Short Term Training Courses at FRI, Dehradun

Set in the sylvan surroundings of Doon Valley and having a history of about a century of forestry research, FRI contributes the research perspectives focusing on different aspects of forestry research to different stakeholders. The manifold research programmes related to enhancement of forest productivity through quality seed and planting material, agroforestry, medicinal & aromatics plants, eco-rehabilitation, forestation techniques for stress sites, bamboo & bio fertilizers, evaluation & utilization of plantation timber to name a few.

Training as a part of extension is an important function of the institute towards capacity building. The institute organizes Short Term Training Courses (STTC) in twelve disciplines to keep managerial level officers, supervisory staff and field officers abreast with recent research developments in forestry and to transfer the latest technologies. In addition to this Short Term Low-Cost Training Courses will also be organized as provided separately in this brochure.

The faculty to impart these trainings consist highly qualified, experienced and skilled professionals and researchers. The Institute has a well-developed infrastructure of laboratories, computer center, library, herbarium, arboreta, nurseries and experimental field for conducting research and training programmes. Excellent boarding & lodging facilities are available at the Scientists Hostel and Officers Rest House of the Institute, with adequate means of recreation.

Course Contents

1. **Wood seasoning:** Importance of seasoning; Equilibrium moisture content; Moisture content values and tolerances for end products; Influence of climate zones on moisture content; seasoning schedules, seasoning kilns (solar, steam, vacuum press drying, dehumidification drying etc.); Other seasoning methods like chemical seasoning of plantation species like eucalyptus and poplar.

2. **Plywood manufacture:** Plywood raw materials both wood and adhesive; Manufacture of veneer, plywood, black board and Flush doors, their properties and testing; preparation and testing of adhesives; Plywood, Laminated of adhesives, plywood, Laminated Veneer Lumber (L.V.L.); Impreg and compreg and other in panel products.

3. **Wood and bamboo preservative and its utilization:** Importance of preservation, Seasoning, products, Composites, Finishing, Working properties and appropriate utilization of wood and bamboo.

4. **Reducing wastage in dimensioned lumber through finger jointing:** The finger jointing technique – uses, design aspects, adhesive aspect, machinery, structural and non-structural usages, glulams, strength aspects, role of moisture and seasoning, finishing aspects, hands-on practice.

5. **Classification and grading of timber:** Testing of wood and classification of timbers for different end uses; Defects in wood, their measurement and evaluation; Visual grading of timber; Machine grading of timber.

6. **Application of remote sensing, GIS and GPS in forest resource assessment:** Remote Sensing (RS): Principles of remote sensing; Indian Remote Sensing Satellite and sensors, Recent RS-GIS technological trends, Licensed and open source software for RS-GIS, installation of open sources software on individual laptops, Demonstration of essential tools of licensed and open source software, Source for free satellite data downloading, Hands on exercise for downloading of satellite data and its handling, Basic image handling procedures like layer stacking and mosaic king.

7. **Bamboo propagation and clonal nursery management:** Introduction to Bamboo and their utilization in rural and urban society, Germplasm collection, Establishment and maintenance of genetic resources of bamboos, Infrastructure development for bamboo propagation, Mass multiplication of important bamboos through low cost clonal technologies. Farmers friendly technologies for bamboo multiplication, management of bamboo clonal nursery etc.

8. **Tree seed technology:** Seed technology. Nursery technology, Plantation technology, Bamboos propagation, Soil fertility management in plantation, Vermi-compost, Management of plant insect pests in nursery and plantations, Fungal disease of nursery and management, visit to seed lab, botanical garden, medicinal plant nursery etc.

9. **Improved seed & nursery technology:** Seed technology of forestry species, Raising quality seedling in nursery, Nursery management, Agroforestry models, Soil fertility management in nurseries, Management of plant insect pest attacks, Fungal diseases of nursery and plantation and their management, Visit to FRI museums, nurseries and plantations. Botanical Garden and Bambusetum etc.

