

## Intensive Training Courses for Coir and Coir products at CCRI/NCT&DC

The Central Coir Research Institute, Kalavoor is conducting following 35 types of intensive coir training courses for production of coir and coir products with a fee of Rs 1000/- plus service tax(12.36%) per trainee per course at Coir Board Complex, Kalavoor for the benefit of those who wish to set up coir based industrial units.

Sl. No	Name of training course	Duration
1	Manufacture of Loom Mats from pile wire loom	10 days
2	Bleaching, Shade Matching & Dyeing	10 days
3	Manufacture of power loom coir mattings	10 days
4	Manufacture of Coir Wood	10 days
5	Fibre Treatment Processes	10 days
6	Technology for production of Pithplus for converting coir pith to organic manure	5 days
7	Economic Utilization of Coir Pith by Composting	5 days
8	Setting up of Home Garden in a Poly House Using C-POM	5 days
9	Development of Cocolawn Using Coir	5 days
10	Manufacture of PVC Tufted Coir Mats	10 days
11	Manufacture of Handmade grade Paper	5 days
12	Manufacture of Polyester Coir Mouldings	5 days
13	Testing of Coir geo textiles	5 days
14	Testing of Coir fibre, curled coir rope, coir yarn and rope	5 days
15	Testing of mats and mattings	5 days
16	Testing of rubberized coir	5 days
17	Mobile Fibre Extraction Machine	5 days
18	Anugraha Loom	5 days
19	Anupam Lom	5 days
20	Electronic Ratt	5 days
21	Pith Composting	5 days
22	Testing of Coir fibre, curled coir rope,coir yarn and rope	5 days
23	Manufacture of coir skin and printing on coir	5 days
24	Manufacture of coir needle felt	5 days
25	Manufacture of coir gift articles	5 days
26	Manufacture of Carpets	10 days
27	Manufacture of Loom Mats	10 days
28	Manufacture of Coir Mattings	10 days
29	Spinning on Automatic Spinning Machine	10 days
30	Manufacture of Frame Mats	10 days
31	Trainers Training Course in Handicrafts	5 days
32	Trainers Refresher Training Courses	5 days
33	Orientation Training Course	5 days
34	Validation Training Course	5 days
35	Spooling and Bobbin winding with flyer	5 days

Those who wish to undergo the intensive coir training courses may apply in the prescribed form and the details of the 35 types of intensive coir training courses for production of coir and coir products available as annexure in the website of Coir Board or Central Coir Research Institute.

For more details please contact **Director, RDTE, CCRI Kalavoor, Alappuzha, Ph.0477-2258480, 2258094** during office hours or visit our website: [www.ccriindia.org/www.coirboard.gov.in](http://www.ccriindia.org/www.coirboard.gov.in)

**Sd**

**Director, RDTE, CCRI**

## ANNEXURE

### COIR TRAINING COURSES FOR COIR INDUSTRY BY COIR BOARD

Sl.No.	Syllabus for theory	Syllabus for practical
<b>1. CENTRAL COIR RESEARCH INSTITUTE, KALAVOOR</b>		
<b>1</b>	<b>1.1. Manufacture of Loom Mats from pile wire loom (10 days)</b>	
	Preparatory process of weaving (sorting, splicing, spooling, bobbin winding, cops winding, warping and beaming), Loom tuning, drafting, denting, pile wire loom weaving. Finishing operations of mats (edging, shearing and stenciling) Quality specification and IS quality parameters and its testing	Sorting, splicing, spooling, warping, beaming, bobbin winding, cops winding), Loom tuning, drafting, denting, pile wire loom weaving. Finishing operations of mats
<b>2</b>	<b>1.2. Bleaching, Shade Matching &amp; Dyeing (10 days)</b>	
	Dyeing procedure with calculation, Different method of dyeing process (Basic, Acid & Direct, Reactive and Natural dyestuffs), Mixed shades, Bleaching (Hot & Cold) Traditional Bulk and mechanized dyeing, screen printing. Quality specification & IS standards for fastness to light, rubbing	Laboratory bleaching & dyeing, bulk bleaching and dyeing, shade matching against given colour & screen printing
<b>3</b>	<b>1.3. Manufacture of power loom coir mattings (10 days)</b>	
	Preparatory process of power loom weaving (sorting, splicing, spooling, bobbin winding, cops winding, warping and beaming), bleaching and dyeing, Loom tuning, drafting, denting, development of weaving designs on Tappet loom, dobby loom, jacquard power looms. Quality specification & IS standards for power loom matting,	Loom arrangement, weaving on Tappet loom, dobby loom, jacquard power looms, weaving defect and its remedies, Quality specification & IS standards for power loom matting.
<b>4</b>	<b>1.4. Manufacture of Coir Wood (10 days)</b>	
	Fibre extraction, preparation of non woven coir felt phenol formaldehyde resin, Coating of resin to the felt and its lamination, moulding into different products, Quality parameters and specification	Preparation of Coir felt, coating of resin to the felt, squeezing, drying, cutting, hot pressing, moulding finishing of edges, maintenance of machineries
<b>5</b>	<b>1.5.Fibre Treatment Processes (10 days)</b>	
	Extraction of Coir fibre, chemical and physical properties of coir fibre, manufacture of coirret /biochem/ fibre magic/vegetable oil in water emulsion and its application on husk and mechanically extracted coir fibre, softening of coir fibre, effluent treatment of ret liquor, Quality specifications for coir fibre,	Calculation of quantity of coirret/biochem/fibre magic required for treatment of husk and mechanically extraction coir fibre, preparation of vegetable oil in water emulsion and its application, willowing of fibre bales, spinning on motorised traditional ratt of treated fibre and treatment of ret liquor
<b>6</b>	<b>1.6.Technology for production of Pithplus for converting coir pith to organic manure (5 days)</b>	

