

Syllabus For Jute Spinning Jobber

Course Name	Jute Spinning Jobber
Course Code	TXT/2024/JUSJ/394
Sector	Textiles & Handlooms
Sub-sector	Jute Spinning
Level	3
Occupation	Jute Spinning Jobber
Job Description	A Jute Spinning Jobber will assist the supervisor and guide the workers ensuring smooth running of Spinning and Winding Machines in a Jute mill. He should also have knowledge about Spinning, Winding & quality assurance in jute industry.
Course Duration	Total Duration 390 Hours (T- 90, P- 180 , OJT-60 and ES-60)
Trainees' Entry Qualification	Grade 10 OR Grade 8 with two year of (NTC/ NAC) after 8th OR Grade 8 pass and pursuing continuous schooling in regular school with vocational subject OR 8th grade pass with 2 yrs relevant experience OR Previous relevant Qualification of NSQF Level 2 with one year experience OR Previous relevant Qualification of NSQF Level 2.5 with 6 months experience
Trainers Qualification	B. Tech in Textile Technology / Textile Engineering from AICTE/UGC recognized Engineering College/ university with one-year experience in the relevant field. OR 03 years Diploma in Jute Technology / Textile Technology/ Textile Engineering from AICTE recognized College / Institute with two years experience in the relevant field.

Structure of Course:

Module No.	Module name	Outcome	Theory (Hrs)	Practical (Hrs)	OJT (Hrs.)	Total (Hrs) [Multiple of 30]
1	Roles & Responsibilities	Demonstrate Jute Spinning and identify the roles & responsibilities of the jobber.	20	40		60

Module No.	Module name	Outcome	Theory (Hrs)	Practical (Hrs)	OJT (Hrs.)	Total (Hrs) [Multiple of 30]
2	Machine operation and Maintenance	Prepare the Jute spinning frame & winding machine for operation ensuring proper maintenance	30	60		90
3	Quality assessment and Process control	Maintain quality in Jute spinning & winding and Process control	20	40		60
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	60	-	-	60
TOTAL			150	180	60	390

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

Outcome : Demonstrate Jute Spinning and identify the roles & responsibilities of the jobber.

Theory Content:

- Objectives of Jute spinning.
- Jute Spinning Industry and its significance in domestic and global markets.
- Principles of jute spinning & winding.
- Basic jute spinning terms such as **Batching, Piecing up, Softening, Pilling, Carding, Drawing, Jute Spinning etc.**
- Brief on various machines of a jute factory.
- Roles and responsibility of the Jute Spinning Jobber .
- Sequences of work in Jute Spinning & winding machines.

Practical Content:

- Demonstrate Jute Spinning & winding operation.

- Drawing of the process diagram.
- Execute the roles and responsibility of the Jute Spinning Jobber.
- Perform proper man-machine allocation after consulting with supervisor.
- Prepare necessary operational tools for spinning & winding.
- Inspection of spinning department and feed material checking.
- Checking of machine breakdowns, mechanical fault of the spinning and winding machine for deciding about necessary action.
- Allocate the spinning operators to different machines as per industry norm.
- Maintain man power namely sliver feeder, bobbin cleaner, mazdoors in the department.
- Ensure maximum efficiency and productivity of the spinning and winding machinery of the department.
- Handing over/taking over documentation preparation.

Classroom Aids:

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

Tools & Equipment needed : Jute Ring Spinning Frame, Jute 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: Machine operation and Maintenance

Outcome: Prepare the Jute spinning frame & winding machine for operation ensuring proper maintenance.

Theory Content:

- Description of different components of a Jute Spinning machine.
- Functions of the parts of Jute Spinning machine .
- Process flow of jute spinning & winding.
- Various processing parameters and their settings.
- Process parameters effecting performance of Jute Spinning machine such as **Surface speed of gill pins, drawing roller, delivery roller, Pitch, spindle speed, top roller pressure** etc.
- Material handling equipment and their importance.

Practical Content:

- Identify different components of a Jute Spinning machine and demonstration of their functions.
- Demonstrate functions of **Retaining roller, Intermediate roller, Drawing roller, Tin cylinder, Flyer, Bobbin rail etc.** of the Jute Spinning machine.
- Setting of proper drafting zone of different pitch jute spinning frame for processing coarse, medium and fine count yarn.
- Proper setting of draft change pinion, twist pinion, felt bob position etc. for different count of yarn.
- Keep fault free winding packages ready.
- Instructions to operator to use proper color code and colored yarns.