10. **Nursery and plantation management:** Establishing modern seedling and clonal nurseries, nursery operations, sources of superior germplasm and their management, seed handling and vegetative propagation techniques, planting and aftercare, cultivation technology of important forest trees, protection measures against insect pests and diseases in nurseries and plantations.

11. **Vegetative propagation technologies for genetic improvement:** Conventional and tissue culture techniques for multiplication of important forest tree species, infrastructure development, maintenance of clonal nursery and propagation complex through insect/disease management, technology/transfer in field.

12. **Nursery diseases and their management:** Ideal nursery practices; Soil health and its importance; Improved planting material; important nursery diseases and their identification; disease management methods including cultural, chemical and biological.

13. **Biofertilizer role and application in forestry:** Isolation of biogens from soil. Isolation of Rhizobirum sp. from module, Inoculation production and mass multiplication trials, Application of biofertilizers, Future Prospectus etc.

14. **Biological control:** Isolation of bio control agent from soil. Identification of Trichoderma, Introduction to DNA bar coding for fungal identification Laboratory assays. Mass multiplication of trichoderma green house experiment.

15. **Cultivation of edible mushroom:** Awareness about mushroom their nutritional value, selection of substrate, technique of cultivation, precautions value addition and marketing, Various steps of production of Ganoderma and Oyster mushrooms for the small growers and SHGs.
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<tr>
<th>Name of the Course</th>
<th>Name of course Director &amp; Division</th>
<th>JAN</th>
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<tbody>
<tr>
<td>1. Wood Seasoning</td>
<td>Dr. N.K. Upreti, Scientist-G, Forest Products Division</td>
<td>24-28</td>
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<td>2. Plywood Manufacture</td>
<td>Sh. D.P. Khali, Scientist-F, Forest Products Division</td>
<td>20-24</td>
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<td>3. Wood and Bamboo Preservative and its Utilization</td>
<td>Dr. Sadhna Tripathi, Scientist-G, Forest Products Division</td>
<td>28-31</td>
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<td>4. Reducing wastage in dimensioned lumber through Finger Jointing</td>
<td>Dr. Sachin Gupta, ACTO, Forest Products Division</td>
<td>22-26</td>
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<td>5. Classification &amp; Grading of Timber</td>
<td>Dr. S.D. Sharma, A.C.T.O., Forest Products Division</td>
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<td>6. Application of remote sensing and GIS in forest resource assessment</td>
<td>Sh. Manoj Kumar, Scientist-G, Forest Informatics Division</td>
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<td>7. Bamboo propagation and clonal nursery management</td>
<td>Dr. Meena Bakshi, Scientist-E, Botany Division</td>
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<td>8. Tree seed technology</td>
<td>Dr. Ombir Singh, Scientist-E, Silv. &amp; Forest Mgmt. Div.</td>
<td>04-08</td>
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<td>9. Improved seed &amp; nursery technology</td>
<td>Dr. Manisha Thapliyal, Scientist-F, Silv. &amp; Forest Mgmt. Div.</td>
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<td>10. Nursery and plantation management:</td>
<td>Dr. Dinesh Kumar, Scientist-G, Silviculture and Forest Management Division</td>
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<td>11. Vegetative propagation technologies for genetic improvement</td>
<td>Dr. Meena Bakshi, Scientist-E, Botany Division</td>
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<td>12. Nursery diseases and their management:</td>
<td>Dr. Amit Pandey, Head/Scientist-G, Forest Pathology Division</td>
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<td>13. Biofertilizer role and application in forestry</td>
<td>Dr. Vipin Parkash, Scientist-E, Pathology Division</td>
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<td>14. Biological control:</td>
<td>Dr. Shailesh Pandey, Scientist-E, Pathology Division</td>
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<td>15. Cultivation of edible mushroom:</td>
<td>Ms. Ranjana Juwantha, Scientist-E, Pathology Division</td>
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The following Low-Cost Short Term Training Courses for Field Staff, Farmers and Artisans shall be conducted at FRI during 2018. These courses are designed as per the requirements of the sponsoring agencies.

