

CIPET: IPT, Chennai, Govt.of India - Skill Development Training Programme in CAD/CAM/CAE

Sl. No	Title of Course	Duration	Course Fee (Tax Extra-18%)
A) JOB ORIENTED PROGRAMME ** (FULL TIME ONLY SI:No-01 & 02) (FULL TIME / PART TIME SI:No-03)			
01	Integrated Programme in Engineering Design Innovation (PDI) ** - (07 Software's with Expertise on Design & Analysis + Industry oriented Learning's + Practical's on Machine) Engineering Graphics Practical + AutoCAD+ Any three CAD / CAM Software + Three CAE Software. (M.E / B.E pass-out without current arrear and above 6.0 CGPA is must to join) {Eligibility :- Mech / Auto / Aero / Polymer / Chem / Mfg / Prod / Mfg / Mechatro / Petrochem / Tool or Equivalent}	06 Months / 960 Hrs.	Rs. 80,000*
02	Master Programme in CAD / CAM / CAE (MPC) ** - (06 Software's + Industry oriented Learning's + Practical's on Machine) Engineering Graphics Practical + AutoCAD + Any Three CAD / CAM Software + Any two CAE Software. (DIPLOMA pass-out without current arrear and above 60% is must to join) {Eligibility :- Mech / Auto / Polymer / Tool & Die / Prod / Mechatro / Mould / Plastics or Equivalent}	05 Months / 800 Hrs.	Rs. 65,000*
03	Master Programme in Plastics Product & Mould Design (MPM) ** - (03 Software's + Plastics Product & Mould Design Practical's +Industry oriented Learning's + Practical's on Machine) Engineering Graphics Practical + AutoCAD + UG-Nx & Mold Flow (B.E / DIPLOMA / ITI – Pass out) / Working Professional from Manufacturing allied sectors {Eligibility :- Mech / Auto / Polymer / Mould / Plastic / Tool & Die / Prod / Draughtsman or Equivalent}	04 Months / 640 Hrs.	Rs. 60,000*
B) SPECIALIZED SKILL DEVELOPMENT PROGRAMME (NO FEES CONCESSION) (FULL TIME / PART TIME)			
04	Advanced Certificate Course in Product Design (ACCP) - AutoCAD + Any Two CAD / CAM / CAE Software + Classes on (NPD Concepts, GD&T) {Eligibility:- M.E / B.E / DIPLOMA Pass out - Mech / Auto / Aero / Mfg. / Prod / Mechatro / Chem / Plastic or Equivalent}	600 Hours	Rs. 50,000
05	Advanced Certificate Course in Precision Manufacturing(ACPM) - Nx (CAD/CAM Software) + CNC Milling + ANY ONE M/C (WEDM / EDM / LATHE) {Eligibility :- B.E / DIPLOMA /ITI Pass out - Mech / Auto / Aero / Mfg. / Prod / Mechatro / Plastic / Tool & Die / Prod / Draughtsman or Equivalent }	320 Hours	Rs. 32,000
C) PROGRAMME FOR CURRENT STUDENTS (# FEES CONCESSION: Group of 05 or above @10% & 10 or above @15% (PART TIME)			
06	Advanced Studies on Product Development Using CAD/CAM/CAE (APDC) # - AutoCAD+ Any 02-CAD/CAM & 01-CAE or 01-CAD/CAM & 02-CAE Software + Machines Practical Engineering Graphics Practical + NPD Concepts {Eligibility:- B.E. / B.Tech 3 rd & 4 th Year / Diploma 3 rd Year – Mech./ Auto. / Aero./ Mechatro / Mfg. / Plastics or Equivalent}	720 Hours	Rs. 42,000
07	Certificate Course in Computer Aided Design & Drafting (CADD) # - Engineering Graphics Practical + AutoCAD + Any One CAD / CAM Software. {Eligibility :- B.E/ B.Tech/ Diploma / ITI - ANY CURRENT STUDENTS }	360 Hours	Rs. 28,000
08	CAE Using HYPERWORKS (or) ANSYS / CAE Using MOLDFLOW #	200 / 160 Hours	Rs. 14,000
D) PROGRAMME FOR WORKING PROFESSIONALS (NO FEES CONCESSION) - (FULL TIME / PART TIME)			
09	PLASTICS PRODUCT DESIGN Using - CATIA / NX / CREO / SOLIDWORKS with GD&T	240 Hours	Rs. 28,000
10	CAD / CAM Using SOLID WORKS with MASTERCAM (or) UNIGRAPHICS (or) CREO (or) CATIA	200 Hours	Rs. 20,000
11	CAE Using HYPERWORKS (or) ANSYS / CAE Using MOLDFLOW	200/160 Hours	Rs. 18,000
E) EXCLUSIVE FOR STUDENTS - INDUSTRIAL TRAINING / INTERNSHIP PROGRAMME			
12	Internship Training { Training on- Design Basics + Basics of 2D Design Software + Basics of 3D Modeling + Product Design Concepts + Design & Development + Manufacturing Process + Production Techniques + Product Inspection + Practical Demonstration}	04-Weeks / 160 Hrs. 02-Weeks / 80 Hrs.	Rs. 8,000 Rs. 4,000
<p>*10% FEES Discount on Course Fee for the candidates having 7.5 CGPA or Equivalent in Percentage for Sl. No. – 1 to 3</p> <p>**PLACEMENT ASSISTANCE will be provided in various industries. Job opportunity will be given to perform in CIPET: IPT – Chennai on Contract basis through manpower agency to get experience & exposure with applied conditions for eligible candidates.</p> <p>Theory :- Sl.No: 01 - (a) NPD Concepts (b) GD&T (c) CNC (d) Plastics Product Design (e) RPT (f) DFMA & FMEA (g) Green Manufacturing (h) Product Validation Sl.No: 02 - (a) NPD Concepts (b) GD&T (c) CNC (d) Metrology & Inspection Sl.No: 03 - (a) NPD Concepts (b) CNC (c) Metrology & Inspection (d) Plastics Product Design (e) Mould Design (f) Plastics Materials</p>			

