CIPET सिपेट

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CIPET : CSTS : MYSURU
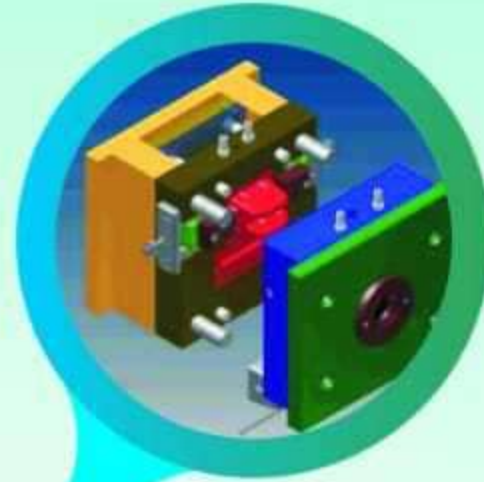
Information
Brochure

CAD / CAM / CAE COURSES

ABOUT CIPET : CSTS - MYSURU

CIPET has established its extension centre in the heritage city Mysore in the state of Karnataka in the year 1991 with the objective of providing Technical education and Technical support services in the field of Plastics. CIPET Mysuru has fully functioning Departments Design, CAD/CAM, Processing, Toolroom and Testing under one roof and committed to provide state of the art Technical support services and Consultancy thereby providing quality education to the students as per the requirements of Plastics and Allied Industries.

CIPET : CSTS - Mysuru Centre is ISO 9001:2015 certified for Training and Technical Services and our Plastics Testing Centre is accredited by NABL for ISO 17025 : 2005 QMS & ISO 17020 and recognized by Bureau of Indian Standards (BIS).

CIPET : CSTS - Mysuru is presently conducting Long Term Courses and also short duration programs in Plastics Processing / Injection Moulding / Extrusion / CNC Milling / CNC Lathe etc., Also our CAD department is conducting various specialized training on CAD Software's.

We are playing vital role to create skilled and technically trained manpower in the field of Plastics Technology by the following Long Term Courses:

1. CAD PROGRAMME

1.1 CAD USING AUTO CAD
Version : 2023 | Fee : 7000/- | Duration : 50 Hrs

Introduction about CAD software, Basic Engineering Drawing, Fundamentals. Types of Views, Types of lines and their Application , Auto CAD Drawing sheet layout setup, page setup, scales setup.

2D Drawing: Draw the Line, Construction Line, Poly line, Circle, Arc, Ellipse, Spline etc by the Draw Tool, Do the Erase. Copy. Mirrnr, Offset, Array, Fillet, Chamfer etc by Modify Tool Give the Linear, Angular, Radius, Diameter Dimensions are given by the Dimension tool on the 2D, drawing, Isometric Drawing.

3D Drawing : Solid Creation and Editing Tools. 3D Orbits. UCS,3D-ExerciseAnd Isometric Drawings.

1.2 CAD USING NX (UNIGRAPHICS)
Version : NX 1847 | Fee : 12,000/- | Duration : 100 Hrs

Modeling : Introduction, Sketch, Curve, Curve Operations, Form Feature, Feature Operation, Transform.

Assembly : Assembly of Components, Exploded Views, Sequencing, Context Control and Cloning and Component arrays editing, Top Down Assembly.

Drafting : Drawing sheets, Views, Dimensioning, Annotations, Symbols, Tabular note and Part list.

1.3 CAD USING CREO
Version : 8.0 | Fee : 12,000/- | Duration : 100 Hrs

Part Modelling : Introduction, Sketch, Base features, datum features, sections in sketch based features. Edit feature. Engineering features, Construction features, Advanced features, Tweak feature, UDFs & Group, Relation & family Table, Resolving feature failures

Assembly : Creating Assemblies, placing, patterning, packaging, freeform Manipulation of components, Top Down Assemblies. Exploded

Detail : Drafting basics, creating a Drawing with Model views, Dimensioning & Detailing, Tables & BOM Balloons

1.4 CAD USING CATIA
Version : V5-6R 2021 | Fee : 12,000/- | Duration : 100 Hrs

Part Modeling: Introduction to GUI. Sketcher, Constraints, sketch-based features. Dress up features, Transformation features, Associating hodies with Boolean Operations, Reference Elements, Modifying Features.

