

Eligible candidates:

Professionals/Research Scholars/faculty members working in the area of composites and interested to digitize their current manufacturing system.

Registration, shared accommodation and food:

Graduates/Postgrads of academia: ₹1500+GST,
Industry: ₹5500+GST
Accommodation per day (extra): ₹1100+GST

First 50 interested candidates will be selected on a 'first-come-first-served-basis.'

Course Registration & online payment

Candidate should apply **online** through the following procedure by clicking 'how to apply' and 'how to pay' on the Short-term course SELF SPONSORED at the link

<https://erp.iitkgp.ac.in/CEP/courses.htm>

Course Duration and delivery:

4-day course.

Course will be delivered by experts from *around the world* in the field of advanced and automated composites. – Includes tour to laboratory facilities.

Organizers:

Principal Coordinator:

Dr Nilanjan Das Chakladar (PhD, CEng MIMechE)

Assistant Professor

PIC, Composites Engineering Facility, Mechanical Engineering Department, IIT Kharagpur

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Joint Coordinator:

Prof Surjya Kanta Pal

Professor, Mechanical Engineering Department

Chairperson, Centre of Excellence in Advanced Manufacturing Technology, IIT Kharagpur

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Short Term Course COMPOSITES 4.0 Present and Future

01 Dec - 04 Dec 2022

Coordinators:

**Nilanjan Das Chakladar
Surjya K Pal**



Venue: CRR Building

**Centre of Excellence in
Advanced Manufacturing
Technology
IIT Kharagpur
5th Floor, CRR Building
coeamt@iitkgp.ac.in**



Day 1 (10:00 – 17:00)

- Registration
- What is Composites 4.0?
- Scope of Composite MSMEs in India
- Purpose and foundation of the centre
- How the centre could help/ collaborate with MSMEs and big industries?
- Lab tour

Day 2 (09:00 – 18:30)

- Traditional manufacture of composites and Industry 4.0
- Robotic Manufacture of composites.
- Advancements of composites in Aerospace Industries.
- Composites in Rail Industries.
- Automotive Composites and their enhancements.
- Lab tour

Day 3 (09:00 – 18:30)

- How composites mechanics, design and fabrication are linked?
- Challenges/opportunities of setting up Composites industry in India?
- Composites in Biomedical and Spacecraft applications.
- Lab tour

Day 4 (09:00 – 13:00)

- In-situ sensing and prediction of automated composites
- Structural Health monitoring of aerospace composite systems.
- Zero-waste and zero-defect manufacture of composites.
- Interactive session, certificate, souvenir, feedback.

Short Term Course COMPOSITES 4.0

Present and Future

In this course, we will deliver the current stand of industrial composites in India and abroad, opportunities of MSMEs under the 'Make-In-India' initiative in Composites, or as we call 'Make-Composites-In-India'. And can we promote composite manufacturing in India as an Industry 4.0 enabled technology? We look forward to your support and help in composite growth in India toward automated composite fabrication to lead the World Composite Exports – an initiative of IIT Kharagpur.

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