	Process involved in the production of PITHPLUS( Weighing, cleaning& pre-cooking of sorghum, sterilization, inoculation, packing & incubation), maintenance, storage & shelf life, application of PITHPLUS for composting, details on composting of coir pith, Technology transfer details, Infrastructure for setting up a PITHPLUS production laboratory, model projects	Demonstration on the production of PITHPLUS, Operation of equipments involved in the process viz Sterilizer, laminar Air flow chamber, Incubator
<b>7</b>	<b>1.7. Economic Utilization of Coir Pith by Composting (5 days)</b>	
	Fibre extraction & pith production, properties, pollution problem by coir pith hillocks, significance of composting, method of composting of coir pith by PITHPLUS (Conventional & hillock), properties of manure, application of C-POM in organic farming, dosage to different plants, setting up of a C-POM unit & marketing of C-POM, Quality specifications for coir pith & C-POM, schemes & services of Coir Board, formation of cluster /consortium/SHG/NGO and its activities, financial assistance, model projects, Technology transfer details	Demonstration on coir pith composting – conventional (sandwiching process) & hillock using perforated pvc pipes, maintenance of moisture by watering, storage & application
<b>8</b>	<b>1.8. Setting up of Home Garden in a Poly House Using C-POM (5 days)</b>	
	Production of C-POM by PITHPLUS, Enrichment of C-POM by organic additives, , organic farming and its importance, setting up of poly house for cultivation of plants, maintenance, Technology transfer details	Demonstration on the formulation of enriched CPOM and its application to different plants in a poly house.
<b>9</b>	<b>1.9. Development of Cocolawn Using Coir (5 days)</b>	
	Extraction of coir fibre, coir pith, production of coir geotextiles using Anugraha loom, method of preparation of COCOLAWN by laying coir geotextiles, coir needled felt/coir fibre, coir pith & C-POM , cutting of seedling of grass, planting, maintenance by watering & trimming at fortnight intervals, model projects, Technology transfer details	Demonstration on the production of COCOLAWN & maintenance
<b>10</b>	<b>1.10. Manufacture of PVC Tufted Coir Mats (10 days)</b>	
	Preparatory process of weaving (sorting, splicing, spooling, warping and beaming) Dyeing-Traditional/mechanized and bulk dyeing, Stenciling, PVC resin and its compounding for tufting, machineries for manufacture of PVC tufted coir mat cutting and finishing and Quality specification of mats	Bleaching and Dyeing of Coir yarn ,manufacture of PVC tufted coir mat
<b>11</b>	<b>1.11. Manufacture of Handmade grade Paper (5 days)</b>	
	Coir fibre-bit and coir pith, bleaching of fibre, machineries for manufacture of paper , pulp preparation for paper	Sorting of fibre, bleaching & dyeing, preparation of pulp ,screen printing
<b>12</b>	<b>1.12. Manufacture of Polyester Coir Mouldings (5 days)</b>	
	Fibre extraction, chemical and physical properties of coir fibre and coir pith, polyester resin ,catalyst and curing agent, Types of moulds, plaster of paris moulds, fibre glass moulds and mould making from plaster of paris & Quality specification	Handling of pith and fibre for moulding, preparation of compound for moulding, finishing & mould making from plaster of paris

