

Syllabus For_Jute cop winder Operator

Course Name	Jute Cop Winder Operator
Sector	Textiles & Handlooms
Course Code	TXT/2024/JCWO/395
Sub-sector	Jute
Level	2.5
Occupation	Jute cop winder Operator
Job Description	A Jute cop winder operator will operate the Jute Cop Winding Machine efficiently to maintain the productivity and quality of the Cops (Jute Weft Yarn) . He should also have knowledge about Winding process flow & quality assurance in jute industry.
Course Duration	Total Duration 270 Hours (T- 60, P- 120 , OJT-60 and ES-30)
Trainees' Entry Qualification	<ul style="list-style-type: none"> • 9th Grade pass • 8th Grade pass and pursuing continuous • Schooling • 8th grade pass with 1 year relevant experience • 5th grade pass with 4 year relevant experience • Previous relevant qualification of NSQF level 2 6 months of relevant experience • Previous relevant qualification of NSQF level 1 with 1.5 year relevant experience
Trainers Qualification	<p>B. Tech in Textile Technology / Textile Engineering from AICTE/UGC recognized Engineering College/ university with one-year experience in the relevant field.</p> <p>OR</p> <p>03 years Diploma in Jute Technology / Textile Technology/ Textile Engineering from AICTE recognized College / Institute with two years experience in the relevant field.</p>

Structure of Course:

Module No.	Module name	Outcome	Theory (Hrs)	Practical (Hrs)	OJT (Hrs.)	Total (Hrs) [Multiple of 30]
1	Roles & Responsibilities	Demonstrate Jute weft winding process along with identify the roles & responsibility	10	20		30

Module No.	Module name	Outcome	Theory (Hrs)	Practical (Hrs)	OJT (Hrs.)	Total (Hrs) [Multiple of 30]
2	Winding operation	Prepare the Jute Cop Winding frame and Execute weft winding operation	20	40		60
3	Process control and doffing	Maintain process parameters of cop winding and perform doffing operation.	10	20		30
4	Maintain occupational safety hazards at work place	Apply safe working practices at work place. TXT/3723/OC4	10	20		30
5	Workplace communication strategies	Demonstrate comprehensive effective workplace communication strategies. TXT/3723/OC5	10	20		30
6	OJT	Work in real job situation with special emphasis on basic safety and hazards in this domain (OJT).	-	-	60	60
7	Employability Skills	As per guided curriculum	30	-		30
TOTAL			90	120	60	270

SYLLABUS:**Module No. 1: Roles & Responsibilities**

Outcome : Demonstrate Jute weft winding process along with identify the roles & responsibility

Theory Content:

- Objectives of Jute weft winding.
- Process sequence of Jute Cop Winding.
- Basic Jute Cop Winding terms such as **creeling, knotting, thread tension, sizing , slubs, yarn count etc.**
- Roles and responsibility of the Jute cop winder Operator.
- Sequences of work in a Jute Cop Winding machine.

Practical Content:

- Demonstrate Jute Cop Winding operation.
- Drawing of the yarn path in weft winder.
- Execute the roles and responsibility of the Jute cop winder Operative.
- Prepare necessary operational tools for winding.
- Feed material checking.
- Meet production & quality requirements.
- Cop management according to count & color.
- Checking of machine breakdowns, mechanical fault of the winding machine.
- Faults identification and produce remedies.
- Ensure maximum efficiency and productivity of the winding machines.
- Preparation of shift Handing over/taking over.

Classroom Aids:

Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook, Pen pencil.

Tools & Equipment needed : Jute Cop Winding machine, Apron, head cap, nose mask, earplug, shoe, Drawing hook, Scissors, Thrumbs, Work method posters, pictures, videos. Pen, Pencil, Marker etc.

Module No. 2: Winding operation

Outcome: Prepare the Jute Cop Winding frame and Execute weft winding operation.

Theory Content:

- Description of different components of a Jute cop winder.
- Functions of the parts of Jute cop winder.
- Process flow of jute weft winding.
- Various processing parameters and their settings.
- Process parameters effecting performance of Jute cop winder such as **yarn tension, bobbin speed, spindle speed, winding angle, traverse** etc.
- Importance of yarn quality.
- Different material handling equipment and their use.

Practical Content:

- Identify different components of a Jute cop winder and demonstration of their functions.
- Demonstrate functions of **Motor, motor shaft, worm wheel, Sensor, stop motion, spindle** etc. of the Jute Cop Winding machine.
- Placing of bobbins onto spindles.
- Checking of bobbin placement and right amount of tension.
- Correct use of thread guide.
- Process of creeling of bobbins.
- Replacing the empty bobbins with the full ones and pick up the empty bobbins.
- Apply joining or knotting the yarn during cop change and during yarn breakage.
- Remove defective bobbins, visible yarn faults like thick place, slubs etc.