- Inspection of proper setting of building zone, grist of yarn, health of spinning and winding machines.
- Perform maintenance activities for material handling equipment.
- Carefully handle raw jute, slivers of jute, jute yarns, all other tools.
- Maintain tools and equipment being used for jute processing and perform shift-wise cleaning.
- Use of appropriate cleaning equipment like knife, brooms, pliers, screw driver etc.

Classroom Aids:

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

Tools & Equipment needed: Jute Ring Spinning Frame, Jute 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: Quality assessment and Process control

Outcome : Maintain quality in Jute spinning & winding and Process control.

Theory Content:

- Knowledge about the importance of maintenance and quality affecting parameters.
- Standard Operating Procedures (SOP) and concern regulations.
- Quality systems and other processes practiced in the jute mill.
- Knowledge on quality specification of drawing sliver / jute yarn quality/ quality of packages.
- Procedures for controlling the quality of feed material and wastage of cop and spool winding for jute yarns.
- Knowledge of grist of yarn (lbs per 14400 yds)

Practical Content:

- Keep the machines well maintained, tuned, cleaned and lubricated properly.
- Record shift-wise wastage and report to supervisor if something goes out of control.
- Follow the instruction of shift supervisor for changing any quality of jute yarn / machine setting / process parameter.
- Find out the major and minor causes of low production and execute remedies with the help of supervisor.
- Ensure the removal of sliver lapping is done by the operator.
- Checking of proper number of doubling is maintained by the operator.
- Inspection of all indicator and stop motions, their working condition.
- Checking the jute sliver quality and jute yarn quality according to desired quality standards.
- Ensure that uniform bobbin weight is maintained in spinning machine.
- Check and ask the maintenance department to rectify if there is any defect.
- Ensure that operator follows the right piecing technique in spinning.
- Control minimum sliver/yarn wastage during piecing and can changing.
- Follow the instruction of Supervisor/shift In-charge during change of count and quality.
- Check frequently the quality of cop and spool and maintaining quality standards and specifications.
- Keeping the winding tension in all drum/spindles 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 Ring Spinning Frame, Jute 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 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 Communication is clear and direct manner.
- 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 (60 Hrs)

Introduction to Employability Skills

Duration: 2 Hours

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: 2 Hours

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: 3 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: 10 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: 2 Hours

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

Communication Skills

Duration: 5 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: 2 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: 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: 10 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: 6 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: 4 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: 9 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 Spinning and identify the roles & responsibilities of the jobber.	<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 spinning process. 1.2. Perform different processes involved in Jute Spinning. 1.3. Explain terms such as Batching, Piecing up, Softening, Pilling, Carding, Drawing, Jute Spinning etc. 1.4. Identify the role and responsibility of the Jute Spinning Jobber . 1.5. Perform proper man-machine allocation after consulting with supervisor. 1.6. Prepare necessary operational tools for spinning & winding. 1.7. Execute Inspection of spinning department and feed material checking. 1.8. Check machine breakdowns, mechanical fault of the spinning and winding machine for deciding about necessary action. 1.9. Maintain man power namely sliver feeder, bobbin cleaner, mazdoors in the department. 1.10. Ensure maximum efficiency and productivity of the spinning and winding machinery of the department.
2	Prepare the Jute spinning frame & winding machine for operation ensuring proper maintenance.	<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 Spinning machine. 2.2. Explain Functions of the parts of Jute Spinning machine. 2.3. Execute Process flow of jute spinning & winding. 2.4. Explain process parameters such as Surface speed of gill pins, drawing roller, delivery roller, Pitch, spindle speed, top roller pressure etc. 2.5. Demonstrate functions of Retaining roller, Intermediate roller, Drawing roller, Tin cylinder, Flyer, Bobbin rail etc. of the Jute Spinning machine. 2.6. Set proper drafting zone of different pitch jute spinning frame for processing coarse, medium and fine count yarn. 2.7. Pass instructions to operator to use proper color

