

**REGULATIONS AND SYLLABUS**  
**FOR**  
**SUPERVISORY CERTIFICATE COURSE**  
**IN**  
**FACTORY SIDE JUTE PRODUCTION (Winding,  
Beaming, Weaving & Sack Sewing and Finishing)**  
  
**UNDER ISDS PROJECT**  
**2014**

**Department of Jute and Fibre Technology**  
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**DEPARTMENT OF JUTE AND FIBRE TECHNOLOGY  
INSTITUTE OF JUTE TECHNOLOGY  
UNIVERSITY OF CALCUTTA  
35, BALLYGUNGE CIRCULAR ROAD  
KOLKATA – 700 019**

**REGULATIONS AND SYLLABUS FOR ONE MONTH SUPERVISORY CERTIFICATE COURSE IN FACTORY SIDE JUTE PRODUCTION (Winding, Beaming, Weaving & Sack Sewing and Finishing), HAVING TOTAL 150 CONTACT HOURS IN 1 MONTH SUPERVISORY COURSE TO BE CONDUCTED AT MILLS OR IJT.**

1. The Supervisory Certificate Course in **FACTORY SIDE JUTE PRODUCTION (Winding, Beaming, Weaving & Sack Sewing and Finishing)**, for Jute Mills Supervisors shall be conducted in the Jute Mills or at the Department of Jute and Fibre Technology, Institute of Jute Technology, University of Calcutta. The duration of the course is one month and shall be held once in every three months.
2. The total number of seats for the said course is ordinarily 30. The candidates sponsored by the Jute Mills and jute related organisations will be preferred.
3. The Examination for the Certificate Course in **FACTORY SIDE JUTE PRODUCTION (Winding, Beaming, Weaving & Sack Sewing and Finishing)**, for the Jute Mills Supervisors shall be held in Jute Mills or at the Department of Jute and Fibre Technology, Institute of Jute Technology, University of Calcutta after completion of the one month's course at such date as decided by the course coordinator in consultation with HOD & Project Leader, ISDS project to be approved in the meeting of the Departmental committee of Department of Jute and Fibre Technology, Institute of Jute Technology, University of Calcutta or by the Course Coordinating Committee of the Department of Jute and Fibre Technology, Institute of Jute Technology, University of Calcutta.
4. Any candidate possessing minimum secondary level school certificate (X pass) eligible for admission to this Supervisory Certificate Course. Candidate possessing senior level school certificate (XII pass) or Graduation preferably in Science and is actively engaged in the industry for a period of at least one year shall be preferred for admission to this Certificate Course.
5. Selection of the candidates will be done through an admission test and / or interview. However sponsored candidates will be exempted from admission test and interview. S.C/S.T/ OBC candidates will be preferred.
6. The candidates completing one month Supervisory Certificate course will be evaluated by oral examination for theoretical paper (one paper in each module) and by checking/evaluating practical knowledge on practical job work for practical paper (one paper per module) for awarding certificate after completion of one month Supervisory training Course. There will be no Pass/ Fail system in these courses, however there will be an evaluation system awarding Grade –A and Grade –B, where Grade A means excellent performance having 70% and above competency for the particular job and Grade B means 50% and above competency level. Candidates below 50% competency level need repeat training of one week to earn the higher level of competency to evaluate again.
7. A candidate shall be eligible to sit for the Examination provided he prosecutes regular course of study and attends at least 75% of the theoretical and practical classes separately held during the period of one month. It is essential that the practical and theoretical work should be combined in a progressive course of study that will lead the candidates naturally to their Examinations.
8. The candidate who will pass the examination of the Certificate Course shall be awarded a Certificate in the following format:

**DEPARTMENT OF JUTE AND FIBRE TECHNOLOGY  
INSTITUTE OF JUTE TECHNOLOGY  
UNIVERSITY OF CALCUTTA  
35, Ballygunge Circular Road, Kolkata: 700019**

**CERTIFICATE**

*This is to certify that Shri /Smt \_\_\_\_\_  
Daughter /Son of \_\_\_\_\_ has completed the  
Supervisory Training on Factory Side Jute Production (Winding, Beaming,  
Weaving & Sack Sewing and Finishing). Under ISDS Project in the year  
\_\_\_\_\_ and obtained \_\_\_\_\_ Grade.*

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*Project Coordinators, ISDS Project*

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*Head of the Department*

The schedule of papers and distribution of marks in these one month duration Supervisory Certificate training courses on Factory Side Jute Production (Winding, Beaming, Weaving & Sack Sewing and Finishing) will be as follows;—