- Proper material handling of bobbins, cops and empty bobbins.

Classroom Aids:

Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook, Pen pencil.

Tools & Equipment needed: Jute Cop Winding machine, Apron, head cap, nose mask, earplug, shoe, Drawing hook, Scissors, Thrumbs, Work method posters, pictures, videos. Pen, Pencil, Marker etc.

Module No. 3: Process control and doffing

Outcome : Maintain process parameters of cop winding and perform doffing operation.

Theory Content:

- Importance of process control and quality affecting parameters.
- Types of jute yarn, their count, defects in jute yarn and reasons for jute yarn breakage.
- Standard Operating Procedures (SOP) of weighing the cop, restarting the machine after doffing.
- Procedures for controlling the quality of feed material and wastage of cop winding for jute yarns.
- Knowledge of grist of yarn (lbs per 14400 yds).
- Significance of doffing.

Practical Content:

- Checking & adjusting the diameter/ length of cops.
- Check the levers, nuts of machine in case of defects and inform maintenance department.
- Doffing the cops - Replacing full cops with the empty ones.
- Identify the defective cops and inform the supervisor.
- Ensure that uniform bobbin weight is maintained in winding machine.
- Following the right piecing technique in winding.
- Check frequently the quality of cop maintaining quality standards.
- Keeping the winding tension in all cops same and uniform throughout winding operation.

Classroom Aids:

Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook, Pen pencil.

Tools & Equipment needed: Jute Cop Winding machine, Apron, head cap, nose mask, earplug, shoe, Drawing hook, Scissors, Thrumbs, Work method posters, pictures, videos. Pen, Pencil, Marker etc.

Module No. 4: Maintain occupational safety hazards at work place

Outcome : Apply safe working practices at work place

Theory Content:

- Significance of routine cleaning activities of machine maintenance
- Identifying potential hazards associated with a lack of regular cleaning on tools, machines and work areas.
- Types of cleaning agents and tools
- Introduction of Occupational safety
- Overview of relevant occupational safety regulations and standards
- The responsibility of technician in compliance with safety guidelines
- Identification of Occupational safety hazards
- Identification of common hazards in the machine

- Describe types of hazards
- Application of PPE (Personal protective equipment)
- Selection and use of PPE
- Safe work practices with electrical systems
- Applications of electrical tools
- Describe the importance of immediate response during emergencies
- Fire prevention measures and firefighting equipment's

Practical Content:

- Demonstration of cleaning techniques
- Create a check list for routine cleaning tasks and their frequency
- Demonstrate the use protective clothing/equipment for specific tasks and work conditions
- Identify PPE application and its maintenance procedure
- Demonstrate the correct use of safety glasses, gloves and hearing protection
- Simulate an emergency scenario require the use of PPE
- Identify electrical hazards (power supply and points, loose and naked cables and wires, equipment malfunctions, etc.)
- Apply electrical precautions like insulated clothing, adequate equipment insulation, use dry work area etc.
- Identify safety features and emergency stop locations
- Present proper method of rescue techniques applied during fire hazard and other accidental situation.

Classroom Aids:

Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook

Tools, Equipment and Other Requirements:

Protective Gloves, Head Caps, Safety Goggles, Safety Boots, Mouth Masks, coats and aprons; ear plugs or muffs; eye and facial protection; head-wear; lifting assistance;

Module No. 5: Workplace communication strategies

Outcome : Demonstrate a comprehensive effective workplace communication strategies

Theory Content:

- Explain purpose or common goals of each member in a group of willing to work toward. Members feel that they played a role in determining these goals and the methods used to achieve them.
- Describe the task between each members in group, but also with its own processes and operating procedures.
- Maintain Communication is clear and direct manner.
- Interpret machine performance data and metrics
- Explain key indicators of machine health and efficiency
- Establish clear reporting procedures for machine running and performance
- Generate machine performance reports and sharing them with the team
- Discuss supervision policy as a leader who can bring the group together and build an environment in which the team can work together effectively.

Practical Content:

Demonstrate the purpose or common goals of each member in a group of willing to work toward. Members feel that they played a role in determining these goals and the methods used to achieve them.

