

## About CRISP

CRISP is established under Indo-German Cooperation agreement as an autonomous organisation of the Dept. of Technical Education and Skill Development, Govt. of M.P.

CRISP provides technical training and consultancy services for Industry Personnel, Government Officers, Faculties of academic and teaching institutions, Students and Jobseekers. CRISP is equipped with the state-of-the-art equipment and technology, latest software, qualified, trained and experienced trainers in the relevant fields.

CRISP has its head office in Bhopal and training centres at several national and international locations.

## Other training programmes in Mechanical Engineering offered at CRISP are :

- AutoCAD
- CAD/CAM - UG NX/ Pro-E/ Solid Works
- AutoCAD Electrical/Mechanical/ Civil
- CNC Technology
- Car Mechatronics
- Industrial Hydraulics
- Industrial Pneumatics
- Mechanical Maintenance
- Industrial Hydraulics & Pneumatics



## Patron Clients of CRISP



### Contact :

#### Course Co-ordinator

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## Centre for Research and Industrial Staff Performance

(Established under Indo-German Technical Co-operation)

Opp. Manas Bhawan, Shyamla Hills, Bhopal – 462 002

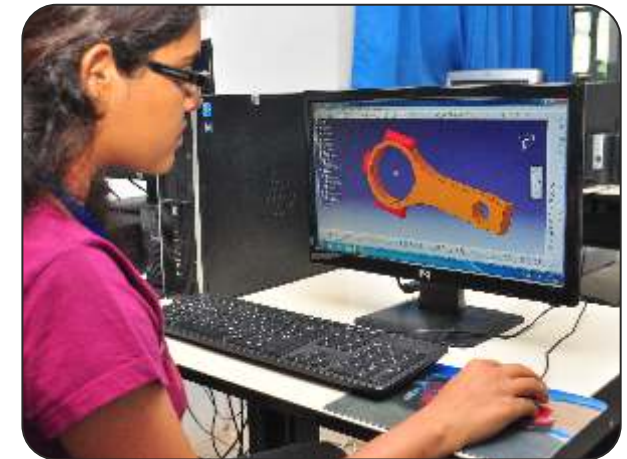
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[www.crispindia.com](http://www.crispindia.com)

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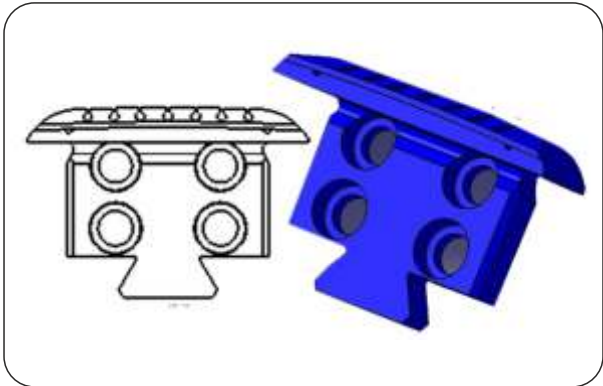
**CRISP**  
ISO 9001 : 2015

## CAD/CAM - CATIA



...unleashing the full potential of men & machines

## CAD/CAM - CATIA



### Introduction of Course

The concept of CAD/CAM in engineering practice is that individual functions in Design, Analysis and Manufacture are computerized and tied together through a control computer data base shared among them. As a result the CAD/CAM system allows a user to interact with computer through a graphics terminal to define a design configuration, analysis the structure and its mechanical behavior, perform kinematic study and modal testing, automatically produce engineering drawing and generate complex/multi axis CNC program for machine tools.

CRISP has well designed training program on CATIA software of CAD/CAM, aiming at developing the competencies in individuals for CAD/CAM technology.

### Course Contents

- **Part Design :**  
Basics of Computer Aided Design and manufacturing (CAD/CAM), Introduction to CATIA, User Interface setting and Preferences  
**Sketch** Creation, Dimensioning and Constraining, Solid, Surface and wire frame modeling, Pad, Pocket, Shaft, Rib, Slot, Multi-section solid, Draft. Boolean\_Operations Radius Fillet, Parent/Child relations. Parametric modeling, Material Selection and Mass property calculation, Catalog and Design Tables, User Pattern, Shell
- **Drafting:**  
Creating Orthographic Section, Detail and Broken View, Annotations and Associatively, Dimensioning and Tolerance, GD & T, Translator -DXF, IGEX
- **Assembly Modeling:**  
Assembly of Design Parts : Concept, assembly constraints, Exploding Assembly BOM/Part List Interference and clearance check

- **Surfacing:**  
Extrude, Revolve, Offset, Multi- section surface, Blend, Offset, Trim, Split
- **Mechanism Design - Kinematics Analysis :**  
Revolute & Prismatic Joints, Simulation
- **CAM - Computer aided manufacturing**  
Basics of CNC programming  
Tools and Tool selection and its cutting parameters  
CNC programme generation 2 axis, 2 ½ axis, 3 axis, CL file and post processing
- **FEA - Finite Element Analysis:**  
Pre Processing, Solver, Post processing  
Element – Type and Selection  
Simulation - Stress, Strain and Displacement

### Methodology

The programme consists of a mix of :

- Lectures and presentations
- Demonstrations
- Interactive discussions
- Hands-on practice

### Pre-requisite

- Industry personnel with relevant experience.
- Passouts or students pursuing Degree/ Diploma in Mechanical/ Production/ Automobile Engineering or equivalent.

### Duration

Full time: 5 working days (7 hours/day)

Part time: Five weeks (25 working days, 2 hours/day)

### Course Fee

Kindly refer to our training calendar at [www.crispindia.com](http://www.crispindia.com) or can be obtained from CRISP counselling desk

### Mode of Payment

Cash / Online / Debit / Credit Card