Shri Narendra Modi
President, CSIR

Dr Jitendra Singh
Vice President, CSIR

Dr (Mrs) N. Kalaiselvi
DG, CSIR & Secretary, DSIR

Council of Scientific & Industrial Research

(Ministry of Science & Technology, Govt of India)

CSIR INTEGRATED SKILL INITIATIVE

"Bridging Skill Gaps in Scientific Disciplines"

"Skilling, re-skilling and up-skilling are the mantras for the future workforce"

-Hon'ble Prime Minister
Shri Narendra Modi

GENESIS

The Council of Scientific & Industrial Research (CSIR), known for its cutting-edge R&D knowledge base in diverse S&T areas, is a contemporary R&D organization. CSIR has a dynamic network of 37 national laboratories, 39 Outreach Centres, 1 Innovation Complex, and 3 Units with a pan-India presence. CSIR covers a wide spectrum of science and technology – from oceanography, geophysics, chemicals, drugs, genomics, biotechnology and nanotechnology to mining, aeronautics, instrumentation, environmental engineering and information technology. It provides significant technological intervention in many areas concerning societal efforts, which include environment, health, drinking water, food, housing, energy, farm and non-farm sectors. Further, CSIR's role in S&T human resource development is noteworthy. CSIR envisages a vision of CSIR@2030 as to "Enhance quality of life of the citizens of India through innovative Science and Technology, globally competitive R&D, by developing sustainable solutions and capacity building to fulfill the dream of Atmanirbhar Bharat". This vision of CSIR is aligned to the Government of India's vision for the next 25 years 'Amrit Kal' when independent India becomes 100 years old.

In tune with the Government Policy of the National Skill Mission, CSIR in its Platinum Jubilee Year (2016) has launched a major program – "CSIR Integrated Skill Initiative" at various levels across different CSIR laboratories. The Initiative was launched by Dr. Harsh Vardhan, the then Hon'ble Minister of Science & Technology and Earth Sciences and Vice President, CSIR on September 23, 2016, in order to encapsulate all CSIR skill/ training programs under one umbrella that envisages to cater to a diverse cross-section of people covering different domains of industrial/service sectors. The launched skill/training programs are for various levels beginning with school dropouts to farmers to ITI diploma holders to graduates. CSIR has taken skill/training programs as a great opportunity to extend its technical expertise for the benefit of society. The aim is to train people of India in different skill areas. All these training programs are interconnected and linked to industry requirements thus would invariably contribute to subsequent employment generation, including small-scale entrepreneurship. CSIR aligned its program in 16 out of 36 Sectoral Skill Councils (SSC):

Life Sciences	Agriculture
Healthcare	Food
Electronics	Leather
Automotive	Mining
Construction	Iron & Steel
Aerospace and Aviation	Management & Enterpreneurship
Handicraft and Carpet	Capital Goods
Hydrocarbon	Green Jobs

AIM

The aim of this Initiative is to equip young minds with the necessary technological skills through exposure to CSIR laboratories to address the critical needs for the technical gap created by the enormous usage of advanced technology

OBJECTIVES

- To utilize CSIR knowledge base and infrastructure for contributing national skill mission.
- To integrate the laboratory's existing and new skill/ training programs under 'CSIR Integrated Skill Initiative'.
- To align identified CSIR skill/ training programs with sector skill councils under MSDE.
- To promote entrepreneurship/ technopreneurship in CSIR through skilling.
- To implement special upskilling/ training programs for societal benefits.
- To create a certified talent pool.

DELIVERABLES

- Imparting skill trainings to nearly 1,93,000 individuals in around 5,300 skilling/upskilling training Programs in 7 years (since 2018-25)
- Generation of technical ready workforce as per industry/ market requirement
- Connect training with entrepreneurship / start-ups
- Promoting Government Goals of skill development, entrepreneurship and start-ups.
- Leading the future technological development and helping the nation's high tech R&D capabilities and competitiveness