COURSE HIGHLIGHT

✓ One Man - One Machine ✓ Flexible Class Timing ✓ Certificate Awarded By CIPET, Govt.of India

✓ Balanced Theory & Practical Classes ✓ New Product Development Concepts ✓ Personality Development Programme



सिपेट : पेट्रोकेमिकल्स तकनीकी संस्थान (आई पी टी)
CIPET : INSTITUTE OF PETROCHEMICALS TECHNOLOGY (IPT)

Department of Chemicals & Petrochemicals,
Ministry of Chemicals & Fertilizers, Govt. of India,
Guindy, Chennai-600 032.

CAD/CAM/CAE CENTRE

CONTACT DETAILS

THE PRINCIPAL DIRECTOR & HEAD,
CIPET: IPT,
T.V.K. INDUSTRIAL AREA ,
GUINDY, CHENNAI – 600 032.
Web Site: www.cipet.gov.in

Contact No : 044-22254701 Extn: 470 & 480
Mobile : 9943323347, 7598145203
Whatsapp : 99-433-233-47
(08:00.A.M to 08:00.P.M)
Email : cadcamcae-chennai@cipet.gov.in

SCAN QR FOR DETAILS

COURSES / HOSTEL / PLACEMENT



FEES ONLINE PAYMENT



REGISTRATION DETAILS:

Direct Admissions On All Days - 9:00 A.M to 5:00 P.M.

Payment has to be made by Online Transaction / DD in the name of CIPET payable at CHENNAI.

***Hostel facility available on Chargeable basis.**



FEW OF OUR RECRUITERS / ALUMNI are in:



PLASTICS PRODUCT & MOULD DESIGN CONTENTS – for SI.No. 03 (MPM)

Duration: 360 Hrs

Plastics Product Design: Review of Engineering Graphics Practice – Plastic Materials, Properties, Processing methods, Optimizing , Moulding Defects & Trouble Shooting, Product Design Features- Wall Thickness-Ribs-Bosses-Gussets-Undercuts-Draft-Holes-Threads-Structural Considerations, Stiffness, Impact, Design for Assembly, Press Fits, Snap Fit, Insert Moulding, Welding, Post Moulding process , Flow –gate & runner concepts, Important parameters and checklist of product design , Feasibility Report Preparation (DFM) **Design of Injection Mould:** Introduction- Mould classifications -Nomenclature and function of mould components - Mould Details - Design Steps and process -Cavity & Core Designing -Runner Systems -Gate Types - Ejector systems -Interlocks - Mould actions and Undercuts - Unscrewing Mould - Shrinkage of plastics in Mould - Design Plastic part Analysis - calculations in Mould design- Mould Design Practice. **Concepts of various Moulds :** Blow Mould Design – Compression Mould Design – Review on Extrusion Dies , Rotational Mould , Thermoforming and vacuum forming.

