



IIT(ISM)
DHANBAD



MALAVIYA MISSION
TEACHER'S
TRAINING PROGRAMME
MMTTC – UGC INITIATIVE

HYBRID REFRESHER COURSE

DEVICE-CIRCUIT CO-DESIGN

From Emerging Materials to Intelligent Systems

Two-week Hybrid Faculty Development / Refresher Course

AUG
10-23
2026



Host Institute
Indian Institute of Technology
(ISM) Dhanbad



Venue
Malaviya Mission Teacher Training Centre,
IIT (ISM) Dhanbad



Registration Free



Application deadline: August 7, 2026



COURSE FOCUS

A cross-layer journey from emerging materials and nanoscale device physics to reliable circuit and intelligent system design.



Emerging devices –
2D and carbon nanomaterial FETs



Compact modelling –
SPICE-ready device parameters



Circuit reliability – variability, leakage, electro-thermal effects



Intelligent systems – low-power IoT and system implications



PARTICIPANTS WILL LEARN TO



Develop device-aware circuit designs



Analyze cross-layer interactions from materials to systems



Integrate reliability-conscious strategies into advanced electronic systems



72
contact
hours



48+24
lecture +
hands-on



CAS /
UGC
recognized



MCQ
assessment



Certificate
on successful
completion



HANDS-ON EXPOSURE



SPICE
simulations



MATLAB-based
modelling



TCAD
demonstrations



Project work
and activities



ELIGIBILITY

Faculty members of universities and colleges under UGC Section 2(f). For Refresher Course admission, FIP participation is a prerequisite and a one-year gap after FIP is required.



RESOURCE PERSONS & EXPERT POOL

Eminent experts from IIT Roorkee, IIT Kharagpur, IIT BHU, IIT Ropar, IIT Patna, IIT Madras, IIT Kanpur, IIT Guwahati, IIT Indore, IIT Delhi, IIT Gandhinagar, IITDM Kancheepuram, IISc Bangalore, CSIR-CGCRI, Synopsys, ISRO/SCL and IIT (ISM) Dhanbad.



APPLY ONLINE

Register at mmc.ugc.ac.in, select Refresher Course, choose Indian School of Mines (Dhanbad) (10/08/2026–23/08/2026), upload approved NOC, and submit. Registration queries: Ayesha (7703889628)/ Gautam (9060692538).



Scan to Register



COURSE COORDINATORS

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NO OBJECTION CERTIFICATE

Photo

Mob..... Email.....

This is to certify that Prof./Dr./Mr./Ms.is
working as (Regular/ Contractual/ Ad hoc/ Part-Time)

Subject.....in the Department of
.....,

College/Institute

University.....

He/ She is permitted to attend (Course) to be
conducted by MMTTC-
from.....to..... through Online/Residential/Hybrid Mode.

The timings for the programme are from.....AM/PM toAM/PM.

- i) Our College/Institute/Organization is affiliated to
.....University, since..... and recognized
under Section 2(f) & included under Section 12(B) of UGC Act 1956 vide letter No.
Dated.....received from University Grants Commission (UGC), New Delhi.

OR

Our College does not come in the purview of the Section 12(B) of the UGC Act, but have been affiliated to the
..... (University), for at least 3 years.

- ii) The Certificate stating that the teacher concerned has not attended any Faculty Induction Programme/ Refresher Course during the last one year. If he/she has attended any Faculty Induction Programme and Refresher Course during the last one year, then mention the dates from toand also mention the due dateof next promotion (only required for Refresh Course).
- iii) The application of the above named teacher is forwarded with recommendation that when selected, he/she will be relieved in time to participate in the above course.

Place:

Date:

Signature
(Head of Institution/Principal/HoD)
(with Seal)