



IMAGES: Various Skill Development Training Programs at different CSIR Labs.

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## SKILLING/UPSKILLING TRAINING PROGRAMS BY CSIR

### सीएसआईआर द्वारा स्किलिंग/अपस्किलिंग प्रशिक्षण कार्यक्रम

- CSIR-CSMCRI, Bhavnagar, conducted Skill Initiative training program on "Seaweed Cultivation and Processing Technology" from 1st-3rd Nov 2023 and 25 participants from across India participated in this training program.
- CSIR-CBRI organised a Village Connect Program on 02 Nov 2023 at Purquazi under CSIR Integrated Skill Initiative. More than 85 villagers and Students from nearby villages participated in the event.
- CSIR-CBRI, Roorkee organized a training program on "Design, Construction and Operation: SOP & Advances in Burnt Clay Brick Industry" from 03-04 Nov, 2023 under the aegis of CSIR Integrated Skill Initiative. The program was attended by 56 working professionals.
- CSIR-CECRI, Karaikudi organised a Five Days Skill Development Training Program on "Electroplating and Metal Finishing" from 06-10 Nov, 2023 under the aegis of CSIR Integrated Skill Initiative. This program was attended by 27 participants covering different states of India.
- CSIR-NBRI, Lucknow had organized 15 days Skill Training Program on "Quality Analysts for Herbal Industry" (SDP1) & "Phytochemicals Analysis Technician" (SDP2) for 21 Post-graduate students during 26th Oct- 10th Nov, 2023 under the aegis of CSIR Integrated Skill Initiative



- [CSIR-NEERI had organized a Skill Training Program on "Understanding the Climate Science for Environmental Engineering" on October 31, 2023](#)
- [CSIR-IIIM, Srinagar organized a week-long Workshop on "Scientific Interventions on Medicinal & Aromatic Plants in Rural Development" funded by SERB-DST through Accelerate Vigyan and CSIR Integrated Skill Initiative from 30th October to 6th November, 2023.](#)
- [A skill development course on "Plant Tissue Culture Technician \(AGR/Q8101\)" aligned as per the National Skills Qualification Framework \(NSQF\) was conducted at CSIR-IHBT Palampur from 1st Sep 2023 to 31st Oct 2023 under CSIR Integrated Skill Initiative Program.](#)
- [CSIR-IHBT, Palampur conducted skill development courses in the area of floriculture aligned with NSQF from 1st September 2023 to 31st October 2023 under CSIR Integrated Skill Initiative Program.](#)
- [CSIR-NEERI, Nagpur had organized a Skill Training Program on "Analytical Instrumentation Techniques for Measurement of Environmental Contaminants" during 07-08 November, 2023 under CSIR Integrated Skill Initiative activities.](#)

- »» National Skill Development Corporation (NSDC) and DP World Sign MoU to Boost Skill Development
- »» 16.2 million workers need to be upskilled and reskilled in AI and automation to meet India's skill deficit according to new Service Now research
- »» NSDC, OdinSchool partner to Skill Indian Youth
- »» Red Hat working with Indian state governments, academia to address telecom skill gaps
- »» Govt. serious about skill development, wants Karnataka to cater to global needs, says Priyank Kharge
- »» Five MoUs signed at first India-Australia skill & education meet
- »» NASSCOM skill courses at higher education institutions from this session in Odisha
- »» India ranked 5th for green skill intensity in 2022
- »» World Bank-powered "Skill India Mission Operation", transforms lives and ignites India's workforce
- »» NSDC and HCLTech collaborate to introduce digital assessments in tech & non-tech based courses
- »» Govt target of training 6 lakh workers under PM Vishwakarma: Skill Development secretary
- »» Australia's Deakin University and NSDC International partner to launch Global Job Readiness Program for skilling young India
- »» Quality education, skill development crucial: NITI Aayog CEO motivates youths at MIT convocation
- »» Mondelez India joins forces with NSDC; aims to empower Indian youth through skill development
- »» Scope Of Green Jobs And Available Skill Programs
- »» State to get second World Skill Centre, signs MoU between Odisha Govt. and Singapore-based ITE Education Services (ITEES)
- »» Karnataka Skill Development Corporation and Friends Union for Energising Lives collaborate to provide AI/ML training
- »» IIT Kanpur to mentor Indian Institute of Skills in ambitious 5-year partnership
- »» ITIs get new subject on skill thoughts of historic personalities
- »» Govt to operate vocational training institutes for skill development of workers
- »» Union Ministry Of Skill Development Signs MoUs With Dassault Aircraft Services And Hal For Aviation Training
- »» Empowering Tribal Women: KU Launches Skill Development Program in Bandipora
- »» Skill Development Dept J&K inks MoU with BSE
- »» Pune: Pimpri-Chinchwad to Become an 'Education Hub' with International Skill Development Center Approval
- »» Bharat Web3 Association and Maharashtra State Skills University Sign Memorandum of Understanding to Foster Skilled Web3 Talent Development in India
- »» Finland seeks Indian collaboration for addressing profession skills shortages and fostering cross-sectoral initiatives
- »» India, Australia Collaborate For Improved Education And Skill Training





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throughout - often without these  
and instead stress

**FOR MATERIALS ANALYSIS BY ELECTRON-  
SOURCE AND THERMAL ANALYSIS**



## Microscopy and X-ray Diffraction Methods in Materials Characterization

### OBJECTIVES

The purpose of this course is to provide the participant with a comprehensive overview of the use of microscopy and X-ray diffraction in materials characterization. The course will cover the following topics:

- Fundamentals of microscopy and X-ray diffraction
- Sample preparation techniques
- Data collection and analysis
- Applications in materials science and engineering

### TOPICS TO BE COVERED

**X-RAY DIFFRACTION:**

Principles of X-ray diffraction, Bragg's law, reciprocal lattice, powder diffraction, single crystal diffraction, and applications in materials characterization.

**MICROSCOPY:**

Optical microscopy, scanning electron microscopy (SEM), transmission electron microscopy (TEM), and applications in materials characterization.

### COURSE COORDINATORS

Dr. Raymond E.adie and Dr. David Houghton

### RESUME POSITIONS

**X-RAY DIFFRACTION:**

Dr. Raymond E.adie, NIST, Gaithersburg, MD

**MICROSCOPY:**

Dr. David Houghton, NIST, Gaithersburg, MD



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### JOB OPPORTUNITIES/BENEFITS

This course is designed for materials scientists and engineers who are interested in the use of microscopy and X-ray diffraction in materials characterization. The course will provide a comprehensive overview of the use of these techniques in materials characterization, including the fundamentals of microscopy and X-ray diffraction, sample preparation techniques, data collection and analysis, and applications in materials science and engineering.

**CONTACT AND  
INQUIRY**

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## USEFUL LINKS

### उपयोगी लिंक्स

<https://www.csir.res.in/csir-labs-units>

<https://msde.gov.in>

<https://nsdcindia.org>

<https://ncvet.gov.in>

<https://www.education.gov.in>

<https://www.nqr.gov.in>

#### CSIR-Human Resource Development Centre (Skill Nodal Office)

Sector -19, Central Govt. Enclave,  
Kamla Nehru Nagar  
Ghaziabad- 201002 (UP) India

e-mail: head[at]csirhrdc[dot]res[dot]in  
Tele-Ph.: +91-120-2788940/2785053

#### सीएसआईआर-मानव संसाधन विकास केंद्र (कोशल नोडल कार्यालय)

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कमला नेहरु नगर  
गाजियाबाद- 201002 (यूपी) भारत

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