

**GUJARAT TECHNOLOGICAL UNIVERSITY, AHMEDABAD, GUJARAT**

**COURSE CURRICULUM  
COURSE TITLE: ADVANCED SURFACE DEVELOPMENT  
(COURSE CODE: 3365104)**

<b>Diploma Programmes in which this course is offered</b>	<b>Semester in which offered</b>
Computer Aided Costume Design and Dress Making	Sixth

**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 curriculum should be implemented with the aim to develop required skills in the students so that they are able to acquire the following competency:

- **Develop fabric surfaces using appropriate surface embellishing techniques.**

**3. COURSE OUTCOMES (COs)**

The theory should be taught and practical should be carried out in such a manner that students are able to acquire required learning outcomes in cognitive, psychomotor and affective domain to demonstrate following course outcomes:

- Embellish fabric using suitable embroidery technique.
- Apply different printing technique for embellishment of garments and fabric.
- Select Crochet, macramé, Tatting and knitting technique for embellishment of accessories.

**4. TEACHING AND EXAMINATION SCHEME**

Teaching Scheme (In Hours)			Total Credits (L+T+P)	Examination Scheme				Total Marks
				Theory Marks		Practical Marks		
L	T	P	C	ESE	PA	ESE	PA	150
0	0	6	6	0	0	60	90	

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

**5. COURSE CONTENT DETAILS**

**Note:** There are no separate theory classes as there is no specific theory in this course. If there is a need to explain any this theory, then it has to be discussed by the faculty at the time of practical in the labs. Following table gives the different practical abilities to be developed in the students.

Unit	Major Learning Outcomes (Outcomes' in Psychomotor Domain)	Topics and Sub-topics
<b>Unit– I Surface embellishment through Embroidery</b>	1a. Apply hand and computerised embroidery on fabric/ garment	1.1 Embellishment on fabric/ garment with machine embroidery / Computerized machine embroidery 1.2 Embellishment on fabric/ garment with hand embroidery
<b>Unit– II Surface embellishment through Printing Technology</b>	2a. Apply different techniques of printing on fabric/ garment. 2b. Explore and gain the knowledge of printing industry.	2.1 Embellishment on fabric/ garment with block, stencil, screen, painting etc. 2.2 Industry visit to observe functioning of digital printing, roller and heat transfer printing, and industrial screen printing
<b>Unit– III Surface development through fancy technique</b>	3a. Apply different techniques such as Crochet, macramé, Tatting and knitting for constructing accessories.	3.1 Embellishment on fabric/ garment with Crochet- Single chain, slip stitch, single crochet, double crochet, treble, half single treble, double treble, triple treble etc. 3.2 Macramé- Half hitch, Half knot, Square knot, Lark head , Horizontal cording, Diagonal cording, Vertical cording, Overhead knot, Josephine knot 3.3 Tatting- single shuttle and double shuttle 3.4 Knitting- Purl, Knit, Garter, Rib, Cable and fancy stitch

## 6. SUGGESTED SPECIFICATION TABLE WITH HOURS and MARKS (Theory) - N.A-

## 7. SUGGESTED EXERCISES/PRACTICALS

The practical should be properly designed and implemented with an attempt to develop different types of skills (**outcomes in psychomotor and affective domain**) so that students are able to acquire the competencies/programme outcomes. Following is the list of practical exercises for guidance.

*Note: Here only outcomes in psychomotor domain are listed as practical. However, if these practical are completed appropriately, they would also lead to development of certain outcomes in affective domain which would in turn lead to development of **Course Outcomes** related to affective domain. Thus over all development of **Programme Outcomes** (as given in a common list at the beginning of curriculum document for this programme) would be assured.*

Faculty should refer to that common list and should ensure that students also acquire outcomes in affective domain which are required for overall achievement of Programme Outcomes/Course Outcomes

