



National Chemical
Laboratory

CSIR-NCL Integrative Skill Initiative

Skill Development Course in

Synthetic Organic Chemistry



Course Title: Synthetic Organic Chemistry

About the Course: Organic synthesis is the toolbox for building molecules impacting every industry, such as pharmaceutical, food, agriculture, polymers and materials, dye, perfumes and cosmetics etc. Synthesizing known molecules via sustainable chemistry as well as new molecules with improved properties greatly impacting the modern society and economy. Practical knowledge on organic synthesis and handling of state of the art facilities is the pre-requirement to contribute to this field. This course provides a hands-on experience of how the planning, designing, execution, and analysis are done in sync to achieve synthetic goals. After completing the course, the candidate will be able to plan and execute the most commonly practiced and advanced organic transformations in lab scale under a safe environment independently.

Course Content: Safe practices essential for working with chemicals will be demonstrated along with training on online database tools and literature, analytical data processing and proper record keeping. Various standard aspects of synthetic organic chemistry, e.g. Isolation, extraction & characterization of natural products; Protection & deprotection chemistry; Oxidation & reduction reactions; Moisture and oxygen free (inert) reactions (Grignard, BuLi mediated reactions etc); Asymmetric organo-catalysis and product analysis; Transition metal catalyzed C-C bond forming reactions (e.g. Suzuki, Sonogashira couplings) and Peptide synthesis & NMR analysis.

Each of the reactions will be carried out following proper planning and safety requirement, setting up the reactions under direct guidance, monitoring the reaction to completion, isolation and purifications, and analysis of product(s) formed. The experiments and its analysis will be documented for reference.

Course Instructors: Scientists from Organic Chemistry Division, CSIR-NCL, Pune.

Course Code: SDP_NCL34_2022

Commencement Date: 10/08/2022

End Date : 10/10/2022

Registration Deadline Date : 10/07/2022

Selection Intimation Date : 18/07/2022

Duration : 8 weeks

Seat Available: 25

Eligibility: M. Sc. (Chemistry Completed)

How to Apply

Apply Online at the following website

<http://nclsdp.ncl.res.in/Default.aspx>

Mailing Address

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