



राष्ट्रीयइलेक्ट्रॉनिकीएवंसूचनाप्रौद्योगिकीसंस्थान,कालीकट  
National Institute of Electronics & Information Technology,  
Calicut



सत्यमेव जयते

Ministry of Electronics and  
Information Technology  
Government of India

# Online Course Prospectus

*ISO 9001-2015 Certified*

## Industrial Training on 3D Printing/Additive Manufacturing

Starting Date: 06-Jan-2025  
(10 days @ 1.5 Hours/day)

### Course Description

Additive Manufacturing is an emerging technology showing potential to reach new markets and create new jobs. Students who complete this program should be able to:

1. Concepts of Additive manufacturing
2. Applications of Additive manufacturing

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## Online Course Prospectus

**Course Name:** Industrial Training on 3D Printing/Additive Manufacturing

**Course Code:** AM100

**Duration:** 10 days @ 1.5 Hours/day (15 Hours)

Monday – Friday, Daily 1.5 Hour online Class (15 Hrs)

Online class Timing: 4:00 PM to 5:30 PM

**Course Fee:** Rs. 2,000/- (Including GST)

**Starting Date:** 06-Jan-2025

**Coordinator:** Shri. Rameshkumar MS, PTO, Mob: 9446031433,  
[rameshkumar@calicut.nielit.in](mailto:rameshkumar@calicut.nielit.in)

### **Who can attend? / Qualification:**

Any under graduate/ diploma student with basic knowledge of design.

- Students pursuing Engineering
- Professionals working on design s development activities and others who would like to develop competency in industrial product design and additive manufacturing
- Research students
- Teaching professionals& faculties

### **Course Content:**

<b>AM100: Industrial Training on 3D Printing/Additive Manufacturing (Online)</b>		
Sl No	Core Modules	Duration (10 days)
1	Introduction to AM	1 day
2	AM process chain	1 day
3	Classifications of AM	2 days
4	FDM in detail	3 days
5	Post processing of AM parts	2 days
6	Applications of AM	1 day

1. Introduction to AM: - AM evolution, Distinction between AM & CNC machining, Advantages of AM
2. AM process chain: - Conceptualization, CAD, conversion to STL, Transfer to AM, STL file manipulation, Machine setup, build , removal and clean up, post processing
3. Classifications of AM: - VAT Polymerization, Material jetting, Binder jetting, Material extrusion, Powder bed fusion, Sheet lamination, and Direct energy deposition methods for metals, Composites & Polymers and other materials
4. FDM in detail: Slicing software - Cura: Adding printer, placing and manipulating models, print configuration & printing
5. Post processing of AM parts: Support material removal, surface texture improvement, accuracy improvement, aesthetic improvement, preparation for use as a pattern, property enhancements using non-thermal and thermal techniques.
6. Applications of AM: - Functional models, Pattern for investment and vacuum casting, Medical models, art models, Engineering analysis models, Aerospace, defence, automobile, Bio-medical and general engineering industries

*In case students are not able to attend online live classes, the recorded lectures of all major classes are available in our Learning Management System (LMS). Students can access LMS by entering their user name and password and they can do offline reference and learn at their own pace and timings, during the course period. After attending the recorded lectures students can submit their assignments and interact through email/ LMS /WhatsApp link.*

### **Prerequisite (optional):**

- Knowledge of engineering design
- Basic knowledge of computers

### **Course Fee and important dates:**

Course Fee	Rs. 2,000/- (Including GST)
Last date for registration & payment	02-Jan-2025
Sharing of online Link / passwords & other details	06-Jan-2025 @ 2:00 PM

### **Faculty Profile:**

All faculty members involved in the course are having post graduate degrees in engineering with several years of experience in the field.

### **Course Coordinator:**

Rameshkumar MS  
Principal Technical Officer  
9446031433(M), 0495 2287266- Exn-209(O)  
Email: rameshkumar@nielit.gov.in

## **Certificate:**

**E-Certificate** will be issued to the participants through registered email after completion of classes and evaluation through ONLINE assessment.

*60% attendance (either attending recorded lecture videos or live online classes through our LMS portal) and feedback submission are mandatory for awarding the certificate.*

## **Terms and Conditions:**

- 1. In case any registered candidate could not attend the online session due to technical issue at their side there will not be any refund of the course fee and the sessions will not be repeated*
- 2. In case the online course is cancelled /postponed due to some technical issue at NIELIT side and new date is not convenient to the candidate, our liability is limited to the refund of the course fee and NIELIT shall not be responsible for any consequential damages.*
- 3. 60% attendance and feedback submission are mandatory for awarding 'participation' certificate. For courses with assessment, 'successfully completed certificate' will be awarded subject to the candidate passing the test with minimum 50% marks, minimum 60% attendance and feedback submission.*

For more details about our institution and facilities visit us

Website: <https://www.calicut.nielit.in/>

Twitter: [https://twitter.com/CAL\\_NIELIT](https://twitter.com/CAL_NIELIT)

Facebook: <https://www.facebook.com/CAL.NIELIT>

**[Click Here to Register](#)**

*An Autonomous Scientific Society of  
Ministry of Electronics & Information Technology,  
Govt. of India*



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