PLASTICS PRODUCT DESIGN using CATIA / NX / CREO / SOLIDWORKS with GD&T- (for SI.No. 9)

Duration: 240 Hrs

Fee: Rs. 28,000/- + Tax @18%

Plastic Product Design: Plastic Materials , Properties, Processing methods, Optimizing , Moulding Defects & Trouble Shooting, Product Design Features- Wall Thickness-Ribs-Bosses-Gussets-Undercuts-Draft-Holes-Threads-Structural Considerations, Stiffness, Impact, Design for Assembly, Press Fits, Snap Fit, Insert Moulding, Welding, Post Moulding process , Flow –gate & runner concepts, Important parameters and checklist of product design , Feasibility Report Preparation (DFMA) , **GD & T :** Limits , Fits & Allowances , Tolerances , GD & T Basis Symbols , Datum Featrues , Material Condition & Size Control Form

CAD/CAM USING SOLIDWORKS with MASTERCAM

Duration: 200 Hrs

Fee: Rs. 20,000/- + Tax @18%

Modeling: Introduction, Pull down menus, 2D sketching, Part Modeling, Constructing Features, Editing Features, Symmetry & Drafting, Patterning, Revolved Features, Shelling & Ribs, Multi-Body Design Techniques, 3D sketching, Library features, Boundary features, Advanced modeling features. **Surface Modeling:** Hybrid modeling, Repairing and Editing, Blends & patches, Advanced Surface modeling. **Drafting:** Generative and Interactive Drafting, Stages, Annotations, Dimensioning, Detailing Techniques, Performance and Display. **Assembly Design:** Top-Up, Bottom-Up, Degrees of Freedom, Advance Mate Techniques, Editing Methods, Large Assemblies, Facility Layout, BOM, Tables. **Sheet Metal:** Basic flange Features, Sheet metal Techniques, Multi body Sheet parts, Converting to sheet, forming tool and gussets, Table making.

MASTERCAM Contents: Introduction to MASTERCAM ,Product Introduction, Basic concepts of CAM (cutters, machines job setup, etc) ,Creating 2D drawings, Creating 2D tool paths, Creating 3D models(Solid & Surface) Creating 3D tool paths,Creating2D Drawings, Line, Arc, Rectangle, Fillet, Chamfer, Point, Polygon , Rectangle shapes, XForm, Trim, Break, Drafting , Analyzing. **Creating 2D Tool paths** , Pocket, Contour, Facing, Drilling, Transforming 2D tool paths(Translate ,Rotate, Mirror), Hole milling, slot milling and helical milling tool paths, Back plot, Verification, Post processing. **Creating 3D Models** , Extrude, Revolve ,Fillet, Chamfer, Sweep, Thicken, Ruled, Boolean operations(Add, Subtract, Common), Converting Solid to Surface , Surface to Solid, Surface modeling tools (Ruled, Extrude ,net, fence, trim, split, removing boundary, fill, holes, flat boundary) Creating 3D Tool paths , boundary box, Orientation, Analyzing, cutting methods Back plot, Verification, Gouge checking, Post –processing & Editing.

CAD/CAM USING UNIGRAPHICS-NX

Duration: 200 Hrs

Fee: Rs. 20,000/- + Tax @18%

Modeling: 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:** Dwg sheets, Views, Dimensioning, Annotations, Symbols, Tab- note & Part list. **Direct Modeling, Free form feature:** Sheets from points, Making sheets from variable cross sections, Bridging, Offsetting, Filleting & Trimming sheet **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 & Contour milling Operations & Post Processing.

CAD/CAM USING CREO

Duration: 200 Hrs

Fee: Rs. 20,000/- + Tax @18%

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 **Creo/Assembly:** Creating Assemblies, placing, patterning, packaging, freeform Manipulation of components, Top Down Assemblies, view. **Creo/Detail:** Drafting basics, creating a Drawing with Model views, Dimensioning & Detailing, Tables & BOM Balloons **Creo/Surface:** Creat Surface Feature, Trimming Quilts, Flattening & Bending, Creating Solid Geometry - Quilt, Freeform Surfaces, Boundary, Conic surface & N-sided patch, style **Creo/Sheet metal:** Introduction creates conversion, wall and Rib, cut, form, flatten form, notch punch, and bend, unbend, bend back, corner relief, deform, edge bend. **Creo/NC:** Manufacturing Process & Parameters, Tooling, NC sequence-Milling & Lathe-turning, CL Data, NC sequence Definition, Creation of CL Data File, NC Post Processing.

