

**REGULATIONS AND SYLLABUS**  
**FOR**  
**SUPERVISORY CERTIFICATE COURSE**  
**IN**  
**Quality Control and Process Control in Jute**  
**Processing**

**UNDER ISDS PROJECT**

**2014**

**Department of Jute and Fibre Technology**  
**Institute of Jute Technology**

**University of Calcutta**

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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  
QUALITY CONTROL AND PROCESS CONTROL IN JUTE PROCESSING HAVING TOTAL 150  
CONTACT HOURS IN 1 MONTH SUPERVISORY COURSE TO BE CONDUCTED AT MILLS OR IJT.**

1. The Supervisory Certificate Course in **Quality Control and Process Control in Jute Processing**, 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 **Quality Control and Process Control in Jute Processing**, 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 Quality Control and Process Control in Jute  
Processing 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 **Quality Control and Process Control in Jute Processing**, will be as follows;—

Subject	Weightage
<b>Theoretical Papers</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-4: Quality Control and Process Control in Jute Processing,**

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

**Theoretical Paper Contact Hours: 75**

1. What is Quality?
2. Concept of Quality.
3. History of Quality Assurance and Quality Control in Jute Mills in Consonance with History of World Quality Development
4. Some Basic Concepts of Data and Data Presentations
5. Some Uses on Descriptive Statistical Methods
6. Classification of Textile Fibre.
7. Jute Fibre – Morphology.
8. Yarn dimension & Properties – Definition of Yarn, Count, Twist, Linear Density etc.
9. Unit of length and mass in different yarn counting system.
10. Conversion from one counting system to another.
11. Condition of sample.
12. Yarn count measurement.
13. Yarn twist & Twist measurement.
14. Twist factor.
15. Yarn strength.
16. Yarn irregularities.
17. Fibre length distribution.
18. Drafting of Sliver.
19. Length distribution vs. diameter CV%
20. Measure of irregularity & irregularity tester.
21. Conditioning of sample.
22. Raw Jute property – Strength, fineness, fineness testing, sample size etc.
23. Quality Control.
24. Statistical Quality Control.
25. Sampling.
26. Idea of central value.
27. Frequency Distribution.

28. Measure of Dispersion.
29. Standard Deviation.
30. CV% & importance of CV%
31. Fabric Characteristics – Porter, Short, Count of Yarn, Areal density, Fabric width, Crimp etc.
32. Fabric defects.
33. Fabric strength & different fabric strength testers.
34. Seam strength
35. Bag Characteristics.
36. Sampling Inspection Plan for Product Control and Quality Assurance
37. Work study, Time & Motion Study, Snap Study, Method Study, Fabric Inspection, Speed checking, Efficiency, Packing & Bailing inspection.

### **PRACTICAL**

**Contact Hours: 75**

1. Physical & Chemical Property of Jute Fibre.
2. Sample preparation for testing.
3. Sample size and statistical analysis of Mean, Median, SD & CV% etc.
4. Determination of Count/Linear Density & Twist of Yarn.
5. Yarn strength measurement.
6. Fibre length distribution.
7. Measurement of Porter, Short, warp Count & weft Count from a Given Fabric.
8. Testing of fabric strength.
9. Testing of seam slippage.
10. Identification of fabric defects.
11. Irregularity measurement.
12. Work study, Time & Motion Study, Snap Study, and Method Study.
13. Packing & Bailing inspection.
14. Speed checking & Efficiency calculation.