CIPET: SCHOOL FOR ADVANCED RESEARCH IN PETROCHEMICALS (SARP) - ARSTPS
(AN R & D WING OF CIPET)
ADVANCED RESEARCH SCHOOL FOR TECHNOLOGY AND PRODUCT SIMULATION (ARSTPS)

Skill Development Course on
Additive Manufacturing Technician
Course Code: SAM 100

Commencement of the course	: Second week of September 2023
Duration	: 4 Months (3Months + 01 Month Internship) 16 Weeks (@8hrs / day)
Course Fees	: Rs. 40,000/- + GST 18%
Course coordinator	**:** Smt. Soundarya S, Asst Tech Officer, Mob**:** 7598866883
No of seats	**:** 12
Registration fees	: Rs.200/-

Introduction about the course:

3D printing refers to the manufacturing process that additively forms or creates a physical object from a digital design. It can be done in a variety of processes in which material is deposited, joined or solidified under control, with material being added together (such as plastics, liquids or powder grains being fused), typically layer by layer. 3D Printing has changed the manufacturing world for the better and in broader sense it becomes Additive Manufacturing.

This course will demonstrate the workings of 3D printers and impart skills involved in creating a CAD model and converting it into a three-dimensional object. You will be aware of different types of 3D printing in materials at both polymer and metal side. Many industries sectors use 3D printing or additive manufacturing technologies to

produce aerospace/Drone parts, prosthetic limbs, Industrial parts and even 3Dprinted medications. 3D printing also provides many opportunities to aid visual and practical learning across the sciences for schools and colleges especially for Mock up study. 3D-printed components are often used as test models for scientific experiments across different disciplines, including mechanical engineering, aerospace, and robotics.

Upon the completion of this course, candidates will learn the economic benefit of using 3D printing technology and will have ability of creating complex and unusual shapes made up of additive manufacturing

Objective of the Course
The course is aimed to create a skilled manpower in the field of 3D Printing/ Additive Manufacturing with knowledge about various additive manufacturing techniques, Design for Additive Manufacturing, Model generation (3D modelling) and Post Processing techniques.

Expected Job Roles
Students well versed in 3D printing are in great demand in almost all types of industries because this AM technology that is much faster than all conventional manufacturing technologies.

The scope of Additive Manufacturing is growing faster. As a result, the market requires more skilled manpower in 3D Printing technologies.

Course Structure:
This course includes blend of Theory and Practical classes on additive manufacturing. Candidates will have hands-on experience in handling live project.

The subject covers:
- Engineering Drawing concepts
- CAD software – 2D and 3D modelling
- Plastic product design
- Polymer Materials
- Metrology
- DFAM concepts
- Part Preparation Software
- System/Machine Control Software
- Orientation

- ➢ Slicing
- ➢ Printing
- ➢ Post processing of 3D Printed models
- ➢ 3D Printer machine maintenance

Equipment Details:

S.No.	Name of the Equipment	Image
1	Fused Filament Fabrication (FFF) – 3dGence	
2	Fused Deposition Modeling (FDM) – Stratasys F900	
3	Selective Laser Sintering (SLS) – 3dsystem Prox 500	

4	Stereo lithography (SLA) – EPA650 Shinning 3d	
5	Multijet Fusion Printer (MJF) – HP Multijet fusion 5200	
6	Selective laser Melting (SLM) – SLM280HL	
7	Vacuum Casting (VC) – Renishaw 5/01	

Course Fees:
100% should be paid at the time of admission

Eligibility:
➢ Students of Diploma in Mechanical, Automobile, Aeronautical Engineering polymer, plastics or ITI (Fitter/Turner/Machinist).

➢ Anybody interested to get an entry into the world of 3D printing with UG of different discipline will also be considered, provided they should appear for an interview and availability of seats.

Selection Procedure:
First come first serve

Admission Details:
Selected candidate will be intimated and upon payment, the admission will be confirmed.

Dates to remember:
Last date to submit application   : 01.09.2023
Number of seats   : 12
Commencement of Course   : Second week of September 2023

Placement: Placement assistance will be provided

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