

GUJARAT TECHNOLOGICAL UNIVERSITY (GTU)

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

Course Title: Creative Surface Ornamentation (Course Code: 4355107)

Diploma programme in which this course is offered	Semester in which offered
Computer Aided Costume Design and Dress Making	5 th Semester

1. RATIONALE

This course helps students to learn about surface development of fabric for garment construction and development of garment through surface embellishment. It is useful for the students for embellishing the fabric in garment industry. Imbided knowledge will be useful for preparing fashioned garments.

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:

- **Develop fabric surface using creative surface ornamentation 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:

- a) Modify fabric surface using suitable embroidery technique.
- b) Develop fabric surface using hand painting.
- c) Use different printing techniques for surface ornamentation of garments and fabrics.
- d) Create suitable surface ornamentation technique on printed garment/fabric.

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	-	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	Design components of dress for hand embroidery. (3 designs each) 1.1 Yoke 1.2 Center panel 1.3 Neckline	1	6
2	Select a garment/fabric and ornament its surface with any one hand embroidery designed in practical No.1.	1	14
3	Design any three garments using hand painting.	2	2
4	Select a garment/fabric and ornament its surface with hand painting designed in practical No. 3.	2	4
5	Design garments using following printing techniques. (3 designs each) 5.1 Block printing 5.2 Stencil printing 5.3 Screen printing	2	6
6	Select a garment/fabric and ornament its surface using any one printing technique designed in practical No.5.	2	12
7	Select a printed garment/ fabric and ornament its surface with suitable technique.	3	12
Minimum Practical Hours			56

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	Selection of suitable technique for design.	20
2	Use of appropriate material for the selected technique.	20
3	Preparation of the product as per design/Performing the practical as per given instruction.	50
4	Finishing of the product and its presentation.	10
Total		100

6. MAJOR EQUIPMENT/ INSTRUMENTS REQUIRED

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

Sr. No.	Equipment Name with Broad Specifications	PrO.No.
1.	Wooden blocks/ vegetable blocks	5,6,7
2.	Screens	5,6,7
3.	Drawing sheets	1,3,5
4.	Embroidery threads	2,7
5.	Tracing paper/ butter paper	1,5,6,7
6.	Fabric Colours for painting and printing	1,3,4
7.	Hand painting brushes	1,3,4

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) Practice environmentally friendly methods and processes.

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 1st year
- ii. 'Organization Level' in 2nd year.
- iii. '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	Major Learning Outcomes (Outcomes' in Psychomotor Domain)	Topics and Sub-topics
Unit – I Surface ornamentation through Embroidery	1a. Select appropriate basic embroidery stitches. 1b. Prepare garments using basic embroidery stitches. 1c. Design garments using fancy embroidery stitches.	1.1 Hand embroidery: 1.1.1. Basic stitches: back stitch, stem stitch, blanket stitch, chain stitch, feather stitch, herring bone stitch, cross stitch, bullion stitch, French knot, satin stitch, long and short stitch, laid and couching stitch. 1.1.2. Fancy embroidery stitches:

		mirror work, bead work, zardosi work, applique work, patch work.
Unit – II Surface ornamentation through Printing and painting	2a. Select appropriate printing. 2b. Prepare garments using hand painting. 2c. Use different printing technique for surface ornamentation. 2d. Create garments using various printing techniques.	2.1 Hand painting 2.2 Block printing using wooden block or vegetable blocks. 2.3 Screen printing 2.4 Stencil printing
Unit-III Surface ornamentation of printed fabric	3a. Select appropriate technique for printed fabric ornamentation. 3b. Use various embroidery materials for printed fabric ornamentation. 3c. Create printed fabric garment with different surface ornamentation.	3.1 Basic and fancy embroidery stitches 3.2 Surface ornamentation using lace, braids, net, fringes, pom poms etc. 3.3 Hand painting

9. SUGGESTED SPECIFICATION TABLE FOR QUESTIONPAPER 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:

- Prepare journals based on practical performed in laboratory.
- Explore internet for latest trends in different types of surface embellishments and advances in technique so applying them, prepare a report/ppt based on it and present it in class. (this activity may be in group of four to five students, and topics may be allotted by faculty)

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) Show video/animation film to demonstrate the different embellishing techniques
- h) Arrange visit to digital printing, roller and heat transfer printing, and industrial screen printing, computerized embroidery units, Exhibitions, Trade fair etc.
- i) Give mini projects to students on different type of surface embellishments (this may include history, origin, suitability for which type of fabric and garment, techniques for applying, materials to be used etc.)
- j) Arrange expert lectures.

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 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) **Accessory making:** Prepare suitable accessories using different embroidery stitches (Scarf, belt, purse, foot wear, head gear, bag etc.).
- b) **Jewellery making:** Prepare small Jewellery set using different hand painting (Necklace, earrings, bangles, bracelet and broch).
- c) **Patch making:** Prepare small patches for garments using painting, embroidery or printing technique.
- d) **Other surface ornamentation (other than fabric):** Prepare articles using surface ornamentation on pebbles, stones, wood, metal, ceramic, earthen objects with painting or printing.

13. SUGGESTED LEARNING RESOURCES

Sr. No.	Title of Book	Author	Publication with place, year and ISBN
1	Make It Yourself – Complete Set Volumes 1-20	Mary Harding and Margo Coughtrie	Columbia House

2	An Introduction to Textile Printing	W. Clarke	Butterworth & Co ISBN 0 408 00140 2
3	Complete guide to needle work	----	Reader Digest
4	Sushobhan	Nirmala Mistry	

14. SOFTWARE/LEARNING WEBSITES

- www.hobbyidea

15. PO-COMPETENCY-CO MAPPING

Semester V	Creative Surface Ornamentation (Course Code: 4355107)						
	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	<ul style="list-style-type: none"> • Develop fabric surface using creative surface ornamentation techniques. 						
CO a) Modify fabric surface using suitable embroidery technique.	3	2	3	3	3	3	3
CO b) Develop fabric surface using hand painting.	3	2	3	3	-	3	3
CO c) Use different printing techniques for surface ornamentation of garments and fabrics.	3	2	3	3	-	3	3
CO d) Create suitable surface ornamentation technique on printed garment/fabric.	3	2	3	3	-	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

S. No.	Name and Designation	Institute	Contact No.	Email
1	Dr. F. V. Kugashiya HOD in CACD&DM	GGP, Ahmedabad.	9825697874	farjana.kugashiya@gmail.com

S. No.	Name and Designation	Institute	Contact No.	Email
2	Smt. S. H. Bhatt Lecturer in CACD&DM	GGP, Ahmedabad.	9898068580	shbhatt99@gmail.com
3	Smt. B.K. Patel Lecturer in CACD&DM	GGP, Ahmedabad.	9879434633	bhavnap76@gmail.com
4	Smt. B.M. Patel Lecturer in CACD&DM	Shri K. J. Polytechnic Bharuch.	9825497217	bmpatel1508@gmail.com