Sant Longowal Institute of Engineering and Technology (SLIET), Deemed-to-be University, was established in 1991 and is funded by the Ministry of Education (MoE), Government of India, to provide technical education in emerging areas of engineering and technology. Over the years, the Institute has established itself as a premier institution imparting technical education of a very high standard.

The Institute caters to the technical manpower requirements at various levels by adopting a modular system of professional education with emphasis on practical training in industry. The academic programmes include ICD, B.E., M.Tech. (NBA accredited), and Ph.D. programmes in various branches of engineering and technology.

The Institute has a sprawling campus spread over 451 acres of lush green land and offers an ideal environment to nurture a peaceful state of mind required for research and other student activities.

INSTITUTE VISION

Sant Longowal Institute of Engineering and Technology shall strive to act as an international podium for the development and transfer of technical competence in academics through formal and non-formal education, entrepreneurship, and research to meet the changing needs of society.

DEPARTMENT OF MECHANICAL ENGINEERING



The Department of Mechanical Engineering is the largest department of the Institute. The department offers several programmes at different levels, including ICD, Diploma, Degree, and Postgraduate programmes.

The department is actively engaged in research areas such as Non-Conventional Machining, Hybrid Machining, Composite Materials, Functional Nanomaterials, Automotive Engineering, Bioenergy and Alternative Fuels, Precision Metrology, Optimization, Modelling and Simulation, CAD, FEA, Welding Technology, etc., and has undertaken many sponsored projects.

The department regularly organises conferences, symposia, and MoE/AICTE/ISTE-sponsored training programmes, and is committed to imparting quality education, research, and training for attaining excellence.

ABOUT THE PROGRAM

A one-week Faculty Development Programme on **"Next-Generation Materials and Additive Manufacturing for Sustainable Energy Technologies: Materials 5.0" (NG-MASET 2027)** will be organised in **hybrid mode from 04–08 January 2027**. The programme will explore how artificial intelligence, data-driven materials development, smart composites, additive manufacturing, digital twins, and sustainable energy materials can support human-centric, resilient, and low-carbon engineering. Participants will gain exposure to emerging materials, intelligent manufacturing, advanced characterisation techniques, and research opportunities across academia and industry.

PROGRAM SPEAKERS

Eminent experts from IITs, NITs, CFTIs, universities, research organisations, and industry will deliver the sessions.

MODE OF CONDUCT

The programme will be conducted in **hybrid mode**. Learning resources and e-certificates will be provided to eligible participants upon successful completion of the programme.

ELIGIBILITY

The interdisciplinary programme is open to faculty members, research scholars, UG/PG students, and professionals from industry, defence, and research laboratories working in engineering, technology, and allied disciplines.

FACULTY DEVELOPMENT PROGRAMME

(Hybrid Mode)

on

Next-Generation Materials and Additive Manufacturing for Sustainable Energy Technologies: Materials 5.0 (NG-MASET 2027)

(04–08 January 2027)

Organised
by

Department of Mechanical Engineering

Sant Longowal Institute of Engineering and Technology

(Deemed to be University under Ministry of Education, Govt. of India)

Longowal -148106,Sangrur (Punjab)
INDIA

Chief Patron: Prof. Mani Kant Paswan, Director
Patron: Prof. A. S. Shahi, Dean (Academics)
Chairperson: Prof. Shankar Singh
Head, Mechanical & Civil Engineering
Coordinators:
Dr. Rakesh Kumar, Associate Professor
Er. Jonny Singla, Assistant Professor
Er. Divesh Bharti, Assistant Professor

COURSE CONTENTS

Materials 5.0: human-centric, sustainable and resilient materials innovation

AI/ML for materials discovery, design, processing and property prediction

Advanced materials, high-entropy alloys, nanomaterials and biomaterials

Hybrid, multifunctional, self-sensing and self-healing smart composites

Additive manufacturing of metals, polymers, ceramics and composites

Generative design, topology optimisation, digital twins and process simulation

Advanced characterisation, computer vision, NDE and intelligent quality control

Materials for batteries, hydrogen, solar energy and thermal management

Green manufacturing, circular economy, recycling and life-cycle assessment

Research translation, intellectual property and industry–academia collaboration

REGISTRATION FEE

The registration fee structure is as follows:

Participants	Fee (₹)
Faculty/Staff outside SLIET	250/-
UG/PG/Research Scholars	100/-
Industry Professionals	500/-
SLIET Faculty (Regular/Contractual)	NIL

Participation is limited to approximately 50. Selection will be made on a first-come, first-served basis.

Bank-account and payment details for NG-MSET 2027:

Bank: Central Bank of India, SLIET, Longowal
Account No.: 4153518111
IFSC Code: CBIL0283105
Scan QR Code. NG MASET 2027 SCAN & PAY UPI ID: 202610060000299-qrp@cbin

Registration Link:
https://forms.gle/9WK8TPVKDaU7YVtp9

IMPORTANT DATES
Last date for registration: 02.01.2027
Notification of selection: 02.01.2027

HOW TO APPLY FOR THE COURSE :
Please register online using the provided registration link or by scanning the QR code.

ADDRESS FOR CORRESPONDENCE
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Chairperson: Prof. (Dr.) Shankar Singh,
HOD(Mechanical &.Civil Engineering)
Email: shankarsingh@sliet.ac.in