<b>13</b>	<b>1.13. Testing of Coir geo textiles (5 days)</b>	
	Quality parameters of coir geo-textiles and applications,	Testing of quality parameters of coir geo-textiles, reporting of testing
<b>14</b>	<b>1.14. Testing of Coir fibre, curled coir rope, coir yarn and rope (5 days)</b>	
	Quality parameters of coir fibre and their testing-retted and mechanically extracted coir fibre (Bristle, mattress & decorticated coir fibre), curled coir rope, coir yarn & rope,	Testing of quality parameters of coir fibre (Bristle, mattress & decorticated coir fibre), curled coir rope, coir yarn & rope, reporting of testing
<b>15</b>	<b>1.15. Testing of mats and mattings (5 days)</b>	
	Quality parameters of coir mat & mattings	Testing of quality parameters of coir mat & mattings, reporting of testing
<b>16</b>	<b>1.16. Testing of rubberized coir (5 days)</b>	
	Quality parameters of rubberized coir	Testing of quality parameters of rubberized coir, reporting of testing
<b>17</b>	<b>1.17. Mobile Fibre Extraction Machine (5 days)</b>	
	Sorting of husk, sprinkling of water if necessary , separation of husk segments, defibering practice, collection of pith and fibre, further cleaning of fibre, bundling of fibre, Maintenance of the machine and safety precautions	Operation of the machine by fibre extraction with green husk
<b>18</b>	<b>1.18. Anugraha Loom (5 days)</b>	
	Manufacture of different varieties of coir geo textiles, sorting of coir yarn, splicing, preparation of warp beam, operation of loom, passing of product and package Maintenance of the machine and safety precautions	Operation of weaving with suitable coir yarn
<b>19</b>	<b>1.19. Anupam Lom (5 days)</b>	
	Manufacture of different varieties mats, mattings, carpets, sorting of coir yarn, splicing, preparation of warp beam, operation of loom, passing of product and package Maintenance of the machine and safety precautions	Operation of weaving with suitable coir yarn
<b>20</b>	<b>1.20. Electronic Ratt (5 days)</b>	
	Sorting and cleaning of fibre by hand and willowing machine ,spinning practice, runnage variation up to 180-240 and blended fibre for fabrics, splicing, measuring practice of scorage and runnage making country hanks	spinning practice, runnage variation up to 180-240 and blended fibre for fabrics, splicing, measuring practice of scorage and runnage making country hanks
	<b>2.CENTRAL INSTITUTE OF COIR TECHNOLOGY</b>	
<b>21</b>	<b>2.1.Manufacture of Coir Wood (10 days)</b>	
	Fibre extraction, preparation of non woven coir felt, phenol formaldehyde resin, Coating of resin to the felt and its lamination, moulding into different products, Quality parameters and specification	Preparation of Coir felt, coating of resin to the felt, squeezing, drying, cutting, hot pressing,moulding finishing of