ACHIEVEMENTS

- CSIR trained over 1,93,000 individuals in 5,300 skilling/upskilling trainings across the sectors and disciplines of all sciences, pan India, so far
- CSIR Integrated Skill Initiative has now been on-boarded on Skill India Portal (SIP)
- CSIR-HRDC has been accepted as approving authority for Training Centres (TC) on the portal
- 35 out of 37 CSIR laboratories have registered as Training Providers (TP) on SIP. 30 out of 35 TPs have opened 35 Training Centres (TC) on SIP
- 82 job-role-based skill development programs have been approved by NSDC/HRDC for affiliation with Sector Skill Councils (SSCs)
- HRDC, as the nodal office, is progressing in doing Industry-Connect to the labs through SSCs to enhance employability
- This programme has received over 90% customer satisfaction
- Active support to the industry in establishing Center of Excellence (CoE) across Sectors/Disciplines
- E-publication of fortnightly "CSIR Skill Bulletin"
- Designing of a user-friendly Web-Portal
- Drafting New Qualifications/ National Occupational Standards (NOS)/ Micro-Credentials

PARTICIPATING CSIR LABORATORIES

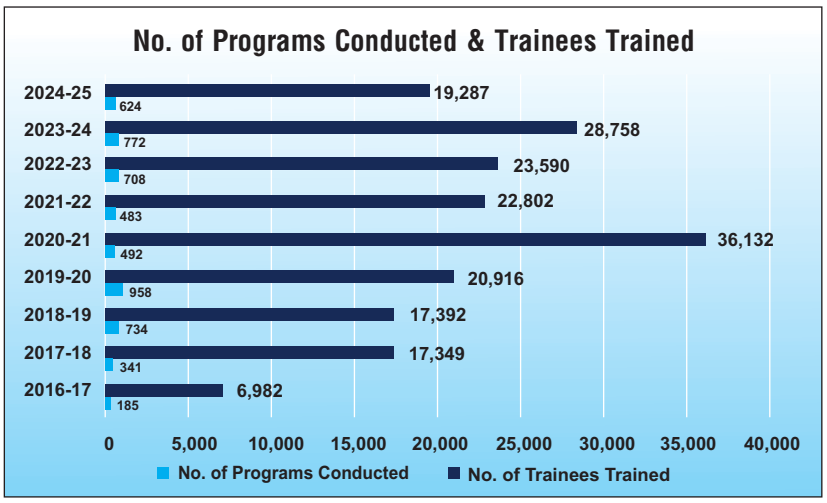
All 37 laboratories of CSIR are participating in this initiative and they can be accessed through-

