

## GUJARAT TECHNOLOGICAL UNIVERSITY (GTU)

### Competency-focused Outcome-based Green Curriculum-2021 (COGC-2021) Semester - IV

#### Course Title: Advance Apparel Construction (Course Code: 4345103)

Diploma programme in which this course is offered	Semester in which offered
Computer Aided Costume Designing and Dress Making	4 <sup>th</sup> Semester

#### 1. RATIONALE

This course imparts the knowledge of advance apparel construction of male and female using drafting and flat pattern techniques. This is a practice-based course and it would require application of most of the knowledge and skills acquired by students in other courses of first to third semester. The skills acquired by this course would help students for preparing garments at par with the industry and for creating advanced pattern design. Thus, it is a key course for garment construction for male and female.

#### 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 various garments for male and female using appropriate blocks.**

#### 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:

- a) Adapt upper basic block of female.
- b) Construct different styles of upper and lower garments for male and female.
- c) Design different styles of upper and lower garments for male and female.
- d) Grade upper block for male and female.

#### 4. TEACHING AND EXAMINATION SCHEME

Teaching Scheme (In Hours)			Total Credits (L+T+P/2)	Examination Scheme				Total Marks
				Theory Marks		Practical Marks		
L	T	P	C	CA	ESE	CA	ESE	
0	0	6	3	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	Grade upper basic block (Front, Back & Sleeve) manually for female (one size up - one size down).	II	10
2	Draft, cut and stitch formal shirt for male.	I	12
3	Grade formal shirt manually for male (one size up).	II	10
4	Draft, cut and stitch basic trouser for male.	I	12
5	Prepare an evening gown for female. 5.1 Adapt female upper basic block to evening gown 5.2 Cut & stitch the adapted garment	Unit IV (4335104)	12
6	Design evening gown for female (Any 5).	Unit IV (4335104)	08
7	Draft, cut and stitch Indian bifurcated garment for female (Any one) <ul style="list-style-type: none"> <li>• Palazzo</li> <li>• Jumpsuit</li> <li>• Culottes</li> </ul>	Unit III (4335104)	12
8	Design Palazzo/Jumpsuit/Culottes for female (Any 5).	Unit IV (4335104)	08
<b>Minimum Practical Hours</b>			<b>84</b>

### **Note**

- i. 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.
- ii. 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 preparing the garment/block.	20
2	Preparing the garment/block/design as per given instructions.	50
3	Finishing of the garment/block/design.	20
4	Presentation of the garment/block/design.	10
<b>Total</b>		<b>100</b>

## 6. MAJOR EQUIPMENT/ INSTRUMENTS REQUIRED

This major equipment with broad specifications for the PrOsis 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	2,4,5,7
2.	Full Shuttle Sewing Machine	2,4,5,7

## 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 fulfill the development of this course competency.

- a) Work as a leader/a team member.
- b) Follow safety practices while using instruments and tools.
- c) Follow ethical practices.
- d) 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:

- i. 'Valuing Level' in 1<sup>st</sup> year.
- ii. 'Organization Level' in 2<sup>nd</sup> year.
- iii. 'Characterization Level' in 3<sup>rd</sup> 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
<b>Unit- I</b> Drafting of shirt and trouser block for male.	1a. Draft the shirt block for male. 1b. Draft the trouser block for male. 1c. Prepare marker of formal shirt and trouser.	1.1 Draft the formal shirt and trouser blocks for male as per the given measurement. 1.2 Create a marker of formal shirt and trouser for male as per the requirement.
<b>Unit- II</b> Grading	2a. Select appropriate grading technique. 2b. Grade female basic bodice block. 2c. Grade shirt block for male.	2.1 Principles of grading 2.1.1 General Principles 2.1.2 Practical principles 2.2 Grading terminology 2.2.1 Origin line 2.2.2 Axis 2.2.3 Zero point 2.3 Grading methods

		2.3.1 Vector Grading 2.3.2 Nest or Stack grading
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### 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:

- a) Assign internet-based assignments.
- b) Give seminar on types and varieties of Formal clothing.
- c) Undertake market survey on various types of Party wear.
- d) 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:

- a) Massive open online courses (**MOOCs**) may be used to teach various topics/sub topics.
- b) 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 is 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 micro project 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) **Grading of Shirt:** Grade manually shirt block to one size down.
- b) **Grading of Skirt:** Grade manually skirt block to one size up and one size down
- c) **Female party wear:** Collect Pictures of female party wear.
- d) **Casual wear:** Design five Casual wear for female.
- e) **Fabric Material:** Collect suitable fabric samples for formal shirt and trouser.

### 13. SUGGESTED LEARNING RESOURCES

Sr. No.	Title of Book	Author	Publication with place, year and ISBN
1	Pattern Grading for Women's Clothes	Gerry Cooklin	John Wiley & Sons Ltd ISBN-10: 0632022957 (April 1990) ISBN-13: 978-0632022953
2	Metric Pattern Cutting	Winifred Aldrich	John Wiley and Sons Ltd ISBN-10: 0632036125 (1994) ISBN-13: 978-0632036127
3	Pattern making for Fashion design	Armstrong, Helen Joseph	Prentice Hall ISBN 10: 0136069347 (2009) ISBN 13: 9780136069348
4	Zarapkar system of cutting	K P Zarapkar	Navneet (2008) ISBN 13: 978-8124301999
5	Metric pattern cutting for Menswear.	Winifred Aldrich	Wiley-Blackwell ISBN 10: 1405182938 ISBN 13:978-1405182935

### 14. SOFTWARE/LEARNING WEBSITES

- a) [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://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)
- b) <https://www.theshapesoffabric.com/2019/02/23/how-to-draft-the-basic-skirt-pattern/>
- c) <https://inthefolds.com/blog/2016/2/22/how-to-draft-a-bodice-block>
- d) [Basics of Pattern Making & Pattern Making Basics for Garments - Fibre2Fashion](#)
- e) <https://itch-to-stitch.com/grade-pattern-size-two/>

- f) <https://www.fibre2fashion.com/industry-article/5690/constructing-a-bifurcated-garment-trousers-and-shorts>

### 15. PO-COMPETENCY-CO MAPPING

Semester IV	Advance Apparel Construction (Course Code: )						
	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	Create various patterns for male and female using appropriate block						
Course Outcomes							
CO a) Adapt upper basic block of female.	3	3	3	3	2	3	3
CO b) Construct different styles of upper and lower garments for male and female.	3	3	3	3	2	3	3
CO c) Design different styles of upper and lower garments for male and female.	3	3	3	-	2	3	3
CO d) Grade upper block for male and female.	3	3	3	3	2	3	3

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

Sr. No.	Name and Designation	Institute	Contact No.	Email
1	Dr. F. V. Kugashiya HOD in CACD&DM	GGP, Ahmedabad	9825697874	farjana.kugashiya@gmail.com
2	Ms. S. H. Bhatt Lecturer in CACD&DM	GGP, Ahmedabad	9898068580	shbhatt99@gmail.com
3	Mrs. U. B. Patel Lecturer in CACD&DM	SKJP, Bharuch	9825343953	ubpatel74@gmail.com
4	Dr. P. A. Acharya Lecturer in CACD&DM	BPTI, Bhavnagar	9427503783	pallaviacharrya@gmail.com