seminar on types and varieties of garment components.
- Undertake market survey on various garment components.
- Assign teacher guided self-learning activities.

11. SUGGESTED SPECIAL INSTRUCTIONAL STRATEGIES (if any)

These are sample strategies, which the teacher can use to accelerate the attainment of the various outcomes in this course:

- Massive open online courses (**MOOCs**) may be used to teach various topics/sub topics.
- Guide student(s) in undertaking micro-projects.

- c) **'L' in section No. 4** means different types of teaching methods that are to be employed by teachers to develop the outcomes.
- d) About **20% of the topics/sub-topics** which are relatively simpler or descriptive in nature is to be given to the students for **self-learning**, but to be assessed using different assessment methods.
- e) With respect to **section No.10**, teachers need to ensure to create opportunities and provisions for **co-curricular activities**.
- f) Guide students on how to address issues on environment and sustainability.
- g) Make students understand the relevant topic using animation, video and presentations.

12. SUGGESTED MICRO-PROJECTS

Only one micro-project is planned to be undertaken by a student that needs to be assigned to him/her in the beginning of the semester. In the first four semesters, the micro-project are group-based (group of 3 to 5). However, **in the fifth and sixth semesters**, the number of students in the group should **not exceed three**.

The micro-project could be industry application based, internet-based, workshop-based, laboratory-based or field-based. Each micro-project should encompass two or more COs which are in fact, an integration of PrOs, UOs and ADOs. Each student will have to maintain dated work diary consisting of individual contribution in the project work and give a seminar presentation of it before submission. The duration of the microproject should be about **14-16 (fourteen to sixteen) student engagement hours** during the course. The students ought to submit micro-project by the end of the semester to develop the industry-oriented COs.

A suggestive list of micro-projects is given here. This has to match the competency and the COs. Similar micro-projects could be added by the concerned course teacher:

- a) **Sleeve:** Collect images of different types of sleeves and prepare a chart.
- b) **Collar:** Prepare a chart showing different designs of collars.
- c) **Garment Component:** Combine different garment components and design any three female garments
- d) **Basic Block variation:** Prepare a collage of images showing basic block variation.
- e) **Fabric waste:** Prepare creative articles using the waste material collected during practical performance.

13. SUGGESTED LEARNING RESOURCES

Sr. No.	Title of Book	Author	Publication with place, year and ISBN
1	Pattern making for fashion design.	Helen Joseph - Armstrong	Longman ISBN: 9780060403324
2	Fabric, form and flat pattern cutting	Winifred Aldrich	Blackwell Publishing Wiley-Blackwell; 2nd edition (July 30, 2007) ISBN-13: 978-1405136204 ISBN-10: 1405136200

Sr. No.	Title of Book	Author	Publication with place, year and ISBN
3	Pattern making for fashion design.	Helen Joseph - Armstrong	Pearson Education India ISBN: 9789332518117
4	Pattern Grading for Women's Clothes: The Technology of Sizing	Gerry Cooklin	Wiley & Sons, Incorporated, John ISBN :06320022957 ISBN 13 : 9780632022953

14. SOFTWARE/LEARNING WEBSITES

- <https://www.fibre2fashion.com/industry-article/5658/basics-of-pattern-making?amp=true>
- https://books.google.co.in/books/about/Patternmaking_For_Fashion_Design_And_Dvd.html?id=2fwcuCqTjtAC&printsec=frontcover&source=kp_read_button&hl=en&newbks=1&newbks_redir=1&redir_esc=y
- <https://fliphtml5.com/zurx/fsbx/basic>
- <https://www.dresspatternmaking.com/blocks/drafting-derivative-blocks/dress-block/bodice-front-side-seam>

15. PO-COMPETENCY-CO MAPPING

Semester II	Pattern Making (Course Code: 4325102)						
	POs						
Competency & Course Outcomes	PO 1 Basic & Discipline specific knowledge	PO 2 Problem Analysis	PO 3 Design/ development of solutions	PO 4 Engineering Tools, Experimentation & Testing	PO 5 Engineering practices for society, sustainability & environment	PO 6 Project Management	PO 7 Life-long learning
Competency	<u>Create innovative pattern using appropriate basic blocks and pattern making techniques.</u>						
Course Outcomes							
CO a) Use flat pattern and drafting method of pattern making.	3	2	2	2	-	-	2
CO b) Create innovative pattern using flat pattern and drafting techniques.	3	3	3	2	2	2	2
CO c) Design various types of sleeves, collars, cuffs and skirts.	3	-	3	2	-	2	2
CO d) Construct different types of sleeves, collars and skirts.	3	-	3	-	2	2	2

Legend: '3' for high, '2' for medium, '1' for low and '-' for no correlation of each CO with PO.

16. COURSE CURRICULUM DEVELOPMENT COMMITTEE**GTU Resource Persons**

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