



**GOVERNMENT OF TAMILNADU**  
**DIRECTORATE OF TECHNICAL EDUCATION, CHENNAI**

**STATE PROJECT COORDINATION UNIT**  
*(Established under Canada India Institutional Cooperation Project)*  
**CURRICULUM**

Course Name	<b>Textile CAD</b>
Course Code	TEX/2020/007
Course Duration	40 Hours
Minimum Eligibility Criteria and Pre-requisites (if any)	10 <sup>th</sup> /+2/Diploma/Graduates
Course Objectives	Training module has been designed to provide the participants <ul style="list-style-type: none"> <li>• Understanding the basics of Textile CAD</li> <li>• Understanding Jacquard and Dobby design</li> <li>• Learning of Printing, Mapping software and Photoshop</li> </ul>
Course Outcomes	At the end of training, the participants will be able to <ul style="list-style-type: none"> <li>• Create designs using CAD software</li> <li>• Know how to make calculation in Dobby software</li> <li>• Know how to extract design from a given Jacquard and Dobby fabric</li> </ul>
Expected Job Roles	Textile Designer

TEACHING AND SCHEME OF EXAMINATION						
Course Code	Course Name	Hours		Assessment Marks		Duration of Examination
				Min	Max	
TEX/2020/007	Textile CAD	Theory	14	10	20	3 Hours
		Practical	26	40	80	
		Total	40	50	100	

## TEX/2020/007- TEXTILE CAD

### DETAILED SYLLABUS

Unit No	Modules	No. of Hours	
		Theory	Practical
I	Dobby designs	12 Hours	
1.1	Introduction of Textile CAD software –Application and uses, Types of software - job opportunities in Textile CAD	4	8
1.2	Creating a simple dobby striped and checked design using Textile CAD dobby software with fabric simulation by learning step by step procedure		
1.3	Analyzing a woven stripe fabric and producing fabric simulation in textile CAD dobby software		
1.4	Analyzing a woven checked fabric and producing fabric simulation in textile CAD dobby software		
II	Jacquard designs	12 Hours	
2.1	Creation of simple jacquard design by learning step by step commands using Textile CAD software	4	8
2.2	Creation of jacquard design for different loom parameters		
2.3	Analyzing a jacquard woven fabric and producing fabric simulation in textile CAD jacquard software. Practicing various print options for design, graph information and fabric simulation with the knowledge of different file formats in textile CAD software		
III	Printing Software	8 Hours	
3.1	Practicing calculation sheet for yarn requirement in dobby software	3	5
3.2	Learning step by step commands of printing software		
3.3	Production of colour separation for multi colour design in printing software		
3.4	Analyze the given printed fabric and produce colour separation in printing software		
IV	3D Texture Mapping CAD software	8 Hours	
4.1	Learning step by step command of 3D texture mapping software and show garment/made-ups simulation in the computer	3	5
4.2	Practicing simple drawing and editing tools in Adobe Photo shop/ Paint software		
4.3	Scanning a design and develop it on Adobe Photoshop suitable to be woven on jacquard weaving		
Total Theory and Practical Hours		14	26
Total hours		40	

## HARDWARE REQUIREMENT

S.NO	LIST OF TOOLS /EQUIPMENTS
1	Personal Computer/Laptop

## SOFTWARE REQUIREMENT

Textile CAD Software
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## REFERENCE WEBSITE / BOOKS

1. [www.fibre2fashion.com](http://www.fibre2fashion.com)
2. [www.tenlinks.com](http://www.tenlinks.com)
3. [www.textronic.com](http://www.textronic.com)
4. [clothingindustry.blogspot.com](http://clothingindustry.blogspot.com)

S.NO	NAME OF THE BOOK	AUTHOR	PUBLISHER
1	CAD in Clothing and Textiles	Stephen Nicholas Gray	Design Council
2	Soft Computing in Textile Engineering	AbhijitMajumdar	Woodhead Publishing Series in Textile

## ASSESSMENT AND CERTIFICATION

S.No	Criteria for assessment
1.	A trainee will be assessed based on the performance in End Examination for Theory and Practical conducted internally in the Project Polytechnic College for a duration of 3 hours
2.	A trainee must have 75% of attendance to appear for End examination in Theory and Practical.
3.	The assessment for theory part will be based on the marks scored in the end examination on the knowledge bank of questions (1 word/objective type questions)
4.	The assessment for practical part will be based on the marks scored in the end examination conducted by the Project Polytechnic and assessed by the Examiners approved by Strategic Plan Implementation Committee (SPIC) of the project polytechnic.
5.	The passing criteria for successful completion of training is every trainee should score 50% of marks in theory and practical examination.
6.	On successful completion of training , Certificate will be issued to the participants by the Directorate of Technical Education through the Project Polytechnics.

## END EXAMINATION

### ALLOCATION OF MARKS

S.NO	DESCRIPTION	Max.Marks
1.	Theory Examination	20
2.	Practical Examination	
	a) Experiment	30
	b) Write up	20
	c)Result	10
	d)Record	20
Total Marks		100

## **THEORY MODEL QUESTION PAPER**

**TEX/2020/007 - TEXTILE CAD**

(Maximum Marks : 20 )

(N.B: Answer any twenty questions)

20 x 1 = 20 Marks

1. What is the use of textile CAD software?
2. Write the different types of textile CAD software name.
3. What is mean by fabric simulation?
4. How will you analyze the woven fabric?
5. What is meant by dobby?
6. What is meant by jacquard?
7. What software is used for creating dobby design?
8. What software is used for creating Jacquard design?
9. What are the editing tools available in adobe photo shop/ paint software?
10. What are the different types of Jacquard?
11. Write the step required for creating dobby design.
12. Write the step required for creating Jacquard design.
13. What is calculation sheet?
14. What is the yarn requirements needed for calculation sheet in dobby software?
15. How will you separate multi colour design in printing software?
16. What is the use of 3D texture mapping software?
17. How will you scan the design?
18. Draw your own stripe design.
19. Draw your own check design.
20. What are the commands used for 3D texture mapping software?
21. What are the job opportunities available in textile CAD?
22. What is mean by printed fabric?
23. What software is used for creating 3D texture fabric?
24. Write some tools name in dobby software.
25. Write some tools name in Jacquard software.