

GUJARAT TECHNOLOGICAL UNIVERSITY, AHMEDABAD, GUJARAT
COURSE CURRICULUM

Course Title: Advance Computer Application
(Code: -3325102)

Diploma Programmes in which this course is offered	Semester in which offered
Computer Aided Costume Design and Dress Making	Second Semester

1. RATIONALE

This course will give knowledge & practice of the advance software viz CorelDraw, Illustrator and Adobe Photoshop that is used for designing purpose and its real life application in various fields of textile & garment designing. A course is designed to provide the students with a fundamental understanding of a range of computer graphics software applications. The main emphasis would be knowledge & practice of the advance software that is used for designing purpose and caters application of various fields of textile & Garment designing. Software application would provide Graphic based platform as per demands & standards of the fashion industry.

2. COMPETENCIES

The course content should be taught and implemented with the aim to develop different types of skills so that students are able to acquire the following competencies.

- i. **Draw the flat drawing of the Garments by using Corel Draw.**
- ii. **Create mood board, Fashion Illustration and reproduce of Graphic application with Image editing software Photoshop**
- iii. **Use vector based Adobe Illustrator software for Illustration and pattern development.**

3. 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	200
2	0	4	6	70	30	40	60	

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

Note: It is the responsibility of the institute heads that marks for **PA of theory & ESE and PA of practical** for each student are entered online into the GTU Portal at the end of each semester within the dates specified by GTU.

4. DETAILED COURSE CONTENT

Unit	Major Learning Outcomes	Topics and Sub-topics
Unit – I Introduction to Corel Draw software	1a. Explain use of basic Corel draw tools 1b. Create and manipulate objects using appropriate command 1c. Create special effects and Texts 1d. Create flat drawing of the Garments. 1e. Create multiple pattern & sample of fabric 1f. Texture map flat drawings related to Garment by applying sample of fabric 1g. Create Spec. sheet	1.1 General introduction to Corel Draw. 1.2 Objects- Creation and Manipulation 1.2.1 Drawing and Shaping Objects for flat drawing <ul style="list-style-type: none"> • Drawing and Shaping Tools • Using the Freehand Tool • Drawing Lines and Polylines • Drawing Freehand Polygons • Drawing Perfect Shapes • Reshaping Lines and Polylines • Drawing Curves • Reshaping Curves • Drawing Rectangles • Drawing Circles 1.2.2 Selecting & Manipulating Objects (Pattern creation etc.) <ul style="list-style-type: none"> • Selecting and Deselecting Objects • Moving Objects • Copying and Deleting Objects • Sizing Objects 1.2.3 Transforming Objects <ul style="list-style-type: none"> • Mirroring Objects • Rotating and Skewing Objects 1.2.4 Outlining & Filling Objects <ul style="list-style-type: none"> • Eyedropper and Paint bucket Tools • The Outline Tool • Choosing Outline Thickness • Choosing Outline Colors • Using Fill Tool • Uniform Fill, Fountain Fill, Pattern Fill • Interactive Mesh fill • Setting Outline and Fill Defaults <ul style="list-style-type: none"> • Power clip 1.2.5 Arranging Objects <ul style="list-style-type: none"> • Arranging Objects • Grouping and Ungrouping Objects • Using Snap To • Aligning Objects

Unit	Major Learning Outcomes	Topics and Sub-topics
		<ul style="list-style-type: none"> • Combining and Breaking Objects • Welding Objects • Using Intersection • Using Trim <p>1.3 Working with Special effects and Texts for spec. sheet</p> <ul style="list-style-type: none"> • The Text Tool • Creating Artistic Text • Editing Text • Formatting Text • Setting Text Options • Creating Paragraph Text • Choosing Paragraph Options • Setting Indents Using the Ruler • Importing Text • Using the Spell Checker <p>1.3 Using Symbols and Clipart</p> <ul style="list-style-type: none"> • Inserting Text Symbols • Adding Clipart • Modifying Clipart
<p>Unit– II</p> <p>Introduction to Photoshop software</p>	<p>2a. Explain Photoshop basics and interface and various tools available in Photoshop tool box like selection, Retouching, color adjustment</p> <p>2b. Use text tools</p> <p>2c. Use Layer management tools & Image transformation</p> <p>2d. Get Images into Photoshop</p> <p>2e. Reproduce the Fashion Illustration images in Photoshop</p> <p>2f. Work on Graphic design mood board by using collage concept</p>	<p>2.1 General introduction to Drawing editor.</p> <ul style="list-style-type: none"> • Create new file • Title bar • Menu bar • Image window • Status bar <p>2.2 Selection tools</p> <ul style="list-style-type: none"> • Rectangular marquee tool • Elliptical marquee tool • Single row marquee tool • Single column marquee tool • Move tool • Lasso tool • Polygonal lasso tool • Magnetic lasso tool • Magic wand tool • Crop tool <p>2.3 Retouching and color adjustment tools</p> <ul style="list-style-type: none"> • Healing brush tool • Spot healing brush tool • Patch tool • Colour replacement tool • Brush tool • Pencil tool • Clone stamp tool • Pattern stamp tool • History brush tool • Art history brush tool • Eraser tool