https://www.csir.res.in/csir-laboratories

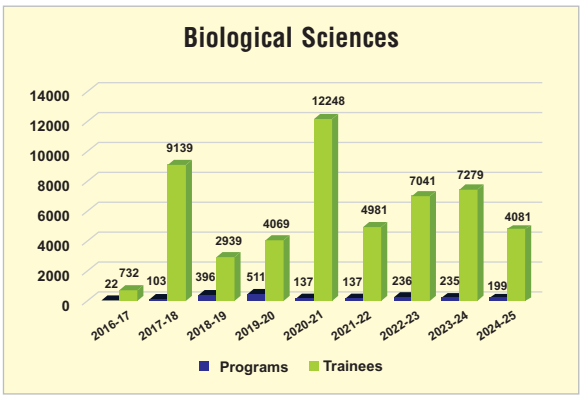
KEY SKILL TRAINING PROGRAMS

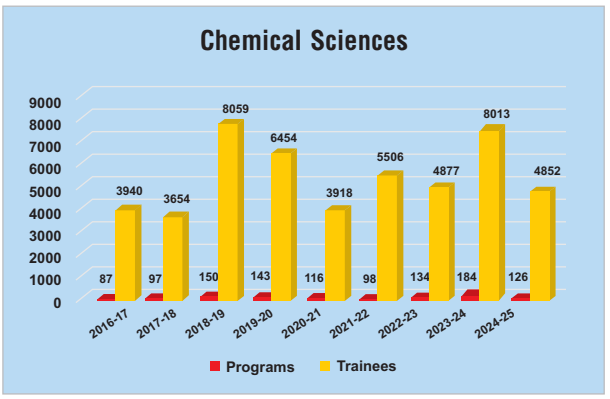
- FIND RT-PCR based diagnostics for SARS-COV-2
- Computational Approaches to Drug Design and in Pathological Tools & Techniques for biomedical applications
- Processing of oilseeds and Entrepreneurs in Northeast for Fruits, vegetables & Spices for Value Addition
- Processing of Spices, coffee and tea and training for Wheat Milling & Bakery Technology
- Herbal Drug Development Technologies
- Application of AI to Biological data analysis
- A step-by-step Hands-on data mining from literature to pathways
- Advanced Bioinformatics, liquid chromatography- Mass spectrometry, X-ray Crystallography, High Performance Liquid Chromatography (HPLC) and in Gene Cloning
- Real time PCR for Women researchers and Training on Molecular Biology
- Pollution monitoring: Soil pollution and Plant Tissue Culture Techniques and its Application
- Theory and practical aspects of household solar thermal gadgets
- Up-Skilling Training Program on AutoCAD
- Fuel Rating by CFR Engines and Basic Skill Development Training on ‘Glass Blowing’
- Welding and CNC turning & machining and AI – Machine Learning
- Remote Sensing and GIS Applications in Environment Impact Assessment and Management
- Classical Analysis for specific constituents of Glass Ceramic and allied materials
- Estimation, Billing and Quality Checking of Civil Works and Electromagnetic Forming and EM Welding/Joining and Metal Injection Moulding - Process, Advantages, Applications
- Quality Control Aspects of Flexible and Rigid Pavement
- Certificate course in advance machining/advance welding
- Aerospace -Design Assistant: Mechanical Design Assistant
- Research Methodology and Science Reporting
- Development of Bamboo Diversity on contaminated Areas/ Fly Ash Dump/Degraded Sites and Surrounding
- Characterization Techniques and Mix Design of Special Concretes.
- Workshop on Industrial Revolution 4.0 for Smart Manufacturing and Interconnectivity

