



GOVERNMENT OF TAMILNADU
DIRECTORATE OF TECHNICAL EDUCATION, CHENNAI

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

CURRICULUM

Course Name	Advanced Spinning
Course Code	TEX/2020/002
Course Duration	50 Hours
Minimum Eligibility Criteria and Pre-requisites(if any)	10 th /+2/Diploma/Graduates
Course Objectives	Training module has been designed to provide the participants <ul style="list-style-type: none"> • Understanding of modern blow room and latest cards • Understanding of compact spinning • Understanding of Auto coner
Course Outcomes	At the end of training, the participants will be able to <ul style="list-style-type: none"> • Gain knowledge of latest machinery and working • Know how to process the fibre to yarn • Know about compact spinning
Expected Job Roles	Assistant to spinning master

TEACHING AND SCHEME OF EXAMINATION						
Course Code	Course Name	Hours		Assessment Marks		Duration of Examination
				Min	Max	
TEX/2020/002	Advanced Spinning	Theory	16	10	20	3 Hours
		Practical	34	40	80	
		Total	50	50	100	

TEX/2020/002–ADVANCED SPINNING

DETAILED SYLLABUS

Unit No.	Modules	No. of Hours	
		Theory	Practical
I	Latest Development in Blow Room	15 Hours	
1.1	Rieter & Trutzschler Latest blow room line – Bale Opener Unifloc A11, Pre Cleaner UNI clean B12, UNIMIX B75,UNI Store A78, Condenser (features and function)	5	10
1.2	Salient features of modern blow room - Study of pneumatic conveyers, condensers, distributors, filters, Automatic Waste Evacuation Systems (AWES) and Automatic waste baling system, metal detectors, Fire detectors and diverters		
1.3	Blow room sequences employed using latest openers and beaters suitable for fine, medium and coarse cotton (flow chart only)		
II	Latest Development in Carding	10 Hours	
2.1	Modern development in different regions – licker-in, flats, cylinder	3	7
2.2	auto leveller - Open and closed loop systems- Dust extraction system in card - Automatic Waste Evacuation System (AWES) – Salient features of modern carding machine		
2.3	Latest cards - LC 300A, TC03 card & other cards (function)		
III	Latest Development in Drawing and Ring Frame	10 Hours	
3.1	Auto leveller Drawing – Features & Functions	3	7
3.2	Ring Frame - Special attachments such as spindle eye, auto doffing, Link Coner. Brief study of Pneumafil and balloon control rings.		
IV	Compact spinning	15 Hours	
4.1	compact spinning -Spinning triangle formation, working & Advantages,	5	10
4.2	Rotor Spinning – Objectives, Working Procedure & Advantages		
4.3	comparison of compact yarn with ring spun & Rotor spun yarn		
4.4	Propeller type precision winder, schlafhorst auto coner 338 and savio auto coner - working, salient features in detail		
	Total Theory and Practical Hours	16	34
	Total hours	50	

HARDWARE REQUIREMENT

S.NO	LIST OF TOOLS /EQUIPMENTS
1.	Rieter Blow Room Line
2.	UNIMIX B75
3.	UNI Store A78
4.	Pre Cleaner UNI clean B12
5.	Rotor Spinning Machine

SOFTWARE REQUIREMENT

Nil

REFERENCE WEBSITE / BOOKS

1. www.fibre2fashion.com
2. www.nptel.ac.in
3. www.textilelearner.blogspot.com

S.NO	NAME OF THE BOOK	AUTHOR	PUBLISHER
1	Cotton Spinning	Taggart W.S	S.S. Shroff
2	Cotton Ring Spinning	Merrill G.R	Gilbert R Menill
3	New Spinning system	Gowde R.V.M	NCUTE
4	Advance in Yarn Spinning Technology	C.A. Lawrance	The Textile Institute

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)Write up/Diagram	15
	b)Experiment	35
	c)Result	10
	d)Record	20
Total Marks		100

THEORY MODEL QUESTION PAPER

TEX/2020/002 - ADVANCED SPINNING

(Maximum Marks : 20)

(N.B: Answer any twenty questions)

20 x 1 = 20 Marks

1. Write three salient features of modern blowroom line.
2. What is the role of condensers in spinning?
3. What is the role of distributors in spinning?
4. What is the role of filter in spinning?
5. What is AWES?
6. What is the role of metal detectors in blowroom?
7. What is the role of fire detectors and diverters in blowroom?
8. Name any two latest openers.
9. Draw the blowroom flow chart for fine cotton fibre.
10. Draw the blowroom flow chart for medium cotton fibre.
11. Draw the blowroom flow chart for coarse cotton fibre.
12. What is the use of auto leveler in carding?
13. What is the modern development is licker-in region in carding machine?
14. What is the modern development is cylinder region in carding machine?
15. What is open loop system?
16. What is close loop system?
17. What is the use of dust extraction system?
18. Write three salient features of modern carding machine
19. What is the function of LC 300A card?
20. What is the function of TC03 card?
21. What is the use of balloon control ring?
22. What is compact spinning?
23. What is rotor spinning?
24. What is called as spinning triangle formation?
25. What are the advantages of rotor spinning?