

CSIR-NCL Integrative Skill Initiative



Skill Development Course in

Industrial Catalysis



Course Code: SDP-NCL-CAT-01

Duration: 22nd April 2025 to 9th May 2025 (3 Week)

Number of Participants: 08

Eligibility: M. Sc., B. E.,

B. Tech., M. E., M. Tech. Course Fees:

- Students: Rs. 11800 (inclusive GST)
- Faculties: Rs. 23600 (inclusive GST)
- Industry Participants: Rs. 59000 (inclusive GST)

(Fee includes breakfast, tea and lunch)

Accommodation (3 weeks + 2 days):

○Students: Rs. 1000/-

○Faculty/Professionals: 2000/-

Participants can make payment only by Online Transfer. For details see SDP website

About the course

Catalysts are the workhorses of chemical transformations in the industry. Approximately 85-90% of the products of chemical industry are made in catalytic processes. A catalyst offers an alternative, energetically favorable mechanism to the noncatalytic reaction, thus enabling processes to be carried out under industrially feasible conditions of pressure and temperature. Main aim of the course is to give in depth knowledge on theory and hands on experience in each aspect of industrial catalysis such as catalyst synthesis; catalyst characterization; catalytic batch reaction, its analysis and catalytic continuous reaction with online product analysis.

Course Content: Introduction to catalysts; types of catalysts; homogeneous and heterogeneous catalysts; different types of heterogeneous catalysts used in industrial batch and continuous processes; hands on experience in catalyst synthesis; types of synthesis methods and facility used; catalyst formulation; different types of catalyst characterization techniques; type of information generated from each characterization; interpretation of catalyst, characterization to establish physico-chemical properties; Hands on experience to carry out catalytic reaction in batch reactor and its analysis in GC/HPLC/GC-MS etc; hands on experience in catalytic reaction in continuous reactor with online feed and product analysis. The course will also extend to add on knowledge in homogeneous catalysis; theory and hands on several catalyst characterization tools .

Course Instructors: Scientists from Catalysis & Inorganic Chemistry Division and Other Divisions of CSIR-NCL

How to Apply

Application form is available at

<http://www.ncl-india.org/files/SDP/Default.aspx>

Mailing Address

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(Application will also be accepted by email)