S. No.	Unit No.	Practical Exercises (Outcomes' in Psychomotor Domain)	Approx Hours. Required
1	I	Designing of surface embellishment using embroidery on yoke	2
2	I	Designing of surface embellishment using embroidery on border	2
3	I	Designing of surface embellishment using embroidery on center panel	2
4	I	Designing of surface embellishment using embroidery on overall sari	2
5	I	Designing of surface embellishment using embroidery on sari <i>palav</i>	2
6	I	Designing of surface embellishment using embroidery on dress.	2
7	I	Prepare a fabric/ garment from embroidery technique by using any one design prepared above.	16
8	II	Prepare design of surface embellishment using printing on <i>T-shirt</i> ,	2
9	II	Prepare design of surface embellishment using printing on <i>kurti</i> ,	2
10	II	Prepare design of surface embellishment using printing on <i>sari</i> ,	2
11	II	Prepare design of surface embellishment using printing on <i>cushion cover</i>	2
12	II	Prepare design of surface embellishment using printing on <i>bed sheets/bed spreads</i>	2
13	II	Prepare design of surface embellishment using printing on <i>table mats</i>	2
14	II	Prepare apparel/ household articles using printing technique prepared above.	12
15	III	Prepare basic samples of knitting/macramé/tatting	12
16	III	Prepare jewellery as accessory using techniques such as crochet /knitting /macramé /tatting (Foot wear, hand bags, head wear, etc.)	5
17	III	Prepare Foot wear as accessory using techniques such as crochet /knitting /macramé /tatting	5
18	III	Prepare hand bags as accessory using techniques such as crochet /knitting /macramé /tatting	5
19	III	Prepare head wear as accessory using techniques such as crochet /knitting /macramé /tatting	5
		<b>TOTAL</b>	<b>84</b>

## 8. SUGGESTED STUDENT ACTIVITIES

- Prepare journals based on practical performed in laboratory.
- Explore internet for latest trends in different types of surface embellishments and advances in techniques of 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)

**9. SPECIAL INSTRUCTIONAL STRATEGIES (if any)**

- i. Show video/animation film to demonstrate the different embellishing techniques
- ii. Arrange visit to digital printing, roller and heat transfer printing, and industrial screen printing, computerized embroidery units and Garment expos, Exhibitions, Trade fair etc.
- iii. 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.)
- iv. Arrange expert lectures.

**10. SUGGESTED LEARNING RESOURCES****A) Books**

Sl. No.	Title of Book	Author	Publication
1	Make It Yourself - Complete Set Volumes 1-20	Mary Harding and Margo Coughtrie	Columbia House
2	Treasury of Knitting patterns	Walker Barbara G	Simon & Schuster Adult Group
3	Complete guide to needle work	----	Reader Digest
4	“Sushobhan”	Nirmala Mistry	

**B) Major Equipment/ Instrument with Broad Specifications**

- i. Single head computerized embroidery machine

**C) Software/Learning Websites**

- i. [www.hobbyidea](http://www.hobbyidea)

**11. COURSE CURRICULUM DEVELOPMENT COMMITTEE****Faculty Members from Polytechnics**

- Prof (Smt.) N. A. Atrey., I/C HOD, CACDDM, C.U.S.P, Surendranagar
- Dr. J. R. Jhala, I/C HOD, CACDDM, A.V.P.T., Rajkot
- Prof (Ms.) K. P. Shah, I/C HOD, CACDDM, G.G.P., Ahmedabad
- Dr. F. V. Kugahshiya, Lecturer, CACDDM, G.G.P., Ahmedabad
- Dr. R. O. Yadav, Lecturer, CACDDM, C.U.S.P, Surendranagar.

**Faculty Members from NIFT Gandhinagar.**

- Prof. Pavan Godiawala, Director and Project Coordinator
- Prof. (Ms.) Kruti Dholakia, Assistant Professor, Fashion Design

**Coordinator and Faculty Members from NITTTR Bhopal**

- Dr. Shashikant Gupta, Professor and Coordinator for State of Gujarat.
- Dr. Joshua Earnest, Professor, Department of Electrical & Electronics Engineering,