Unit	Major Learning Outcomes	Topics and Sub-topics
		<ul style="list-style-type: none"> • Back ground eraser tool • Magic eraser tool • Gradient tool • Paint bucket tool • Blur tool • Sharpen tool • Smudge tool • Dodge tool • Burn tool • Sponge tool 2.4 Path, selection and draw tools <ul style="list-style-type: none"> • Path selection tool • Direct selection tool • Horizontal and vertical type tool • Mask tool • Pen tool • Free form pen tool • Add anchor point tool • Delete anchor point tool • Convert point tool • Rectangle tool • Rounded rectangle tool • Ellipse tool • Polygon tool • Line tool • Type tool • Custom shape tool • Eye dropper tool • Colour sampler tool • Measure tool • Hand tool • Zoom tool • Changing back ground and foreground colour • Switch foreground and back ground colour 2.5 Photoshop menu Bar. <ul style="list-style-type: none"> • Saving the work-Scanning images into Photoshop • Duplicating the image • Undo-Redo • Step back forward-Step forward • Transform • Creating new pattern • Creating new brush • Selecting and deselecting • Setting border • Saving selection

Unit	Major Learning Outcomes	Topics and Sub-topics
		<ul style="list-style-type: none"> • Print preview • Print • Rulers • Snap • Filters • Colour balancing • Different colour modes <p>2.6 Working with text</p> <ul style="list-style-type: none"> • Orientation options • Font family option • Font style option • Font size option • Alignment option • Text colour option • Wrap text option <p>2.7 Layer Management and special effect</p> <ul style="list-style-type: none"> • Blending modes • Opacity settings • Lock transparent pixels • Lock position • Lock all • Layer visibility • Painting/masking indicator • Layer thumbnail • Add layer • Add mask • Create new layer • Delete layer <p>2.8 Photoshop palettes</p> <ul style="list-style-type: none"> • Colour palettes • Info palette • Option palettes • Swatches palettes • Style palettes • History palettes • Layer palettes
<p>Unit– III</p> <p>Introduction to Adobe Illustrator software.</p>	<p>3a. Explain Illustrator basics and interface</p> <p>3b. Use Illustrator Designs Garments with vector based clarity and comparative study with Corel draw.</p> <p>3c. Develop pattern & textures.</p> <p>3d. Create Fashion Illustration</p>	<p>3.1 Illustrator: Getting Started Introduction, Workspace & Navigation</p> <ul style="list-style-type: none"> • Using the Welcome Screen • Introducing Vector Based Paths • Working with Layers in Illustrator • Introducing Anchor Points • Creating a New Document • Repositioning and Adjusting View • Saving the Document • Using Color Settings • Configuring Palettes & Workspace Rulers • Rulers introduction

Unit	Major Learning Outcomes	Topics and Sub-topics
		<ul style="list-style-type: none"> • Grids Gradients & Gradient Mesh • Gradients introduction • Using the Gradient Tool • Applying a Gradient • Making Color Adjustments • Using the Eye Dropper Tool • Creating a Gradient Mesh • Expanding a Gradient Mesh • Modifying Gradient Mesh Colors • Modifying Gradient Mesh Points and Control Handles • Applying Other Gradient Mesh Color Change • Blending Objects into the Gradient Mesh 3.2 Illustrator Drawing, Editing and Symbol Tools Drawing with Lines and Shapes and Brushes Line • Line segment tool • Arc tool • Spiral tool • Rectangular grid tool • Polar grid tool • Moving lines Shapes • Rectangle tool • Rounded rectangle tool • Ellipse tool • Polygon tool • Star tool • Flare tool • Using the Flip Tool to Mirror Shapes • Combining Shapes The Pen Tools and Path Editing • Pen introduction • Convert anchor point • Additional and sub anchors • Joining anchors • Introducing Path Transformations • Drawing with the Pen Tool • Cutting, Extending, and Closing Paths The Pencil Tools • Basic pencil tool • Smooth tool • Eraser tool Drawing with Brushes • Paintbrush introduction • Calligraphic brush • Art brush • Pattern brush

Unit	Major Learning Outcomes	Topics and Sub-topics
		<ul style="list-style-type: none"> • Loading and saving brushes • Creating custom Brushes • Editing your art brush stroke • Converting Text To An Art Brush tool Cutting tools <ul style="list-style-type: none"> • The scissor tool • The knife tool Alignment and distribution <ul style="list-style-type: none"> • Re-positioning art • Object alignment Introduction of the drawing editor. Appearance and Styles <ul style="list-style-type: none"> • Styles introduction • Multiple strokes and fills • Converting effect to shape • Distort and transform Transparency and Masking <ul style="list-style-type: none"> • Object opacity • Creating an Opacity Mask • Transparency Palette • Assigning Different Opacity For Stroke And Fill Blending modes Blending <ul style="list-style-type: none"> • Blending introduction • Blending multiple objects • Simple Color Gradients • Creating Custom Gradients via Blending • Cropping Custom Gradient Blends • Customizing Blends for Specific Shapes • Creating Blends Between Two Shapes • Changing the Shape of Customized Blends