		edges, maintenance of machineries
<b>22</b>	<b>2.2. Pith Composting (5 days)</b>	
	Fibre extraction, chemical and physical properties of coir fibre and coir pith, Testing of Coir pith, Manufacture of pith plus and cultivation of different types of micro organism – bacteria, fungi and cyano bacteria, laboratory and field level, storage , Method of composting of coir pith – Bed , Hillocks method and decomposition by cyano bacteria, preparation and monitoring of various stages of coir pith decomposing, separation of decomposed coir pith by different methods- supernatant, drying, packaging, storage, shelf life, application methods and advantages of coir pith in organic farming and its marketing, Quality specification	Floor arrangements, Handling of pith, pith plus and urea, method of composting- Bed method, formation of layers, sandwiching composting of Hillocks of coir pith, water treatment and maintenance of moisture, decomposition of coir pith using microbial consortia (cyano bacteria and bacteria) and organic farming using decomposed coir pith, testing and packing.
<b>23</b>	<b>2.3. Testing of Coir fibre, curled coir rope, coir yarn and rope (5 days)</b>	
	Quality parameters of coir fibre and their testing- retted and mechanically extracted coir fibre (Bristle, mattress & decorticated coir fibre), curled coir rope, coir yarn & rope,	Testing of quality parameters of coir fibre (Bristle, mattress & decorticated coir fibre), curled coir rope, coir yarn & rope, reporting of testing
<b>24</b>	<b>2.4. Testing of mats and mattings (5 days)</b>	
	Quality parameters of coir mat & mattings	Testing of quality parameters of coir mat & mattings, reporting of testing
<b>25</b>	<b>2.5. Testing of rubberized coir (5 days)</b>	
	Quality parameters of rubberized coir	Testing of quality parameters of rubberized coir, reporting of testing
<b>26</b>	<b>2.6. Manufacture of coir skin and printing on coir (5 days)</b>	
	Fibre extraction, preparation of non woven coir felt, phenol formaldehyde resin, Coating of resin to the felt and its lamination, moulding into coir skin and printing , Quality parameters and specification	Preparation of Coir felt, coating of resin to the felt, squeezing, drying, cutting, hot pressing, moulding into coir skin and printing, finishing of edges,
<b>27</b>	<b>2.7. Manufacture of coir needle felt (5 days)</b>	
	Fibre extraction, preparation of non woven coir felt, Quality parameters and specification	Preparation of Coir felt and its grades
<b>28</b>	<b>2.8. Manufacture of coir gift articles (5 days)</b>	
	Fibre extraction, preparation of non woven coir felt, Coating of resin, prepregs formation and moulding with felt and using pith, Quality parameters and specification	Preparation of Coir felt, coating of resin to the felt, squeezing, drying, cutting, hot pressing, moulding and making of gift articles from fibre and pith and its finishing of edges,
	<b>3. NATIONAL COIR TRAINING &amp; DESIGN CENTRE, KALAVOOR</b>	
<b>29</b>	<b>3.1 Manufacture of Carpets (10 days)</b>	
	Preparatory process of weaving (sorting, splicing, spooling, warping and beaming, dyeing of coir ,	Sorting, Splicing, Spooling, warping and Beaming,

	Loom tuning, drafting, denting, weaving method of Mourzouk Carpet, Weaving method of 4 shaft carpet weaving, finishing operations of carpet, IS quality parameters and its testing	maintenance of loom, dyeing of coir, parts of carpet loom, weaving of mourzouk and 4 shaft carpet
<b>30</b>	<b>3.2. Manufacture of Loom Mats (10 days)</b>	
	Preparatory process of weaving (sorting, splicing, spooling, warping and beaming), Loom tuning, drafting, denting, Finishing operations of mats, Quality specification and IS quality parameters and its testing	Sorting, splicing, spooling, warping, beaming, weaving of mats, Fibre, Rod, Creel & Loop mats, Carnatic mat, finishing operations of mat
<b>31</b>	<b>3.3. Manufacture of Coir Mattings (10days)</b>	
	Preparatory process of weaving (sorting, splicing, spooling, warping and beaming), bleaching and dyeing, Loom tuning, drafting, denting, Weaving method of 2 Shaft Matting, 3 Shaft & 4 Shaft Matting Quality specification, IS standards for matting,	Loom arrangement, weaving of 2, 3, & 4 shaft matting, Basket weave & ribbed matting, weaving defect and its remedies. Quality specification, IS standards for matting.
<b>32</b>	<b>3.4. Spinning on Automatic Spinning Machine (10 days)</b>	
	Extraction of fibre, soft, medium, & hard varieties of coir yarn, its cleaning and spinning into yarn and maintenance of automatic spinning machines, spinning defects & its remedies, Quality specifications for yarn, preparations of coir ret & its application on husk & coir fibre, preparation of vegetable oil in water emulsion and its application to unsoaked coir fibre.	Willowing, sliver preparation, quality parameters for yarn maintenance of spinning machineries, Application of coir ret to races of fibre, Preparation of emulsion and its application to willowed fibre.
<b>33</b>	<b>3.5. Manufacture of Frame Mats (10 days)</b>	
	Preparatory process of weaving (sorting, splicing, spooling, warping and beaming) Types of Frame Mats and its manufacture- Sinnet Mat, Mesh Mat, Corridor Mat and Rope Mat, Dyeing-Traditional/mechanized and bulk dyeing, Quality specification of frame mats and IS standards for frame mats and its testing,	Sorting, Splicing, Braid & Rope making, manufacture of Sinnet, Mesh, Corridor and Rope mat, different designs, passing, Bleaching and Dyeing of Coir yarn Maintenance of frames.
<b>34</b>	<b>3.6. Trainers Training Course in Handicrafts (5 days)</b>	
	Bleaching and dyeing of fibre, Manufacturing of different varieties of Coir Handicrafts items, Ornamental items Quality specification	Sorting of fibre, bleaching & dyeing, preparation of loops for bangles, ring, chain, preparation of designs for manufacture of other ornaments, General idea about handling the field training centres, (behaviour, attendance, discipline and punctuality etc.), classes for training and distribution of stipend, practical test, issue of certificates, maintenance of records/register & stock materials

