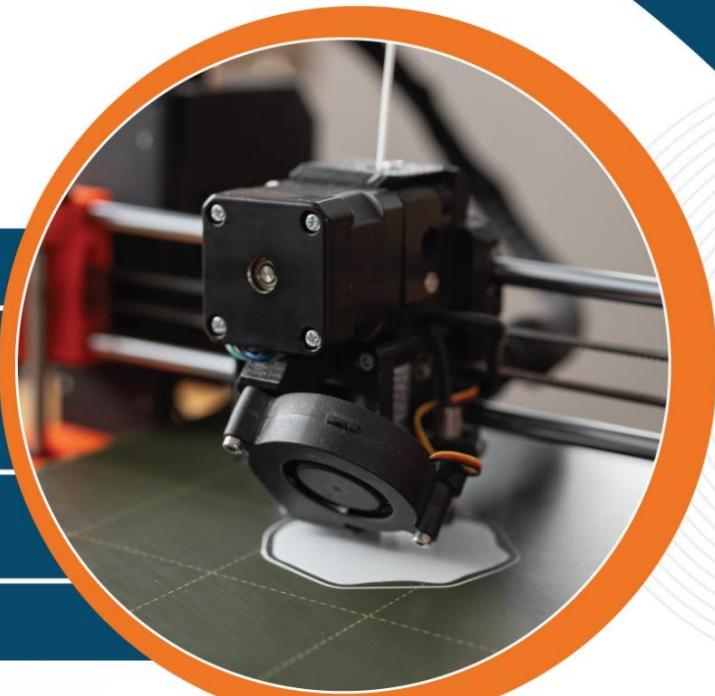Project Funded Under tih a ni PM-DevINE - Digital hmanga siam a ni and **3D Printing** Centre tha tak a ni in a ni Electronic hmanga thil siam chhuahna Cluster a ni(EMC)Sawrkar Agency dangte nen thawhhona tha tak an nei a ni

Industry 4.0 & 3D Printing chungchang a ni

Industry 4.0 hian chatuan atan zin chhuah dan, hnathawh dan leh inpawh tawnna a tidanglam dawn a, chutiang technology pakhat chu a ni 3D Printing (additive siamna tia hriat bawk) chu chuan awlsam takin rapid prototyping / digital design of complex shape and sizes a phalsak a, chu chu customized product (traditional method hmanga siam theih loh) siamnain a zui thei a ni. heng solution te hian healthcare, disability treatment, Oil & Gas, Fashion & Accessories Design, Drone leh aerospace industry-ah te hmanna a nei a, a tlem berah chuan hman theih a ni.

Agenda 3D Printing chungchanga Workshop neihna tur:

thuhmahruai on 3D Printing Technology hmanga siam a ni

NER tana SDG 2030 Gaps-a nghawng a neih dan

khawtlang tana Use Case thenkhat

Infra NER-a sak a nih / Project hnuaia hmalakna ruahman, Stakeholder hrang hrangte hlawkna thlen thei

entrepreneurship Hnathawh tur On 3D Printing

Registration duh tan kan website hi tlawh theih a ni.
www.3dpcoe.in

3D CAD Model	.STL file	Layer Slice & Tool Path	3D Printer	3D object

3D Printing Technology hman tlanglawn tak tak te

S.No.	3D Printing Tech hmanga siam a ni	Hrilhfiahna
1	Fused Deposition Modeling(FDM)	FDM printer te hian melted plastic filament layer khat hnu layer khatin an extrude a, thil an siam chhuak thin.
2	Stereolithography (SLA)	SLA uses a UV laser to cure liquid resin layer by layer, creating precise and detailed models.
3	Digital Light Process (DLP)	SLA nen a inang a, mahse Digital Projector hmangin resin a tithianghlim a, Engineering Applications atan hman a ni.
4	Polyjet	Polyjet printers jet layer hrang hrang a awm photopolymer resin leh duhthlan tur multi-material leh rawng hrang hranga print theih a ni. Medical Applications ang deuha hman tam ber Pre-Surgery Planning, Cadaver Printing etc.
5	Selective Laser Sintering (SLS)	SLS fuse te a awm powdered material (a tlangpuiin nylon emaw, a dang emaw pawh ni se polymers) hmanga a laser.Entirnan, chakna sang tak socket tan amputation case hrang hrang a awm.
6	Electron Beam Melting (EBM)	Electron Beam Melting (EBM) hi 3D siamna a ni a, powder metal chu electron chakna sang tak beam hmanga tihthianghlim a ni.
7	Direct Metal Laser Sintering (DMLS)	Direct metal printing (DMP) emaw DMLS 3D CAD data atanga Metal Powder Sintering (at High Temperature) hmanga complex metal parts quality tha tak siamna atana hman thin.
8	Binder Jetting	Powder layer te chu liquid binder hmangin thlan bik takin an inzawm khawm thin.

Registration duh tan kan website hi tlawh theih a ni.
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Thenkhat chu Planned Use Case te an ni

1	India ramah rualbanlo/ Rehab/ Heal	• Prosthesis–sockets te chu amputation atan a ni • Orthosis–Braces Spine Correction atan hman a ni • CranialHelmets–naupang/Accident Case awm thei te • Hand Splints–Children's Arthritis/Post Stroke Management
2	Damdawi lam Zirna /Hriselna lam	• ha lam A hman dan tur • Surgery hmaa Modeling & Planning siam a ni • Cancer–Brachytherapy, Hmai siamthatna Surgery te • CME Classes–Digital Content Doctor te Zirtirna & Training atan siam a ni
3	Industrial	• Oil & Gas Ecosystem hmanga siam a niNER • Drone • MSME Use Cases–Hmanraw, Lo neihna hmanrua te Rapid Prototyping
4	Consumer Goods	• Fashion Accessories Buttons, Nail Art, Puan Printing, Jewellery Etc te a awm bawk. • Pheikhawk Design Prototypes te pawh a awm