- Identify the task between each members in group, but also with its own processes and operating procedures. The group periodically evaluates its performance.
- Exhibit the accurately receive information and instructions from the supervisor and fellow workers, getting clarification where required.
- Apply good communication environmental practices in workplace.
- Simulate/role play of ethical dilemmas in the workplace
- Illustrate organizational policies and procedures

Classroom Aids:

Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide, Participant's Handbook

Tools, Equipment and Other Requirements:

Protective Gloves, Head Caps, Aprons, Safety Goggles, Safety Boots, Mouth Masks, Sanitizer, Food Safety Manual, communication tools, communication manual, On-task Communication, Instant Chats , Video Conferencing, Voice Calls, Audio Recording, Discussion Forums, Instant File Sharing, External Communication

Module No. 6: OJT

Outcome: Work in real job situation with special emphasis on basic safety and hazards in this domain

Practical Content:

Assessor will check report prepared for this component of Practical training of the course and assess whether competency has been developed to work in the real job situation with special emphasis on basic safety and hazards in this domain. (The trainee is expected to undertake work in actual workplace under any supervisor / contractor for **60 Hours.**)

Module No. 7: : Employability Skills (30 Hrs)**Introduction to Employability Skills**

Duration: 1 Hour

After completing this programme, participants will be able to:

1. Discuss the Employability Skills required for jobs in various industries
2. List different learning and employability related GOI and private portals and their usage

Constitutional values - Citizenship

Duration: 1 Hour

3. Explain the constitutional values, including civic rights and duties, citizenship, responsibility towards society and personal values and ethics such as honesty, integrity, caring and respecting others that are required to become a responsible citizen
4. Show how to practice different environmentally sustainable practices.

Becoming a Professional in the 21st Century

Duration: 1.5 Hours

5. Discuss importance of relevant 21st century skills.
6. Exhibit 21st century skills like Self-Awareness, Behavior Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn etc. in personal or professional life.
7. Describe the benefits of continuous learning.

Basic English Skills

Duration: 5 Hours

8. Show how to use basic English sentences for everyday conversation in different contexts, in person and over the telephone
9. Read and interpret text written in basic English
10. Write a short note/paragraph / letter/e -mail using basic English

Career Development & Goal Setting

Duration: 1.5 Hours

11. Create a career development plan with well-defined short- and long-term goals

Communication Skills

Duration: 2 Hours

12. Demonstrate how to communicate effectively using verbal and nonverbal communication etiquette.
13. Explain the importance of active listening for effective communication
14. Discuss the significance of working collaboratively with others in a team

Diversity & Inclusion

Duration: 1 Hour

15. Demonstrate how to behave, communicate, and conduct oneself appropriately with all genders and PwD
16. Discuss the significance of escalating sexual harassment issues as per POSH act.

Financial and Legal Literacy

Duration: 2.5 Hours

17. Outline the importance of selecting the right financial institution, product, and service
18. Demonstrate how to carry out offline and online financial transactions, safely and securely
19. List the common components of salary and compute income, expenditure, taxes, investments etc.
20. Discuss the legal rights, laws, and aids

Essential Digital Skills

Duration: 5 Hours

21. Describe the role of digital technology in today's life
22. Demonstrate how to operate digital devices and use the associated applications and features, safely and securely
23. Discuss the significance of displaying responsible online behavior while browsing, using various social media platforms, e-mails, etc., safely and securely
24. Create sample word documents, excel sheets and presentations using basic features
25. utilize virtual collaboration tools to work effectively

Entrepreneurship

Duration: 3 Hours

26. Explain the types of entrepreneurship and enterprises
27. Discuss how to identify opportunities for potential business, sources of funding and associated financial and legal risks with its mitigation plan

28. Describe the 4Ps of Marketing-Product, Price, Place and Promotion and apply them as per requirement
29. Create a sample business plan, for the selected business opportunity

Customer Service

Duration: 2 Hours

30. Describe the significance of analyzing different types and needs of customers
31. Explain the significance of identifying customer needs and responding to them in a professional manner.
32. Discuss the significance of maintaining hygiene and dressing appropriately

Getting Ready for apprenticeship & Jobs

Duration: 4.5 Hours

33. Create a professional Curriculum Vitae (CV)
34. Use various offline and online job search sources such as employment exchanges, recruitment agencies, and job portals respectively
35. Discuss the significance of maintaining hygiene and confidence during an interview
36. Perform a mock interview
37. List the steps for searching and registering for apprenticeship opportunities

Learning Outcome – Assessment Criteria

Module No.	Outcome	Assessment Criteria
1	Demonstrate Jute weft winding process along with identify the roles & responsibility	<p>After completion of this module students will be able to:</p> <ol style="list-style-type: none"> 1.1. Demonstrate the Principles of Jute Cop Winding process. 1.2. Execute Process sequence of Jute Cop Winding. 1.3. Explain terms such as creeling, knotting, thread tension, sizing , slubs, yarn count etc. 1.4. Identify the roles and responsibility of the Jute cop winder Operator. 1.5. Prepare necessary operational tools for winding. 1.6. Check the feed material. 1.7. Meet production & quality requirements. 1.8. Explain the count of yarn produced, colour codes followed in the cop winding. 1.9. Check for machine breakdowns, mechanical fault of the winding machine and produce remedies. 1.10. Ensure maximum efficiency and productivity of the winding machine.
2	Prepare the Jute Cop Winding frame and Execute weft winding operation	<p>After completion of this module students will be able to:</p> <ol style="list-style-type: none"> 2.1. Demonstrate different components of a Jute Cop Winding machine. 2.2. Explain Functions of the parts of Jute Cop Winding machine. 2.3. Execute Process flow of Jute Cop Winding.

