

GUJARAT TECHNOLOGICAL UNIVERSITY, AHMEDABAD, GUJARAT

COURSE CURRICULUM

COURSE TITLE: CAD-I

(Code: 3345107)

Diploma Programmes in which this course is offered	Semester in which offered
Computer Aided costume Design and Dress Making	4 th Semester

1. RATIONALE

This course will provide the skill in pattern making on computer through CAD software. Student will develop skills in digitization of pattern. CAD software will also provide the opportunity to use various patterns making tools for modification of the pattern and presenting stylization of the pattern. The course on CAD –I will help the student to generate and modify skirt, trouser and shirt pattern as per the need of fashion industry

2. COMPETENCY (Programme Outcome according to NBA terminology)

The course content should be taught with the aim to develop different types of skills so that students are able to acquire following competency:

- **Create and modify patterns using Auto CAD and CAD software as per requirement.**

3. COURSE OUTCOMES:

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

- Creates Simple pattern using CAD software
- Carries out modification and stylization of given pattern as per requirement using CAD software

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	100
0	0	3	3	0	0	40	60	

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

5. DETAILED COURSE CONTENT

NOTE: There are no separate theory classes for following theory and it has to be discussed before relevant practical/exercises.

Unit	Major Learning Outcomes (Outcomes in Cognitive Domain)	Topics and Sub-topics
Unit-I Introduction of apparel CAD system	1a. Digitize given pattern using digitization tools 1b. Create Simple pattern using CAD software	1.1 Hardware requirement. 1.2 Comparison of Manual Pattern Making and pattern making using CAD software. 1.3 Introduction of cad software 1.3.1 Screen layout 1.3.2 Tools bar 1.3.3 Menu bar 1.3.4 File menu 1.4 Digitizing of Manual Patterns for Basic Bodice, Trouser etc. 1.4.1 Digitisation tools 1.5 Introduction of Basic drawing & drafting tools 1.5.1 Unit 1.5.2 Scale 1.5.3 Rectangle 1.5.4 Line 1.5.5 Curve 1.5.6 Points 1.6 Introduction of commands for Pattern creation & Drafting 1.6.1 Line & points menu 1.6.2 Drafting menu 1.6.3 Editing tools menu Assignment: Basic Bodice, Skirt, shirt Trouser)
Unit-II Pattern Modification and stylization	2a. Carry out modification and stylization of given pattern as per requirement using CAD software.	2.1 Pattern Modification tools 2.2 Modification Menu 2.2.1 Reshape 2.2.2 Erase 2.2.3 Shrinkage 2.2.4 Move 2.2.5 Pins 2.2.6 Stretch 2.2.7 Extend 2.2.8 Curve length 2.2.9 Modification of curve 2.2.10 Modification of line 2.2.11 Modification of Shape

Unit	Major Learning Outcomes (Outcomes in Cognitive Domain)	Topics and Sub-topics
		2.3 Pattern stylization tools 2.3.1 Notch 2.3.2 Dart 2.3.3 Princes line 2.3.4 Seam allowances 2.3.5 Seam & cut 2.3.6 Pivoting dart 2.4 Cut & join tools for pattern stylization 2.4.1 Horizontal & vertical 2.4.2 Cut by shape 2.4.3 Cut by angle 2.4.4 Symmetric 2.4.5 Join by two points etc. 2.4.6 Creation of fusing, facing etc. Analysis of the pattern in terms of accuracy. Assignment stylization of pattern

6. SUGGESTED SPECIFICATION TABLE WITH HOURS & MARKS (THEORY)

--NA---

7. SUGGESTED LIST OF EXERCISES/PRACTICAL

The practical/exercises 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/exercises. However, if these practical/exercises 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. Hrs. Required
1	01	Digitize the manual pattern of basic bodice and skirt.	3

2	01	Create basic bodice pattern using AutoCAD and CAD software as per given measurement.	6
3	01	Create Skirt pattern by using AutoCAD and CAD software as per given measurement.	3
4	01	Create trouser pattern by using AutoCAD and CAD software as per given measurement.	6
5	01	Create shirt pattern by using AutoCAD and CAD software as per given measurement.	6
6	02	Create a pattern of crawl by using basic block.	6
7	02	Present all the created pattern with proper analysis and stylization of the pattern	6
8	02	Take any industry based dress of women/men/kids wear and create all pattern of dress and compare with manual pattern	6
Total Hrs			42

8. SUGGESTED LIST OF STUDENT ACTIVITIES

- i. Collect manual pattern for digitization.
- ii. Visit the nearby industry and understand the importance of pattern making using CAD Software.

9. SUGGESTED LEARNING ACTIVITIES

A. List of Books

S.No.	Title of Book	Author	Publication
1.	Metric pattern cutting for Menswear	Winfred Aldrich	-
2.	How to draft Basic Pattern	Kopp Rolfo, Zelin & Gross	-
3.	CAD for Apparel Industry	Gerru Cookin	-
4.	Lectra & Tuka tech Manual /PDF files	-	-

i. List of Major Equipment/ Instrument:

- i. Digitiser,
- ii. Plotter,
- iii. High speed computer system and
- iv. Apparel cad software (Lectra / Tukatech / Reach / Gerber / Optitex)

C. List of Software/Learning Websites

- i. www.lectra.com
- ii. www.tukatech.com

10. COURSE CURRICULUM DEVELOPMENT COMMITTEE

Faculty Members from Polytechnics

- **Prof. (Ms.) K. P. Shah**, I/C HOD CACDDM, C U Shah Polytechnic, Surendranagar.
- **Prof. (Ms) F. V. Kugasiya**, CACDDM, Lecturer GGP, Ahmedabad
- **Prof. (Mrs.) U.B. Patel**, CACDDM, Lecturer K.J. Polytechnic, Bharuch
- **Prof. (Ms.) A.R. Rathod**, CACDDM, Lecturer A.V.P.T., Rajkot

Co-ordinator and Faculty Members from NIFT-Gandhinagar

- **Prof. Pavan Godiawala**, Director and Professor, Fashion Technology
- **Prof. Dr. Amar Tiwari**, Associate Professor, Fashion Technology

Co-ordinator and Faculty Members from NITTTR

- **Prof. Dr. Shashi Kant Gupta**, Professor and Coordinator for State of Gujarat.
- **Prof. (Mrs.) Chanchal Mehra**, Associate Professor, Department of Vocational Education and Entrepreneurship Development