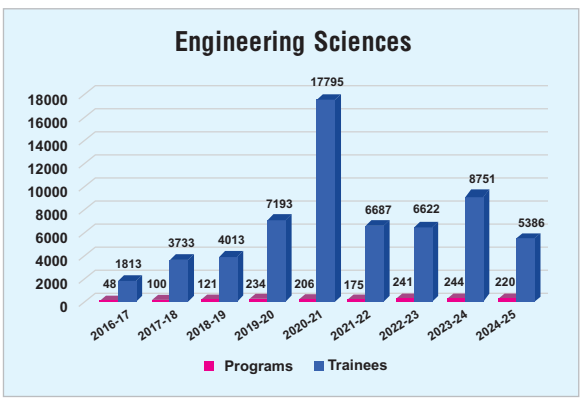
Overall Performance

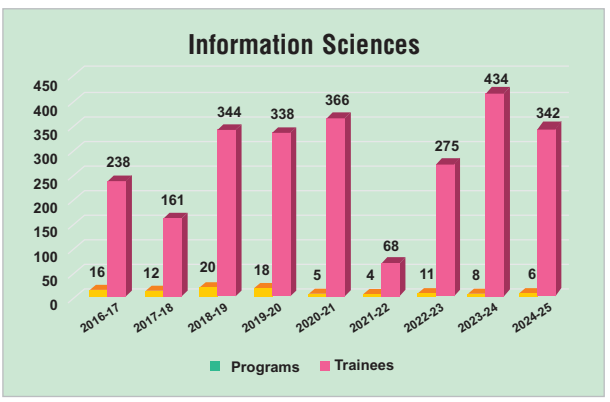


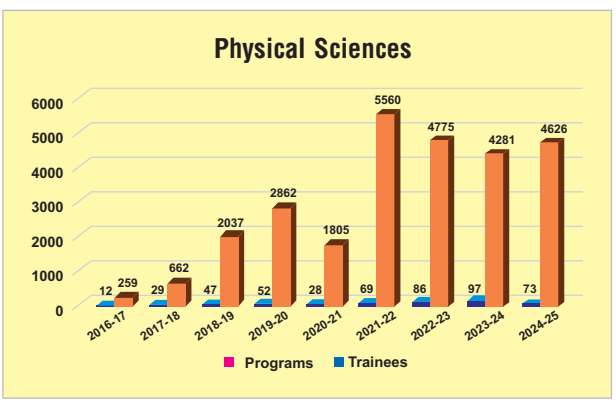
CLUSTER-WISE PERFORMANCE











GLIMPSES OF CSIR SKILL TRAININGS










Image: 'CSIR Skill Coordinators' Conclave & Brainstorming on Future Skills" (November 21-22, 2024) organized by CSIR HRDC in associations with CSIR-Institute of Minerals and Materials Technology (CSIR-IMMT)

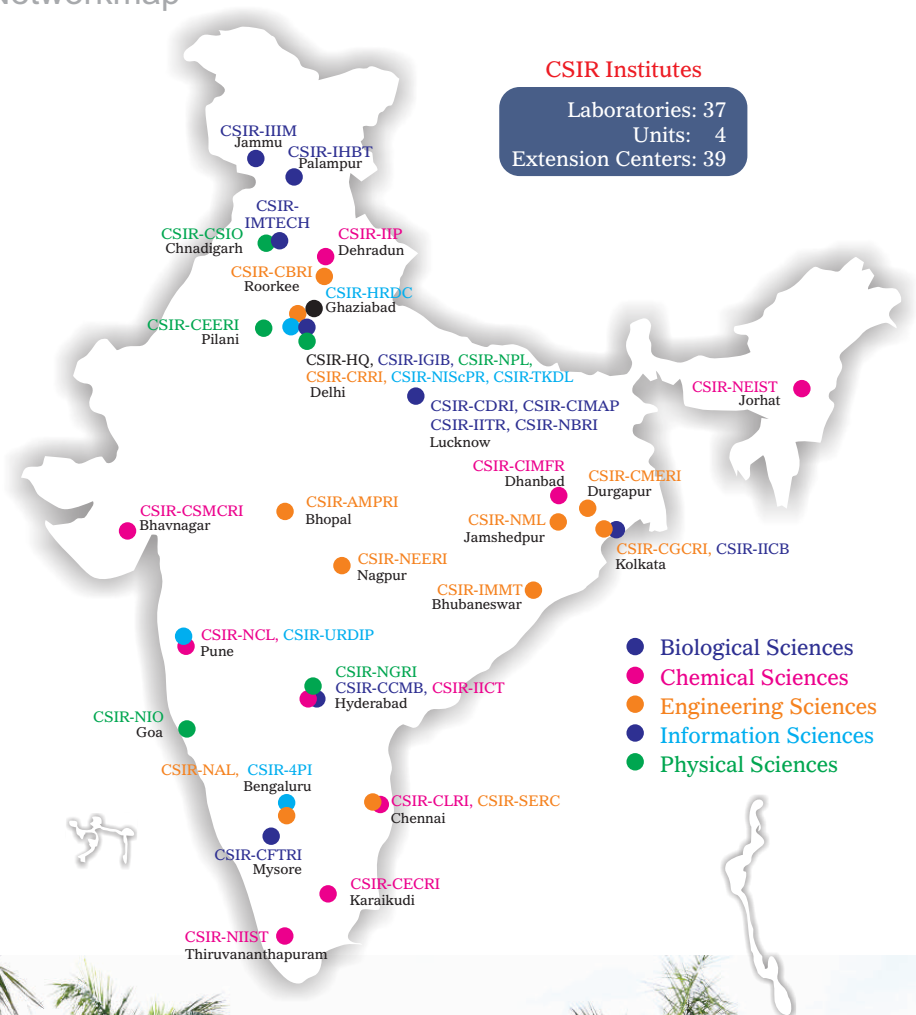








CSIR Networkmap



CONTACT US :-

Head

CSIR - Human Resource Development Centre

(Skill Nodal Office)

Sector - 19, Central Govt. Enclave, Kamla Nehru Nagar,

Ghaziabad - 201002 (UP) India

: +91-1202785053 /+91-120-2789882

: head@csirhrdc.res.in, csirskill@gmail.com

: www.csirhrdc.res.in

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