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

Unit No.	Unit Title	Teaching Hours	Distribution of Theory Marks			
			R Level	U Level	A Level	Total Marks
1.	Introduction to Corel Draw software	10	10	10	10	30
2.	Introduction to Photoshop software	10	5	5	10	20
3.	Introduction to Adobe Illustrator software	8	5	5	10	20
	Total	28	20	20	30	70

Legends: R = Remember; U = Understand; A = Apply and above levels (Bloom's revised taxonomy)

Note: This specification table shall be treated as only general guideline for students and teachers. The actual distribution of marks in the question paper may vary from above table.

6. SUGGESTED LIST OF EXERCISES/PRACTICAL

The exercises/practical should be properly designed and implemented with an attempt to develop different types of skills so that students are able to acquire above mentioned competencies. Following is the list of exercises/practical for guidance.

S. No.	Unit No.	Practical Exercise	Approx. Hours Required
1	01	Prepare motifs of any traditional Indian embroidery using Corel-draw software. (any 2)	06
2	01	Apply Garment on human figure using Corel-draw software. <ul style="list-style-type: none"> • Male (With Accessories) • Female (With Accessories and Jewelleries) • Child (With Accessories) 	08
3	01	Create spec. sheet by using Corel draw	06
4	02	Prepare a Mood board /Theme board by using Photoshop	09
5	02	Reproduce Fashion Illustration with 3 different types of fabric and texture in garment by using Photoshop (Using scan image of human body figure).	06
6	03	Preparation of eight head theory plan using given adobe Illustrator software	06
7	03	Prepare Flat Sketches of garments using Adobe Illustrator <ul style="list-style-type: none"> • T-shirt (with collar, pocket and sleeves)(any 1) • Skirt or Capri (any 1) • Trouser • Shirt • Any Dress 	15
Total			56

7. SUGGESTED LIST OF STUDENT ACTIVITIES

7.1 Students will prepare file/journal for the above mentioned practical exercise.

7.2 Students may be asked to collect pictures of prevailing fashion trend & may go for survey.

8. SUGGESTED LEARNING ACTIVITIES

A. List of Books

Sr.No.	Title of Book	Author	Publication
1.	Corel Draw	-	
2.	Adobe Photo shop 7 Class room Book	-	Training workbook from Adobe system Inc.
3.	Adobe Illustrator CS6 Classroom in a Book	-	Adobe Creative Team
4.	CorelDRAW® 9 Bible (Paperback)	Deborah Miller	-
5.	CorelDRAW 12	Steve Bain	-

B. List of Major Equipment/ Instrument:

--N.A.--

C. List of Software/Learning Websites

1. CorelDRAW Graphics Suite X3 Essential Training CD
2. CorelDRAW12 Personal Tutor
3. VTC - CorelDRAW 11 Training CD
4. http://www.insidegraphics.com/corel_draw/
5. www.tutorio.com/coreldraw-tutorials4.html
6. www.softwaretrainingtutorials.com/coreldraw
7. <http://www.clicknlearn.com/>

Corel Draw latest version

1. http://www.insidegraphics.com/corel_draw/
2. www.softwaretrainingtutorials.com/coreldraw
3. <http://www.clicknlearn.com/>

Photo Shop latest version

1. <http://www.crazyleafdesign.com/blog/40-awesome-photoshop-cs5-tutorials/>
2. <http://designrfix.com/resources/photoshop-cs5-tutorials-70-creative-tips>

Adobe Illustrator latest version

1. <http://apex.vtc.com/illustrator10.php>
2. <http://www.smashingmagazine.com/2007/02/03/adobe-illustratortutorials/>

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

- **Prof. I. J. Dave**, HOD, Department of CACDDM, Sir. BPTI, Bhavnagar
- **Prof.K.P.Shah**, I/c HOD, Department of CACDDM, C.U SHAH, Polytechnic, Surendranagar
- **Prof. Beena Sujit** , Lecturer, Department of CACDDM, Tolani foundation, Adipur
- **Prof. S.S.Bhambhaniya**, Lecturer, Department of CACDDM, Sir. BPTI, Bhavnagar

Co-ordinator and Faculty Members from NIFT-Gandhinagar

- **Prof. Pavan Godiwala**, Project Coordinator
- **Dr. Amar Tewari**, Associate Professor, Fashion Technology

Coordinator and Faculty Members from NITTTR, Bhopal

- **Prof. (Mrs.) Chanchal Mehra**, Associate Professor, Department of Vocational Education and Entrepreneurship Development.