The Indian Institute of Metals Short Professional Educational Courses (Online) on

"Additive Manufacturing: From Design to Deployment"

(Course Number IIM-26-112)

Online Mode 17th, 18h & 19th March 2026, 09:30 – 14:00 each day

Background: Additive Manufacturing (AM) is transforming modern engineering by enabling complex geometries, customized components, and efficient material usage across industries. As metal AM technologies mature, there is a growing need to understand the complete workflow from design and pre-processing to process physics, real-time monitoring, and performance evaluation. This short-term course provides a comprehensive introduction to these elements, bridging fundamental principles with practical insights and industrial applications to equip participants for effective deployment of AM in real-world settings.

Speakers Profile: The faculty for this course comprises eminent experts from leading institutions.

1. Dr. Gopinath Muvvala, IIT, Hyderabad
2. Prof. Suryakumar S, IIT Hyderabad
3. Dr. Viswanath Chinthapenta, IIT Hyderabad
4. Dr. Gururaj Telasang, ARCI Hyderabad
5. Dr. Somashekara M A, IIT Dharwad
6. Dr. Buchibabu Vicharapu, IIT Palakkad

The Course Content would be covered in Classroom Lectures accessible through Virtual on-line route from 17th to 19th March 2026.

Who should attend: This course is designed for Academicians, researchers, industry professionals and students interested in metal additive manufacturing.

Course Objectives: The course is designed to:

- Understand fundamental pre-processing and digital design steps for metal AM.
- Learn core process physics of major metal AM technologies.
- Exposure to real-time monitoring of melt-pool behavior and defect formation.
- Develop insight into process–structure–property relationships in AM-built components.
- Acquire basic knowledge of thermal modelling for heat flow and distortion tendencies.
- Understand industrial applications, qualification needs, and deployment practices.
- DfAM principles related to manufacturability and support strategies.
- Build an integrated view of the full AM workflow from design to reliable component realization.

Topics or modules to be covered:

- **Pre-processing in Additive Manufacturing:** Tessellation, part orientation strategies, support structure generation, slicing methods, and tool-path optimization.
- **Fundamentals of Metal Additive Manufacturing:** Process physics of major metal AM technologies and key process parameters.
- **Real-time Process Monitoring:** Melt-pool behaviour, defect signatures, sensing approaches, and data interpretation.
- **Process–Structure–Property Relationships:** Linking process conditions to microstructural evolution and resulting mechanical performance.
- **Performance Enhancement Strategies:** Methods to improve strength, ductility, fatigue life, and reliability of AM components.
- **Microstructure Tailoring:** Approaches for controlling grain structure, phases, texture, and residual stress through process and post-process strategies.
- **Thermo-Mechanical Modelling:** Fundamentals of heat transfer, melt dynamics, stress evolution, and demonstrations using commercial simulation tools.
- **Industrial Applications and Challenges:** Case studies, qualification requirements, defect mitigation, and deployment considerations across sectors.
- **Design for Additive Manufacturing (DfAM):** Principles of manufacturability, support design, feature limitations, and best practices for metal AM

Registration Fees and Payment Methods

Participant type	Only Theory Course
IIM Member	5000 + 900* = 5900
IIM Non Member	7500 + 1350* = 8850
Student Member	800 + 144* = 944
Student Non-member	1200 + 216* = 1416
* (18% GST)	

- Participants may join for the 3 days course module which shall be conducted virtually.
- Advance payment of Registration fees is mandatory.
- Participation fee is non-refundable; however, change in nomination is possible.
- Students may furnish suitable proof of they being students while filling in the online form.
- 10% discount shall be offered if more than 5 participants are nominated by any Organisation (Not Applicable for Students).

Participants are requested to register via
https://urlsmush.com/s1RNlC [For Individuals],
https://urlsmush.com/d89nut [For Organizations]

and pay online as per the details given below.

The online transaction receipt, mentioning the course number IIM-26-112 may be uploaded by using the link provided in google form. Alternately, a demand draft in favour of "The Indian Institute of Metals" payable at Salt Lake, Kolkata can be sent to The Indian Institute of Metals, Metal House, Plot 13/4, Block AQ, Salt Lake, Sec V, Kolkata : 700 091.

Contact Person :

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Bank Details :

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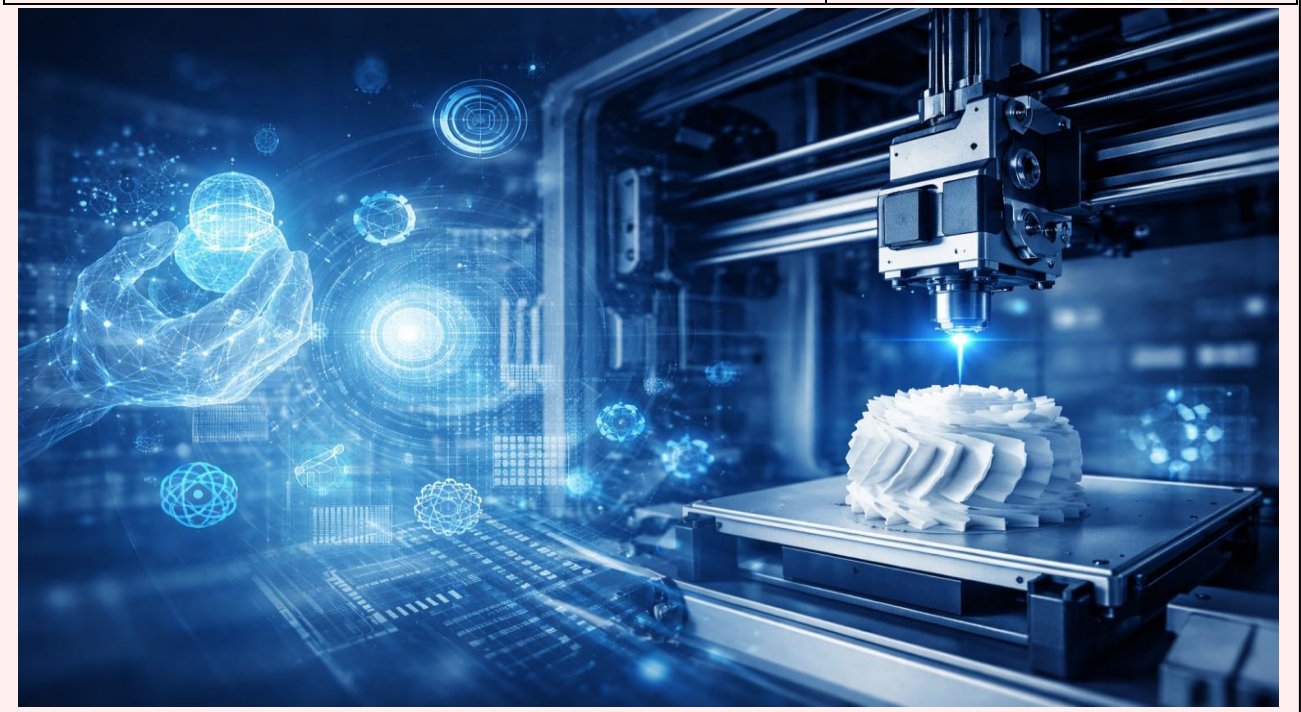

IIM Metallurgy Materials Engineering