

**REGULATIONS AND SYLLABUS**  
**FOR**  
**Executive Training Course**  
**On Jute Technology and Management**

**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 (25 DAYS) EXECUTIVE TRAINING COURSE ON JUTE TECHNOLOGY AND MANAGEMENT HAVING TOTAL 150 CONTACT HOURS:**

1. The Executive training Certificate Course on **JUTE TECHNOLOGY AND MANAGEMENT**, for Jute Mill Executives shall be conducted at IJT under the Department of Jute and Fibre Technology, Institute of Jute Technology, University of Calcutta. The duration of the course is one month or 25 days covering 150 hrs, shall be held once in a year.
2. The total number of seats for the said course is ordinarily 20 - 30. The candidates sponsored by the Jute Mills and jute related organisations will be preferred.
3. This Executive training Certificate Course in **JUTE TECHNOLOGY AND MANAGEMENT** for Jute Mill Executives shall be held at the Department of Jute and Fibre Technology ,Institute of Jute Technology, University of Calcutta on regular basis in staggered timing basis (i.e. 2 days per week covering 10 hrs. per week to complete 150 hrs. including evaluation and feedback. After completion of 150 hrs. Course at such date as decided by course coordinator of Department of Jute and Fibre Technology, Institute of Jute Technology, University of Calcutta an evaluation / examination will be conducted by oral test for both theoretical and practical knowledge on the course studied for awarding certificate.
4. Any candidate possessing minimum Graduate level with 5 years' experience in Sr. Level or Mill Executives are eligible for admission to this Certificate Course without any interview/ admission test etc.
5. The candidates completing one month, 150 hrs. Certificate course will be evaluated by oral examination with 70 % weightage on theoretical paper (one paper in each module) and 30 % weightage on knowledge on practical paper (one paper per module) for awarding certificate of completion of Executive training Certificate Course. There will be no Pass/ Fail system in this course, 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 field 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 and they will be evaluated again.
6. A candidate shall be eligible to sit for the Examination provided he prosecutes regular/staggered timing of study and attends at least 70% of the theoretical and practical demonstration classes separately held during the total course duration.
7. The candidate who will pass the examination of this Executive training Certificate Course from this department of Calcutta University, they 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 passed the  
Executive Training on Jute Technology and Management 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 this 150 hrs. / 1 month duration Executive training certificate level course on Jute Technology and Management is as follows;—

Subject	Weightage
<b><u>Theoretical Papers</u></b>	
Paper - 1 Theoretical as detailed in the syllabus	70%
Paper – 2 as detailed in the syllabus	30%

**Syllabus for Executive Training Course on Jute Technology and Management 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: E-1, Jute Technology and Management**

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

**Theoretical Syllabus (100 Hrs)**

1. Quality of Raw Jute - Different grades of Raw Jute. Batch requirements for different jute products and Newer diversified Jute products including geotextiles sale yarn, fine yarn and decorative fabrics. Defects of raw Jute, Mixture in raw Jute. Quality Claim and Moisture Claim.

Physical properties of Jute Fibre as compared to other allied fibres, Grading of Jute & Mesta and MSP (Minimum support price)

Selection Criteria of Raw Jute as per quality of yarns. Name of different Mokams according to type of Jute, Batching of Jute, and Batch Cost.

2. Jute machinery and Process outlines and Process & Quality Control for Jute Yarn Manufacture (Spinning) Jute Yarn Manufacture Machinery and Process outline, Process Parameter, Machine Balancing, Process Control, Man-days per tonne, Energy savings and energy cost per tonne, wastage Control etc. from Jute Yarn Manufacture.

Limitations of existing system of Jute Yarn Manufacture and need of Modernisation for improvement of productivity. Modern Machinery for Jute Yarn Manufacture to improve production rate, to improve man-machine ratio i.e. to reduce hands per tonne, to shortcut the process route, to reduce cost of production, to reduce waste generation, to incorporate suitable/new technology for higher productivity. Fine Yarn and blended Jute Yarn Manufacture.

Process & ways & means of Quality improvement of Jute Yarn:

How to improve quality of Yarn, to incorporate better process control with the help of suitable technology for better quality and value-added products.

Improvement in material handling system:

To improve material handling method for better material flow and improvement in working environment.

3. Jute Machinery, process outline, process and quality control, control for Jute fabrics and bag manufacture (weaving, sack sewing & Finishing).  
Jute Machinery for fabric Manufacture and process outline, process parameters for end stage. Limitation of existing looms and weaving preparatory Technology. Modern looms and other weaving preparatory machinery and their advantages. Machine-balancing, process control, Man-days per tonne, Energy savings and energy cost per tonne, wastage Control etc. from Jute Yarn Manufacture. Shuttle less Jute looms, Nonwoven production line, production of Jute

decorative fabrics and Jute geotextiles for different end uses and their specifications and applications and standards, calculations of Jute fabrics and bag making. Improvement of product making in two shed Jute based Technical Textile Products and their applications.

4. Chemical processing and Finishing of Jute products as per requirements. Scouring, bleaching, Dyeing, Printing and chemical finishing of Jute fabrics and their Process Control.
5. Newer Jute Products/ diversified Jute products/ utility products manufacture from Jute Bags and consumer products and its marketing potentiality and strategy.
6. Testing of Jute Yarns and Fabrics as per Standards, modern testing instruments and their uses for process and product parameter control for Jute Yarns and fabrics.
7. HRD-Training:  
Need of HRD-Training and Technical Training and Induction Training for Jute Mill workers and supervisors.  
Managerial HRD-Training for Motivation, Team work, change of attitude/ behavioural aspects, stress management, awards and incentives measures. Time management, leadership quality, development, modern management tools and index. Improving working environment, environmental hazards, agronomics and work management tools.

### **Practical Paper (50 Hrs.)**

1. Demonstration of conventional and Modern Jute Yarn Manufacture Technology including slip draft open draft, Ring spinning, Rotor spinning and Friction Spinning (Dref-II) technology.
2. Demonstration of conventional and Modern Jute fabric manufacturing system including ordinary looms, dobby / Jacquards looms, Carpet loom, sample loom, shuttleless looms (S4, MLS and other types.)
3. Demonstration of Nonwoven fabric Manufacture.
4. Demonstration of Jute Geotextile Testing Machinery.
5. Demonstration of Testing Machinery of fibres, Jute Yarns, Fabrics and geotextiles including Uster Uniformity Tester, Instron tensile tester and Fabric Strength tester and other property parameter testing.
6. Demonstration of computerised Colour Measurement, Colour matching, Print Design development machine.