



# Ka Project wa da ei jingiarap hapoh ka PM-DeviNE – Digital Design chiruplang waka **3D printing** Center of Excellence hapoh ka Electronic Manufacturing Cluster (EMC) hei jing iakreh lang wa ki wi wan de ki agency iong ka Sorkar.

## Chaphang ka Industry 4.0 & 3D Printing



Ka Industry 4.0 daw kylla ko junom ia ka rukom lai kreh, ka rukom kreh kam juh leh ki rukom iaklam paidbah. Kawi na kite ki technology toh ka 3D Printing (kawa tip leh kam ka additive manufacturing) kawa ei lad iaka rapid prototyping / digital design iong ki dur kamjuh leh ki jingheh iong kate ka dur dei wa suk, bud wan sa ka jingchna iong ki mar wa saindur khyllah (ki wym ye u chna da ki sap iong rim).

Ye i u pynemkam ia kini ki lad ha ka jingsumar sukher, ka jingpynbha ia kiwa duna dkhot met, Phniang & Gas, ki Fashion & Accessories Design, ka karkhana Drone & aerospace, kini toh kiwi na ki rukom pynemkam.

### Ka Agenda iong ka Workshop (ka jinghikai dei wa pynio ia ka rukom chna) nei bynta ka **3D Printing**:

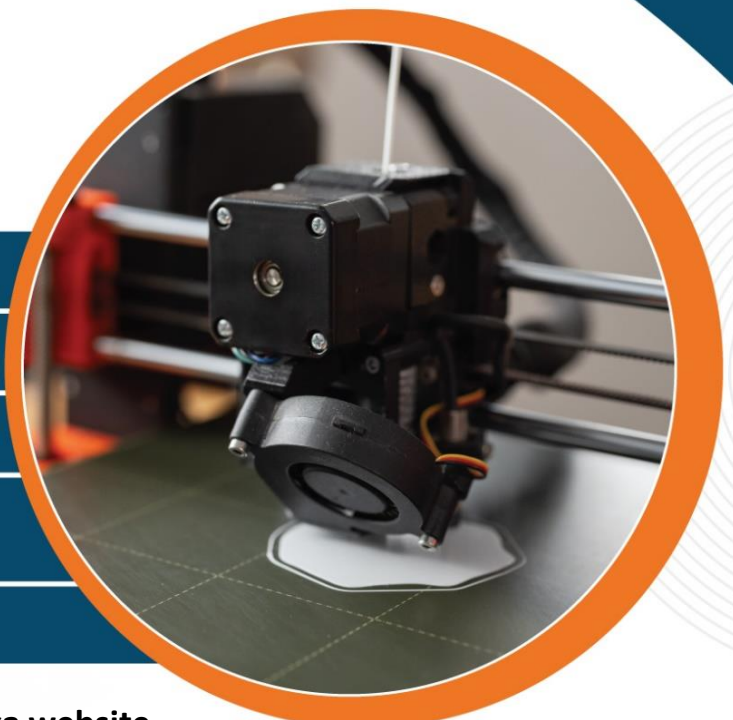
Ka lamphrang iong ka 3D Printing Technology

Ka jingktah haka SDG 2030 Gaps iong ka NER

Khajiak ki jingjia kiwa iatoh nei bynta ki paidbah paidphlang

Kiwa dang chna hapoh ka NER / ki kam wa da plan hapoh ka project kawa ye u ei jingioh ia ki nongchna kam wa em jingmut

Ki rukom thawkam haka 3D Printing



Lada kwah phi u register, sniawbha lai ha kani ka website.

[www.3dpcoe.in](http://www.3dpcoe.in)



# Ki tiar iong ka 3D Printing technology



3D CAD Model



. STL file



Layer Slice & Tool Path



3D Printer



3D Object

## Ki 3D Printing Technology wa juh pynemkam tein

S. NO.	3D Printing Technology	DESCRIPTION
1	Fused Deposition Modelling (FDM)	Ki FDM printer pynmih ki ia ka plastic wa um da ki sap ioh u cha ia ki tiar.
2	Stereolithography (SLA)	Ka SLA pynemkam ko ia ka laser UV ioh u pynckkeh ia ka um resin da ki rtap ioh u chna ia ki sain wa biang.
3	Digital Light Process (DLP)	Dei wa syriem ia ka SLA, ka DLP pynemkam ko ia ka Digital Projector ioh u pynckkeh ia ka resin nei te daw pynemkam ki ia ka ha ki kam Engineer.
4	Polyjet	Ki Polyjet Printers pynmih ki ia ki rtap iong ka photopolymer resin dei wa eilad ko ia l u jied ia ki mar chna wa ki rong wa bun jait. Ia ka Polyjet pynemkam bunsien ki ha ki kam sumar kam ki Pre-surgery Planning, Cadaver Printing, etc.
5	Selective Laser Sintering (SLS)	Ka SLS pynsnoh lang ko ia ki tiar powder (kam ki nylon ne kiwi wan ki polymer) dei wa pynemkam iaka laser kam ki nuksa toh ha ki por wa ah ki ia ki dkhot met hei por wa chah sumar.
6	Electron Beam Melting (EBM)	Electron Beam Melting (EBM) toh ka rukom chna 3D heiwa pynum ki ia u nar wa da pynkylla powder dei wa pynemkam ki ia ki high-energy beam electrons.
7	Direct Metal Laser Sintering (DMLS)	Direct metal printing (DMP) or DMLS da pynemkam ki ioh u chna ki nar wa da dep saindur da ka 3D CAD deiwa leh ki ia ka Sintering (kawa mut deiwa thang da ka din wa khlan) ia u nar powder.
8	Binder Jetting	Ki rtap iong ka powder da jied ioh ki u snoh lang deiwa pynemkam ki ia ka thaw pynsnoh kawa man um.

Lada kwah phi u register, sniawbha lai ha kani ka website.

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## Ki Plan wa juh pynemkam tein

1	<b>Ki Disability/Rehab/Heal hapoh India</b>	<ul style="list-style-type: none"> <li>Prosthesis—ki dkhot met wa chna da ki kor ioh u buh hei thaw ki dkhot met wa dep ah.</li> <li>Orthosis—Braces da pynemkam ioh u pynbait/pyntoh ia u budlum.</li> <li>Cranial Helmets—ioh u iada ia ki khynnah ne ki aksiden.</li> <li>Hand Splints— jingkjut Arthritis iong ki khynnah/JIngsumar ia kiwa ioh stroke</li> </ul>
2	<b>Ki Medical Education /Healthcare</b>	<ul style="list-style-type: none"> <li>Ki jingpynemkam ha ki jingsumar lymmein</li> <li>Chna ia ki sain chwa ka surgery &amp; ka chna plan.</li> <li>Ka Cancer—Brachytherapy, ki surgery pynkylla ka dur khmat.</li> <li>Ki CME Classes— ioh u chna ia ki Digital Content Creation nei bynta u hikai kam juh leh u train doctor.</li> </ul>
3	<b>Ka Industrial</b>	<ul style="list-style-type: none"> <li>Ka ecosystem phniang &amp; gas iong ka NER</li> <li>Ki Drones</li> <li>Ki jingpynemkam ka MSME —Ka jingchna sain iong ki tiar kreh, ki tiar rep.</li> </ul>
4	<b>Ki Consumer Goods</b>	<ul style="list-style-type: none"> <li>Ki budam nei bynta ka riam ka bait, ka jingdro tyrsim, ka printing iong ki thad ki nep, ki jingdein Etc.</li> <li>Ka jingsaindur ia ki juti.</li> </ul>