CAD/CAM USING CATIA

Duration: 200 Hrs

Fee: Rs. 20,000/- + Tax @18%

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 **Surface Design:** Wire frame geometry creation, Basic surface, Operations on surface, advanced surface, Surface based features in Part design,Power copy, Close volume. **Sheet metal:** Sheet Metal Parameters, Creating the side walls, Cutout, Automatic bends. **Kinematics:** Mechanical System Design,Mechanism representation, Mechanic player, Engineering Connection definition. **Mold Design:** Core - Cavity separation, Basic mold design. **Manufacturing:** Basic Tasks, Part operations, Programs & Processes, Managing Manufacturing Entities, Verification, Simulation and NC Code generation.

CAE USING HYPERWORKS

Duration: 200 Hrs

Fee: Rs. 18,000/- + Tax @18%

Hyper mesh: Basic modeling, Geometry cleanup, organizing the model with collectors, extracting mid surfaces & simplifying, Selecting the user Profiles, Project, Numbering, Mask, Normals, Interactive surface meshing, Element density, Algorithms, Checking element quality. Introduction to solid meshing: Solid panels, Drag, spin, Line drag, Element offset, Linear solid. **Optistruct-** Linear Static Analysis, Thermal Analysis, Modal Analysis, Harmonic Analysis, Inertia Relief Analysis. **Optimization-** Topology, optimization for solid problems, Optimization for stress problems. **Hypermorph-** Morph volumes, Morph to geometry, Freehand morph, Morph options **Hypergraph, hyperview, Batch mesher.**

CAE USING ANSYS

Duration: 200 Hrs

Fee: Rs. 18,000/- + Tax @18%

Introduction to FEA & ANSYS: GUI, Basics & general analysis procedure. **Modeling:** Creating Solid model, Finite element modeling and importing models, Select Entities Component manager, Space claim, Geometry Clean up. **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, Transient Thermal. **Rigid Body Dynamics:** Joint Loads, Types of Joints, Remote Displacement. **Explicit Dynamics:** Impact Analysis, Rigid and Flexible analysis. **ANSYS Workbench:** Simulation, CFX Mesh, CFX fluent, Engg Datasheet & FE modeler.

CAE USING MOLDFLOW

Duration: 160 Hrs

Fee: Rs. 18,000/- + Tax @18%

Introduction to CAE: Basics of Plastics Product Design, Mold flow Modeling, Mesh Creation, Mesh Checking, Surface repair tools, Creating Feed system & Cooling System. **Meshing Tools:** Create node, curves, regions, move/copy, nodal mesh tools, edge mesh tools Mid plane& 3D Solid. **Analysis:** Gate location, Fill, Flow, Cool, Pack, Warp, Shrinkage, molding window, Case Study.

AutoCAD

AutoCAD: Introduction, industrial application, interface, coordinate system, Introduction to drafting, curve creation, use of functional key, Utilization of Layer, block, W block, attribute edit, text Creation methods, UCS movement, 3d visualization, photo, realistic rendering, Print Setup, Tool Bars – Standard, Draw, Modify, Dimension, Layers, Properties.

ONLINE MODE TRANSACTION DETAILS (GPAY, NEFT, IMPS, UPI)

Bank Name	: CANARA BANK
Account Number	: 120027749915
IFSC Code	: CNRB0000909
Branch	: GUINDY, CHENNAI.
Account Name	: CIPET IPT

ADMISSION PROCEDURE

Submit copies (02 Nos.) of the following :

- 1.) Aadhaar Card**
- 2.) Course Completion Certificate**
- 3.) Overall / Past Year Mark Sheet**
- 4.) Passport & Stamp Size Photo**

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<p>*10% FEES Discount on Course Fee for the candidates having 7.5 CGPA or Equivalent in Percentage for Sl. No. – 1 to 3</p> <p>**PLACEMENT ASSISTANCE will be provided in various industries. Job opportunity will be given to perform in CIPET: IPT – Chennai on Contract basis through manpower agency to get experience & exposure with applied conditions for eligible candidates.</p> <p>Theory :- Sl.No: 01 - (a) NPD Concepts (b) GD&T (c) CNC (d) Plastics Product Design (e) RPT (f) DFMA & FMEA (g) Green Manufacturing (h) Product Validation Sl.No: 02 - (a) NPD Concepts (b) GD&T (c) CNC (d) Metrology & Inspection Sl.No: 03 - (a) NPD Concepts (b) CNC (c) Metrology & Inspection (d) Plastics Product Design (e) Mould Design (f) Plastics Materials</p>			