Module No.	Outcome	Assessment Criteria
		2.4. Adjust various processing parameters and their settings. 2.5. Control process parameters such as yarn tension, bobbin speed, spindle speed, winding angle, traverse etc. 2.6. Demonstrate functions of Motor, motor shaft, worm wheel, Sensor, stop motion, spindle etc. 2.7. Place bobbins onto spindles correctly. 2.8. Check bobbin placement and adjust right amount of tension. 2.9. Pull yarn from bobbin through thread guide properly. 2.10. Execute creeling of bobbins. 2.11. Replace the empty bobbins with the full ones and pick up the empty bobbins. 2.12. Join or knot the yarn during cop change and during yarn breakage. 2.13. Remove defective bobbins, visible yarn faults like thick place, slubs etc.
3	Maintain process parameters of cop winding and perform doffing operation.	After completion of this module students will be able to: 3.1. Explain the importance of process control and quality affecting parameters. 3.2. Demonstrate Types of jute yarn, their count, defects in jute yarn and reasons for jute yarn breakage. 3.3. Follow Standard Operating Procedures (SOP) of weighing the cop, restarting the machine after doffing. 3.4. Check & adjust the diameter/ length of cops. 3.5. Check the levers, nuts of machine in case of defects and inform maintenance department. 3.6. Doff the cops – Replace full cops with the empty ones. 3.7. Identify the defective cops and inform the supervisor. 3.8. Ensure that uniform bobbin weight is maintained in winding machine. 3.9. Follow the right piecing technique in winding. 3.10. Check frequently the quality of cop maintaining quality standards. 3.11. Keep the winding tension in all cops same and uniform throughout winding operation.
4	Apply safe working practices at work place	After completion of this module students will be able to: 4.1 Demonstrate of effective cleaning techniques 4.2 Execute machine specific cleaning procedures

Module No.	Outcome	Assessment Criteria
		4.3 Create a checklist for routine cleaning tasks 4.4 Demonstrate the use of protective clothing/equipment for the specific tasks and work conditions 4.5 Describe the importance of PPE kit 4.6 Demonstrate the correct use of safety gear. 4.7 Identify electrical hazards, including power supply issues, loose cables and equipment malfunctioning 4.8 Detect health hazards (such as untreated injuries and contagious illness/ zoonotic diseases). 4.9 Maintain Fire safety and prevention of fire hazards in workplace [fire extinguishers, fire Alarm, fire exits] 4.10 Ensure use of general health and safety equipment and materials in the workplace first aid equipment
5	Demonstrate a comprehensive effective workplace communication strategies	After completion of this module students will be able to: 5.1 Demonstrate the purpose of each team member and their involvement in determining goals 5.2 Identify tasks between team members and their own processes 5.3 Apply effective communication strategies in a practical context 5.4 Exhibit enterprise ethical standards in workplace interactions 5.5 Apply good communication environmental practices in practical workplace 5.6 Simulate/Role play ethical dilemmas in the workplace 5.7 Illustrate familiarity with relevant industry standards and regulations. 5.8 Explain the organizational policies and procedures
6	OJT	Work in real job situation with special emphasis on basic safety and hazards in this domain (OJT).
7	Employability Skill	As per guided curriculum

List of Tools, Equipment & materials needed for 30 Trainees (Practical)

Sl No	Items Name	Specification	Qty
1	Jute cop winder machine		1
2	Yarn package		As required
3	Drawing hook		5
4	Scissors		5
5	Thrumbs		As required
6	Apron		30
7	Head cap		30
8	Shoe		30
9	Hand gloves		30
10	Nose mask		30
11	Earplug		30
12	Meterage devices		5
13	Measuring scales, Inch Tape		5
14	Fire extinguishers		2
15	Fire Alarm		2
16	First aid equipment		2

Marks Distribution

Outcome	Outcome Code	Total Th marks	Total Ph marks	Total OJT marks
Demonstrate Jute weft winding process along with identify the roles & responsibility	TXT/3725/OC1	30	120	0
Prepare the Jute Cop Winding frame and Execute weft winding operation	TXT/3725/OC2	40	170	0
Maintain process parameters of cop winding and perform doffing operation.	TXT/3725/OC3	20	120	0
Apply safe working practices at work place.	TXT/3723/OC4	30	120	0
Demonstrate comprehensive effective workplace communication strategies.	TXT/3723/OC5	30	120	0
Work in real job situation with special emphasis on basic safety and hazards in this domain (OJT).	TXT/3725/OC4	0	0	150
Employability Skills – 30 Hrs	DGT/VSQ/N0101	50	0	0