35	<b>3.7. Trainers Refresher Training Courses (5 days) -Eligibility – Pass in Advanced /Artisan Training Course.</b>	
	To study all incubation training courses except maintenance of coir machineries and handicrafts incubation training courses.	Preparatory process for weaving, manufacture of products, loom tuning, weaving of products, passing, quality specification, general idea about handling the field training centres, (behaviour, attendance, discipline and punctuality etc.), classes for training and distribution of stipend, practical test, issue of certificates, maintenance of records/ register & stock materials
36	<b>3.8. Orientation Training Course (5 days)</b>	
	Process and manufacture of all types of coir and coir products, Coconut Husk, White fibre extraction & Different types of machineries for Fibre extraction, Treatment of green husk fibre using Coir Ret/biochem/vegetable oil in water emulsion and Composting of Coir Pith using pithplus, Different methods of spinning coir yarn, quality specification, ropes and cordages, Dyeing, Bleaching and Softening of Fibre/ Yarn, Frame mats, Loom Mats and Manufacturing of different varieties of matting, power loom matting and their constructional details, Manufacture of Rubberised Coir Products, application of polymer composites and their impact on coir. Manufacture and application of Coir Geo-Textiles Quality Specification of coir products	Testing of coir & coir products based on their quality parameters as per IS Standards, Treatment of coir fibre using coir ret/ vegetable oil in water emulsion composting of coir pith – bed and Hillocks method traditional bulk dyeing and mechanized dyeing, effluent treatment
37	<b>3.9. Validation Training Course (5 days) - Applicable to the Coir Board staff working in NCT &amp; DC, RETC / DCEC and Regional Offices and candidates sponsored by coir trade associations.</b>	
	Process and manufacture of all types of coir and coir products, Coconut Husk, White fibre extraction & Brown Fibre, Treatment of green husk fibre using Coir Ret and Composting of Coir Pith using pithplus, Different methods of spinning coir yarn, ropes and cordages, Dyeing, Bleaching and Softening of Fibre/ Yarn, Frame mats, Loom Mats and Manufacturing of different varieties of matting, power loom matting and their constructional details, Manufacture of Rubberised Coir Products, application of polymer composites and their impact on coir. Manufacture and application of Coir Geo-Textiles Quality Specification of coir products,	Testing of coir & coir products based on their quality parameters as per IS Standards, Treatment of coir fibre using coir ret/ vegetable oil in water emulsion composting of coir pith – bed and Hillocks method traditional bulk dyeing and mechanized dyeing, effluent treatment, rules and procedures for conduct of training courses.
38	<b>3.10. Anugraha Loom (5 days)</b>	
	Manufacture of different varieties of coir geo textiles, sorting of coir yarn, splicing, preparation of warp beam, operation of loom, passing of product and	Operation of weaving with suitable coir yarn



	package, Maintenance of the machine and safety precautions	
<b>39</b>	<b>3.11. Spooling and Bobbin winding with flyer (5 days)</b>	
	Sorting of different kinds of coir yarn, splicing, practice of bobbin winding and spooling, calculation of runnage and scorage of coir yarn, maintenance of spooling machine	Sorting of different kinds of coir yarn, splicing, practice of bobbin winding and spooling, maintenance of spooling machine
<b>40</b>	<b>3.12. Electronic Ratt (5 days)</b>	
	Sorting and cleaning of fibre by hand and willowing machine, spinning practice, runnage variation up to 180-240 and blended fibre for fabrics, splicing, measuring practice of scorage and runnage of country hanks	spinning practice, runnage variation up to 180-240 and blended fibre for fabrics, splicing, measuring practice of scorage and runnage of country hanks

**APPLICATION FORM FOR UNDERGOING INTENSIVE TRAINING  
COURSES FOR COIR PRODUCTS**

SI No	Details	Remarks
1	Name of the Unit/Applicant	
2	Full Address of the Unit/ Applicant for correspondence  Phone No Mobile No Email	
3	Category in which the unit/Applicant belongs  1. Registered Society or unit  Reg No & Year  2. Entrepreneurs  3. NGO/SHG  4. Individual	
4	Educational Qualifications	
5	Date of Birth and Age	
6	Religion/Community	
7	Name and type of training course in which training needed by the applicant	

I hereby agree that the facts and information given above are true and correct to the best of my knowledge and belief.

Place

Signature

Date

Name & Designation

(Office Seal)