Assembly Design: Creating assembly. Manipulating components in assembly, Assembly constraints, Exploded view. Clash checking. Assembly features. Scene creation, Using Mechanical Standard parts. Top Down Assembly.

Drafting: Generative Drafting. Interactive Drafting, Creating Views,Sections, BOM Generation.

1.5 CAD USING SOLID WORKS
Version : 2022 | Fee : 12,000/- | Duration : 100 Hrs

Advanced Part Modeling: Introduction to GUI, Sketcher, Constraints, sketch-based features, Dress up features. Transformation features, Associating bodies with Boolean Operations, Reference Elements, Modifying Features.

Advanced Assembly Design: Creating assembly. Manipulating components in assembly. Assembly constraints. Exploded view. Clash checking. Assembly features, Scene creation, Using Mechanical Standard parts. Top Down Assembly.

Drafting: Generative Drafting. Interactive Drafting, Creating Views, Sections, BOM Generation.

Advanced Surface Design: Wire frame geometry creation, Basicsurface, Operations on surface, advanced surface, Surface based features in Part design.

Sheet metal : Introduction, Sheet Metal Parameters, Creating the Side Walls. Cutout. Automatic Bends

2. CAD/ CAM PROGRAMME

2.1 CAD / CAM USING NX (UNIGRAPHICS)
Version : NX 1847 | Fee : 18,000/- | Duration : 200 Hrs

Modeling: Introduction. Sketch. Curve. Curve Operations, Form Feature. Feature Operation. Transform.

Assembly: Assembly of Components. Exploded Views, Sequencing, Context Control and Cloning and Component arrays editing. Top Down Assembly.

Drafting: Drawing sheets, Views, Dimensioning, Annotations, Symbols. Tahularnote and Part list.

Surfac : Sheets from points, Making sheets from variable cross sections. Bridging, Offsetting, Filleting& Trimming sheets

Sheet Metal feature: Tab, Flange, Break corner, closed corner. Normal cutout, Jog, Bend, Dimple, Bead, Unbend, Rebend, Edge rib, flat solid.

Manufacturing: Model Creation, Tool Selection, Geometry Definition, Machining Methods, Planer Milling and Contour milling Operations and Post Processing.

2.2 CAD/CAM USING CREO
Version : 8.0 | Fee : 18,000/- | Duration : 200 Hrs

Part Modeling: Introduction, Sketch, Base features, datum features, sections in sketch based features. Edit feature, Engineering features, Construction features, Advanced features, Tweak feature, UDFs & Group, Relation & family Table, Resolving feature failures

Assembly : Creating Assemblies, placing, patterning, packaging, freeform Manipulation of components. Top Down Assemblies, Exploded

Detail: Drafting basics, creating a Drawing with Model views. Dimensioning & Detailing, Tables & BOM Balloons

Surface : Creating a Surface Feature, Trimming Quilts, Flattening & Bending, Creating Solid Geometry Using Quilt, Freeform Surfaces, Boundary, Conic surface and N-sidcd patch, style tools

Sheet metal : Introduction creates conversion, wall, rip, cut, form, flatten form, notch punch, and bend, unbend, bend back, corner relief, deform, edge

Manufacuting : Manufacturing Process & Parameters, Tooling, NC sequence- Milling & Lathe-turning, CL Data, NC sequence Definition. Creation of CL Data File, NC Post Processing.

2.2 CAD / CAM USING CATIA
Version : V5-6R 2021 | Fee : 18,000/- | Duration : 200 Hrs

Part Modeling: Introduction to GUI, Sketcher, Constraints, sketch-based features, Dress up features, Transformation features, Associating bodies with Boolean Operations, Reference Elements, Modifying Features.