Subject	Weightage
<b><u>Theoretical Papers</u></b>	
Paper - 1 Theoretical paper for each module as detailed in the syllabus	50%
Paper – 2 Practical paper for each module as detailed in the syllabus	50%

**Department of Jute and Fibre Technology, Institute of Jute Technology, University of Calcutta**

**Syllabus for Vocational Supervisors' Training for Jute Sector to be Conducted by Department of Jute and Fibre Technology, Institute of Jute Technology, University of Calcutta, Under Integrated Skill Development Scheme Project (ISDS) Sponsored by Ministry of Textiles, Government of India**

**Module: S-2, Factory Side Jute Production (Winding, Beaming, Weaving & Sack Sewing and Finishing),**

**Total Contact Hours 150 (One month Training)**

**Theoretical Paper**

**Contact Hours: 75**

Spool Winding –

- i) Factors in winding, advantages and disadvantages of different type of packages.
- ii) Method of unwinding
- iii) Spool and cone winding machines operation in details and their production calculations.
- iv) Main working parts and their adjustments for length and diameter of different type of warp winding machines.
- v) Cause and remedies of defects in packages.

Cop Winding –

- i) Details and action of vertical and horizontal cop winding machines and its production calculations.
- ii) Defects in cop and their remedies.

General -

- i) Duties and responsibilities of supervisors: (Cleaning, Oiling, Waste Control, Stock taking and production supervision etc.)

BEAMING & SIZING

- i) Purpose and functions of Beaming and Sizing.
- ii) Principles and operational details of pre-beaming machines.
- iii) **Beaming / Sizing :**
  - a) Purpose of Sizing.
  - b) Sizing ingredients and recipe.
  - c) Functions of different ingredients of recipe. Size paste preparation for Jute Yarn for beams.
  - d) Process control in Beaming / Sizing.
  - e) Faults in beam – causes and remedies.
  - f) Calculations for the no. of ends in beams.
  - g) Quality wise production and how many looms to be fed by a dressing machine.

General -

Duties and responsibilities of Supervisors: (Cleaning, Oiling, Waste Control, Stock taking and Production Supervision etc.)

## WEAVING

### Principles of Weaving:-

- i) Primary, Secondary & Auxiliary Motion.
- ii) Type of Jute Cloth and different type of uses.
- iii) Porter of Cambs, Reeds and Cloth porter
- iv) Shots / Picks of Cloth
- v) Cambs fileying and its purpose.
- vi) Shedding mechanism – different parts and motion.
- vii) Picking mechanism – different parts and motion.
- viii) Beat up mechanism – different parts and motion.
- ix) Let-off and take up motion.
- x) Warp protectors, Warp and Weft stop motion.
- xi) Loom cycle and tuning.
- xii) Loom Constant.
- xiii) Loom Speed, Production and Efficiency calculations.
- xiv) Self cop loading mechanism.
- xv) Common defects in cloth and its remedial measures.
- xvi) Different measures required during quality change of fabrics.
- xvii) Introduction of Dobby and Jacquard fitted looms.
- xviii) Introduction of Shuttle less looms.

### General -

Duties and responsibilities of Supervisors: (Cleaning, Oiling, Checking of Cloth quality on loom, Waste control, Stock taking and Production Supervision etc.)

## FINISHING & SACK SEWING

### Finishing –

- i) Function & Machine parameters of Damping, Calendaring, Measuring, Lapping / Packing and Baling process.
- ii) Calculation of bales hoop length for different qualities of cloth.

### Sack Sewing –

- i) Cutting machines,
- ii) Sewing machines:-
  - a) Hemming
  - b) Heracles
- iii) Bundling,
- iv) Baling.

### General –

Duties and responsibilities of supervisors:- (Cleaning, Oiling, Checking of Cloth quality at different stages, Waste Control, Stock taking and Production Supervision etc.)

**PRACTICAL****Contact Hours: 75 Hrs.**

Winding Machine: Supervision of quality-wise Yarn preparation, Measurement of Spool, Cops, Defects of cops, spools etc. Calculation of surface speed of different rollers, production and efficiency.

Demonstration of process to rectify the defects

Beaming Machine: Supervision of quality of beam, Defects of Beaming Machine, Defects of starch, No of ends calculation, Efficiency calculation.

Weaving: Supervision of Production, Efficiency calculation, Defects of cloth, Loom maintenance, Practical study of machine

Finishing: Practical study of all machine.

Demonstration of defects identification and measure to be taken.

Demonstration of process control measurement.