1. **Extraction, quality assessment, value addition and applications of essential oils from aromatic plants.**
   - **Course Director:** Dr. Vineet Kumar, Head, Chemistry Division
   - **Ph. No.:** 0135-2224210
   - **Dates:** 3rd to 5th October, 2018
   - **Course contents:** Overview of essential oils, Techniques for extraction of essential oils, Physicochemical assessment of essential oils for quality control, GC-MS assisted analysis of chemical constituents, Value addition of essential oils, Industrial applications of essential oils.

2. **Low-cost clonal propagation**
   - **Course Director:** Dr. Meena Bakshi, Scientist-E, Botany Division
   - **Ph. No.:** 0135-2224410
   - **Dates:** 13th to 17th August, 2018
   - **Course contents:** Infrastructure, development for clonal propagation of important forest tree species, Mass multiplication for production of superior planting stock of Shisham, Eucalyptus, Casuarina, Grewia, Teak, Terminalia and Medicinal plants, Maintenance of clonal material in nursery.
Low-Cost Short Term Training Courses for Field Staff, Farmers and Artisans

The requisite course fees (through demand draft drawn in favour of the Director, Forest Research Institute, Dehradun, and payable at Dehradun) should reach on the above address at least 30 days before the commencement of the respective courses.

Participants are advised to commence their journey for the training only after getting confirmation about the course programme from the concerned Course Director at the telephone numbers.

COURSE FEES

The course fees for STTC (including boarding & lodging charges) per participant is as follows:

- Rs.11,000 for Indian nationals,
- Rs. 22,000 for SAARC countries and
- Rs.40,000 for other foreign nationals.

Course fee for “Low-Cost Short Term Training Courses only for farmers, artisans, etc. is Rs. 5,500 course.

Institutional charges @20% on course fees will be charged extra for each course.

The minimum number of participants for each course must be 10 (ten).

Nomination letters for the above courses to be conducted at CSFER, Allahabad may be addressed to the Director, Centre for Social Forestry and Eco-Rehabilitation (CSFER), Allahabad (UP).

Nomination letters for the courses to be conducted at F.R.I., Dehra Dun may be addressed to:

Head, Extension Division
Forest Research Institute
P.O. New Forest
Dehradun – 248 006 (Uttarakhand)
Phone: 0135 – 2758606
Fax: 0135 – 2756865
E-mail: headext@icfre.org Website: www.fri.res.in

Low-Cost Short Term Trainings to be conducted at Centre for Social Forestry and Eco-Rehabilitation (CSFER), Allahabad (UP)

1. Nursery and Planting Techniques

Course Director: Dr. Anita Tomar
Ph. No.: 8052298888
Dates: 08 to 09 November, 2018
Course contents: Designing of nursery, Types of Containers in Nursery, raising of plants of important species in nurseries, Collection, processing and storage of seed, macropropogation, maintenance of Plantation, pre-sowing treatments for enhancing seed germination, Significance of Potting mixture in nurseries, Agro forestry

2. Waste lands reclamation

Course Director: Shri Alok Yadav
Ph. No.: 9411166881
Dates: 12 -13 September, 2018
Course contents: Categories of wastelands, Caused and effects of land degradation, Methods of waste land reclamations, Potential of tree species in reclamation of wasteland.

3. Cultivation and Marketing of important timber species

Course Director: Dr. Anubha Srivastav
Ph. No.: 9451180868
Dates: 30 - 31 October, 2018
Course contents: Nursery and multiplication techniques, Cultivation techniques of important timber species, Utilization and marketing.

Nomination letters for the above courses to be conducted at CSFER, Allahabad may be addressed to the Director, Centre for Social Forestry and Eco-Rehabilitation, Allahabad (Indian Council of Forestry Research & Education), 3/1 Lajpat Rai Road, New Katra, Allahabad – 21 1002 INDIA.
Phone: 91 –0532 -2440795 (O), FAX: 0532-2440795