Assembly Design: Creating assembly, Manipulating components in assembly. Assembly constraints, Exploded view. Clash checking. Assembly features. Scene creation, Using Mechanical Standard parts. Top Down Assembly.

Drafting: Generative Drafting, Interactive Drafting, Creating Views, Sections, BOM Generation.

Surface Design: Wire frame geometry creation, Basic surface, Operations on surface, advanced surface, Surface based features in Part design.

Sheet metal: Introduction, Sheet Metal Parameters, Creating the Side Walls. Cutout, Automatic Bends.

Manufacturing: Basic Tasks, Part operations, Programs & Processes, Managing Manufacturing Entities, Verification Simulation and NC Code generation

1.3 CAD / CAM USING SOLID WORKS WITH I-MOLD & MASTER CAM
Version : 2022 | Fee : 24,000/- | Duration : 260 Hrs

(A) SOLID WORKS 2022

Advance Part Modeling : Introduction to GUI, sketcher Constraints, sketch-based features. Dress up features, Transformation features. Associating bodies with Boolean Operations. Reference Elements, Modifying Features.

Advanced Assembly Design: Creating assembly. Manipulating components in assembly. Assembly constraints, Exploded view. Clash checking. Assembly features. Scene creation. Using Mechanical Standard parts, Top Down Assembly.

Drafting: Generative Drafting, Interaclive Drafting, Creating Views, Sections, BOM Generation.

Advanced Surface Design: Wire frame geometry creation, Basic surface, Operations on surface, advanced surface. Surface based features in Part design.

Sheet metal: Introduction, Sheet Metal Parameters, Creating the Side Walls, Cutout, Automatic Bends.

(B) SOLIDWORKSI-MOLD

Data preparation: Project control-Core/cavity builder-Moldplus advanced parting-Mold layoutdesign

Feeddesigner: Moldbase design (standard/custom)-Ejectordesign (standard/ custom)

Slider design (standard/custom): Lifter design [standard/custom)-Standard components library (standard/custom)

Cooling channel design : Intelligent screws-Mold assembly drawings-Hill of Materials (BOM)

© SOLID WORK SMASTER CAM : 2023

Master cam Mill 2D&3Dand Lathe: Ceate 2.5D Mechanical CAD drawings and 2.SD Toolpaths for milling parts on a Vertical CNC Milling Machine. High Speed Toolpaths. import a Solid Model from Solid Works. Inventor and Creo and use Mastercam's solid chaining features.

Feature Based Machining WCS (Work Coordinate System): Create 3D Surface and Solid models and 3D Toolpaths for milting parts on a Vertical CNC Milling Machine, import a Solid Model from Solid Works, Inventor and Creoand use Mastercam's solid chaining features. Create Mechanical CAD drawings and Toolpaths for turning parts on a CNC Lathe, create C-Axis toolpaths. Advanced Exercise Drawings, generating G-Code.

2.6 CAD / CAD USING NX (UNIGRAPHICS) WITH MOLD WIZARD
Version : NX 1847 | Fee : 24,000/- | Duration : 260 Hrs

Sr. No.2.1 Syllabus of CAD/CAM USING NX (UNIGRAPHICS) Mold Wizard : Loading Product, Family Moid, Shrinkage, Work piece. Layout, Mould Tools, Parting, Mould Base, Standard Parts, Slider Lifter, Ejector Pin, Runner, Gate, Cooling Insert, Mould Trim, Bill of Material, Mould Drawing. Prerequisite : Mould Design Drawing

3. CAE PROGRAMMES

3.1 CAE USING ANSYS
Version : 2022 RI | Fee : 15,000/- | Duration : 160 Hrs

Introduction to FEA & ANSYS: GUI, Basics & general analysis procedure.
Modeling: Creating Solid model, Finite element modeling and importing models. Select Entities and Component manager.
Meshing : Quad and Tetrahedron mesh, Volumes, Areas, Line meshing. Free and mapped meshing,
check mesh.
Structural Analysis: Static, Modal, Harmonic, Spectrum, p-method, Nonlinear & Transient analysis.
Thermal Analysis: Steady state thermal analysis.
ANSYS Workbench: Simulation, CFX Mesh, Engineering Data sheet and FE modeler.
Report generation