Module No.	Outcome	Assessment Criteria
		<p>code and colored yarns.</p> <p>2.8. Execute inspection of proper setting of building zone, grist of yarn, health of spinning and winding machines.</p> <p>2.9. Perform maintenance activities for material handling equipment.</p> <p>2.10. Handle carefully raw jute, slivers of jute, jute yarns, all other tools.</p> <p>2.11. Maintain tools and equipment being used for jute processing and perform shift-wise cleaning.</p>
3	Maintain quality in Jute spinning & winding and Process control.	<p>After completion of this module students will be able to:</p> <p>3.1. Explain the importance of maintenance and quality affecting parameters</p> <p>3.2. Demonstrate quality systems and other processes practiced in the jute mill.</p> <p>3.3. Control the quality of feed material and wastage of cop and spool winding for jute yarns.</p> <p>3.4. Ensure that the machines are well maintained, tuned, cleaned and lubricated properly.</p> <p>3.5. Record shift-wise wastage and report to supervisor if something goes out of control.</p> <p>3.6. Follow the instruction of shift supervisor for changing any quality of jute yarn / machine setting / process parameter.</p> <p>3.7. Find out the major and minor causes of low production and execute remedies with the help of supervisor.</p> <p>3.8. Check proper number of doubling is maintained by the operator.</p> <p>3.9. Ensure that all indicator and stop motions are in working condition and are operating properly.</p> <p>3.10. Check jute sliver quality and jute yarn quality according to desired quality standards.</p> <p>3.11. Ensure that uniform bobbin weight is maintained in spinning machine.</p> <p>3.12. Check and ask the maintenance department to rectify if there is any defect.</p> <p>3.13. Control minimum sliver/yarn wastage during piecing and can changing.</p> <p>3.14. Follow the instruction of Supervisor/shift In-charge during change of count and quality.</p> <p>3.15. Check frequently the quality of cop and spool and maintaining quality standards and specifications.</p> <p>3.17. Keep winding tension in all drum/spindles same and uniform throughout winding operation.</p>

Module No.	Outcome	Assessment Criteria
4	Apply safe working practices at work place	<p>After completion of this module students will be able to:</p> <p>4.1 Demonstrate of effective cleaning techniques</p> <p>4.2 Execute machine specific cleaning procedures</p> <p>4.3 Create a checklist for routine cleaning tasks</p> <p>4.4 Demonstrate the use of protective clothing/equipment for the specific tasks and work conditions</p> <p>4.5 Describe the importance of PPE kit</p> <p>4.6 Demonstrate the correct use of safety gear.</p> <p>4.7 Identify electrical hazards, including power supply issues, loose cables and equipment malfunctioning</p> <p>4.8 Detect health hazards (such as untreated injuries and contagious illness/ zoonotic diseases).</p> <p>4.9 Maintain Fire safety and prevention of fire hazards in workplace [fire extinguishers, fire Alarm, fire exits]</p> <p>4.10 Ensure use of general health and safety equipment and materials in the workplace first aid equipment</p>
5	Demonstrate a comprehensive effective workplace communication strategies	<p>After completion of this module students will be able to:</p> <p>5.1 Demonstrate the purpose of each team member and their involvement in determining goals</p> <p>5.2 Identify tasks between team members and their own processes</p> <p>5.3 Apply effective communication strategies in a practical context</p> <p>5.4 Exhibit enterprise ethical standards in workplace interactions</p> <p>5.5 Apply good communication environmental practices in practical workplace</p> <p>5.6 Simulate/Role play ethical dilemmas in the work place</p> <p>5.7 Illustrate familiarity with relevant industry standards and regulations.</p> <p>5.8 Explain the organizational policies and procedures</p>
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)

SI No	Items Name	Specification	Qty
1	Jute Ring Spinning Frame		1
2	Jute winding machine		1
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 Pr marks	Total OJT marks
Demonstrate Jute Spinning and identify the roles & responsibilities of the jobber.	TXT/3724/OC1	30	130	0
Prepare the Jute spinning frame & winding machine for operation ensuring proper maintenance	TXT/3724/OC2	50	170	0
Maintain quality in Jute spinning & winding and Process control	TXT/3724/OC3	30	130	0
Apply safe working practices at work place.	TXT/3723/OC4	20	110	0
Demonstrate comprehensive effective workplace communication strategies.	TXT/3723/OC5	20	110	0
Work in real job situation with special emphasis on basic safety and hazards in this domain (OJT).	TXT/3724/OC4	0	0	150
Employability Skills – 60 Hrs	DGT/VSQ/N0102	50	0	0