

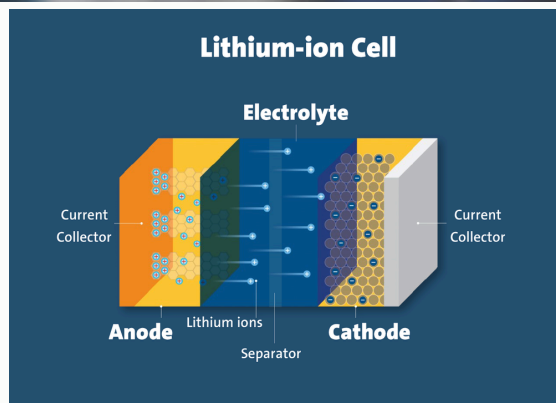


## CSIR INTEGRATED SKILL INITIATIVE

### CSIR-NCL SKILL DEVELOPMENT PROGRAM

# "Lithium-ion battery cells: Fundamentals to Fabrication"

<https://ncisdp.ncl.res.in/>



#### ABOUT COURSE

This skill development program provides comprehensive training in Lithium-ion Battery (LiB) technology by combining core theoretical concepts with practical laboratory experience. The course covers fundamentals of LiB chemistry, electrode and electrolyte materials, cell architecture, performance, safety considerations, and recycling strategies through expert lectures and interactive sessions. Participants will also receive hands-on training in the fabrication of coin cells and small pouch cells, along with basic testing and evaluation methods. The program is designed to equip participants with essential knowledge and practical skills relevant to careers and projects in battery technology and energy storage.

#### COURSE CONTENT

- Basics of Lithium-ion batteries: principles, components, and performance
- LiB materials: cathodes, anodes, separators, electrolytes
- Electrode formulation, coating, drying, and calendaring
- Cell design and configurations
- Hands-on fabrication of coin cells and small pouch cells
- Battery cell testing, performance evaluation, and safety basics
- Overview of LiB recycling, sustainability, and second-life concepts



#### FOR WHOM

- Students
- Academic Researchers
- Industrial Professionals

#### HOW TO APPLY

Application form is available at -  
<http://www.ncl-india.org/files/SDP/Default.aspx>

#### PRIME INSTRUCTOR

**Dr. Manjusha Shelke,**

Chief Scientist, Physical & Materials'  
Chemistry Division

**Dr. G. P. Nayaka,**

Senior Scientist, Physical & Materials'  
Chemistry Division

**Dr. Varun Natu,**

Scientist, Physical & Materials'  
Chemistry Division

#### COURSE DETAILS

**Duration**- 1 week

**Dates**- 23rd February to 27th February 2026

**No. of Seats**- 15

**Eligibility**- M. Sc. Chemistry, Physics,  
Material Science, B. E., B. Tech., M. E.,  
M. Tech.

**Course Fees** -

Students - 5,900 /-

Faculty - 17,700/-

Industrial Professional - 35,400/-

(The fees stated include 18% GST)

Accommodation-1 week + 2 days with  
affordable charges

Here is the reason why  
**WHY CHOOSE US**



- More weightage on hands-on practice
- Interactive sessions
- Robust & sustainable training module
- Affordable fee structure
- Networking



<https://ncisdp.ncl.res.in/>



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