3.2 CAE USING NASTRAN
M.Sc., Nastran | Fee : 15,000/- | Duration : 160 Hrs

Introduction to Patran : Creating a Geometry in Patran, Importingageometry. Meshing&tactics.
Normal Mode Analysis, Linear Static Analysis. Buckling Analysis.
Introduction to Dynamic Analysis • Transient Response Analysis.
• Frequency Response Analysis. • Thermal Analysis.
Introduction to Fatigue • S-N Analysis • E-N Analysis Vibration Analysis
Introduction to Marc & Mentat • Importing a Geometry • Cleaning a Geometry • Difference between Linear and Non Linearity • Example problem
Non-Linear Rubber Seal • Hertz Contact Problem • Hertz Contact Problem with Friction • Interference Fit Introduction to Explicit Analysis • Ball Penetration Problem

3.3 CAE USING MOLDFLOW
Fee : Rs 15,000/- | Duration: 160 hrs

Introduction to CAE: Basics of Plastics Product Design, Moldflow Modeling, Mesh Creation, Mesh Checking, Surface repair tools, Creating Feed system and cooling system.
Meshing Tools: create Node, curves, regions, move/copy, nodal mesh tools, edge mesh tools & check
mesh diagnostics Modules: Mid plane, Fusion and 3D Solid.
Analysis: Gate location, Fill, Flow, Cool, Pack, Warp, Shrinkage, molding window, Case Study. Pre-requisite: Plastics & Mold knowledge.

4. CNC PROGRAMMES

4.1 Operation & Machining in CNC Milling / Lathe / EDM / WIRE CUT
Version : V8 (M-Tab) | Fee : 7,000/- | Duration : 50 Hrs

Job Setting, Datum Point/Reference Point, Co ordinate X.Y, Edge Finding, G code M code. Manual CNC Programme on Machine, Tool Section Method, Tool Compensation RPM, Feed rate. Exercise Pocketing Drilling, Programme on Machine, Tool Section Method, Tool Compensation RPM, Feed Rate, Exercise Pocketting Drilling, Boring Etc.

5. SPECIAL PROGRAMMES

5.1 Masters Programme in Product Development with CAD / CAM / CAE
MPPD_CAD | Fee : 90,000/- | Duration : 6 Months

MODULE- I : Creo /NX With Mould Wizard / Catia/Solid Edge/Solid Works with 1- Mould & Mater Cam (Any Four Software).
MODULE -II : Ansys /Nastran (Any One Software)
MODULE-III : Project Works
MODULE -IV : (Theory Classes)Plastics Product & Mould Design, Jigs Fixtures, Sheet Metal, CNC. GD&T, Rapid Prototyping and Reverse Engineering Etc.
Course Highlights : *Latest Software 'Balanced Theory & Practical Classes *Product Development Concepts * Personality Development Programme *Certificate awarded by CIPET * Placement Assistance
(Stipend: Rs. 5,000/- per month during the programme)
Fee: Rs. 90.000/-
Eligibility : Degree/Diploma in Mechanical/ Production/ Tool & Die/ Automobile/ Aeronautical /Pol imer/ equivalent candidates aspiring to start the career in R&D and product development. **Selection :** Eligible candidates have to appear in the interview for final selection.
* Incentive in Course Fee is not applicable in Master Programmes

5.2 Summer Traning Programmes in CAD / TOOLROOM / PRODUCTION / TESTING
Fee : 5,000/- / 7500 | Duration : 4/6 Months

Incentive in Course Fee*	
SC/ST/OBC/Minorities / Women / PH	25%
Fresh Diploma Holders / Engineers	20%
CIPET -	30%
CIPET - Current Batch Students	50%
Except Master Programme, all course fee is exclusive of GST as per Govt. Norms	
Course Fee, Once paid (full / in part) is non-refundable	