



Centre for Continuing Education Indian Institute of Science

PROFICIENCY COURSE JANUARY - MAY 2026



Computational Fluid Dynamics(CFD) for engineering applications

Course Coordinator Prof Ratnesh K. Shukla,
Dept Mechanical Engineering IISc



Minimum Qualification :

Bachelor's (B.E., B. Tech) or Masters (M.E./M. Tech/M.Sc) degree

Prerequisite: Introductory courses on fluid mechanics and numerical methods. Familiarity with a programming language (such as Python, C, C++).

Course Fee per participant: INR 15000+18% GST

Course Schedule

Start Date 12 January, 2025

Tuesday and Thursday 8.00PM to 9.30 PM

Mode: Online

Scan here to apply



Registration Link: <https://iisc.online/admissions/home.html>



Course Objectives

This course aims to provide a solid foundation in CFD fundamentals including fluid dynamics, numerical methods, turbulence, and Multiphysics while emphasizing their practical application. Participants will gain hands-on experience with industry-standard tools, focusing on the selection of appropriate models, numerical methods, and the evaluation of result quality. This is done through a combination of lectures, case studies, and assignments with practical exercises. Participants will develop the expertise required for designing, executing, and interpreting CFD simulations that address realworld engineering challenges across a range of sectors. CFD Fundamentals, Discretization and Meshing, Solver methods, validation and verification, turbulence, heat transfer, and multiphysics, RANS, LES, DES models, multiphase and reacting flows, software practice, setting up and running simulations, best practices in pre and post processing, applications across automotive, aerospace, energy and process domains, advanced topics (HPC, data-driven CFD).

Contact us

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More Details

<https://cce.iisc.ac.in/cce-proficiency/>

