



ENGINEERING STAFF COLLEGE OF INDIA (ESCI)

Autonomous Organ of The Institution of Engineers (India)

(IMS [ISO 9001:2015, ISO 14001:2015, ISO 50001:2018, ISO 45001:2018],
ISO/IEC 17025:2017 Certified, AICTE & CEA Recognized Institution)
Old Bombay Road, Gachibowli, Hyderabad – 500 032. Telangana, India



Design Prototyping Centre & Mechanical Division (DPC-MD)

Organizing

Continuing Professional Development Programme on Engineering Simulations using LS-Dyna

16 – 19 June 2025

INTRODUCTION

LS-DYNA is a general-purpose finite element code for simulating the response of materials to short periods of severe loading. LS-DYNA is used in applications such as automotive crashes, bird strikes in aerospace and other high-impact applications involving large deformations. Ansys LS-DYNA is the most used explicit simulation program in the world. Its many elements, contact formulations, material models and other controls can be used to simulate complex models with control over all the details of the problem. Ansys LS-DYNA is the industry-leading explicit simulation software used for applications like drop tests, impact and penetration, smashes and crashes, occupant safety, and more.

OBJECTIVES

The main objectives of the programme are:

- Impart thorough knowledge to the scientist and engineers on modelling and simulating various Multiphysics problems.
- The objective of the programme is to provide an insight into the various aspects of LS-DYNA modelling like keyword structure, penalty and kinematic contacts, element selection and understanding the results.

COURSE COVERAGE

The following topics will be deliberated during the training programme:

- Keyword structure
- Joint modelling
- Element selection
- Thick and thin shells
- Impact problems
- Projectile motion
- Explosion modelling
- Crash modelling
- Spot welding
- SPH modelling
- Bird impact (ALE)
- Foam material modelling
- Case studies and discussions on on-going projects

METHODOLOGY

Methodology of the programme includes Chalk & Talk sessions /lectures/group discussions/case studies/debates with audio-visual aid, benched marked video shows etc. All the sessions will be interactive demanding active participation from all the member participants.

TARGET PARTICIPANTS

Professionals from Governments, Private and Public Sector Undertakings (from Design, Prototyping, Development, Service & Maintenance Divisions), Scientists working in Research Laboratories & Faculties of various Colleges & Universities, Startups into New product development, Dockyard personnel and repair shop personnel will find the programme useful.

CERTIFICATION

A Certificate of participation will be awarded to all the participants after the successful completion of the training programme.

COURSE ADVISOR & RESOURCE PERSONS:

The Faculty consists of experts from the Industry, Research establishments and Academia besides ESCI.

COURSE DIRECTOR

Dr. N V S S Sagar, Ph.D

Faculty

Design Prototyping Center and Mechanical Division

Engineering Staff College of India

Gachibowli, Hyderabad.

Email: mechanical-dpc@escihyd.org

Mobile No.: 040-66304184/ 7416 409 119

PROGRAMME DATES: 16 – 19 June 2025

COURSE FEE: Rs. 22,500/- (Rupees Twenty Two Thousand and Five Hundred Only) per Participant + **GST@18% Extra**. Fee includes, course material, course kit, twin-sharing/single AC accommodation as per availability, breakfast, lunch, dinner, tea / coffee and snacks during the actual days of training programme.

DISCOUNT:

Additional 10% discount for three or more participants, if sponsored by the same organization. PAN Card No **AAATT3439Q**; GST No. **36AAATT3439Q1ZV**. H.S. No. 999293 (Under commercial training or coaching services – clause 65(105) (ZZC) of Finance act – 1994).

Programme fee is to be paid in in favor of “**THE INSTITUTION OF ENGINEERS (INDIA) – ENGINEERING STAFF COLLEGE OF INDIA**” in the form of Demand Draft (DD) payable at Hyderabad. Alternatively, the payment may be made by Electronic Fund Transfer (EFT) to ESCI - SB A/c No. **10007111201** with **State Bank of India**, P.B.B / Khairatabad, Rajbhavan Road, Hyderabad-500004 by RTG's/ NIFT / **IFSC Code No: SBIN0004159**. While using EFT method of payment, please ensure to communicate us your company name, our Invoice reference and programme title.

REGISTRATION:

To register, please send your nominations by providing name, designation, contact address, email address, mobile no, telephone and fax number of the participant along with the details of mode of payment of fee, addressed to: dpc@escihyd.org/mechanical-dpc@escihyd.org. For more details please contact our program assistant, Ms Sameera, Mobile No: 7416 409 119.

GENERAL INSTRUCTIONS:

- ESCI encourages participants to present case studies from their respective organizations.
- ESCI provides complimentary accommodation and boarding to the participants one day before commencement (Check-in 12:00 h) and one day after conclusion (Check-out 12:00 h) of the programme duration. Overstay charges will be applicable as per ESCI rules (subject to availability of accommodation).
- Well-developed Information Centre and Internet facilities are available to the participants free of cost.