भारतीय प्रौद्योगिकी संस्थान खड़गपुर
Indian Institute of Technology
Kharagpur

Short Term Course

On

CAD-CAM Application in CNC Machining with Solid & Surface Modelling

(February 22 – 26, 2016)

Venue: CNC Room, CWISS

Organized by

Central Workshop & Instruments Service Section
Indian Institute Technology, Kharagpur 721302

5-AXIS CNC Milling Machine


4-AXIS CNC Milling m/c

Objectives of the Course

The primary objectives of the course are as follows:

- **i)** Exposing participants to the fundamentals of different types of CAD and CAM software.
- **ii)** Building up confidence and capability in the participants to handle CAD- CAM software.
- **iii)** Exposing the participants to different types of CNC machines and their uses in the manufacturing field.
- **iv)** Providing exposure to CNC machining problems and their solutions.
- **v)** Enhancing the capability of the participants to make models using CAD-CAM application and their supporting software.
- **vi)** To make them up to date in the latest developments in the field of CAD-CAM application.

Course Schedule and Methods

9 am to 6 pm with 1-hour lunch break in each day.
The course would consist of lecture sessions, instruction sessions, discussions on problems and practical sessions.

Eligibility

Category -1 (AICTE & TEQIP Sponsored):

Faculty from AICTE approved Colleges / Institutions / Universities.

Category – 2 (Student / Industry / others):

B. E. / B. Tech./AMIE/Diploma in Engineering/M. Sc. or any higher qualification in relevant field.

Persons from Industries & Govt. Organizations related in this field are also eligible.

Course Contents

Sl. No.	DESIGN COURSE	TOOL ROOM COURSE	Days wise
1	**AUTOCAD 2D 2010** **Key Points of AutoCAD:** AutoCAD application for 2D, drafting and Modeling. ❖ The course explores the application of latest tools & techniques of AutoCAD software package with all available features. ❖ The progressive step by step solution of various example of 2D & 3D Modeling, making an ideal solution for both the novice & the advanced user. **AUTOCAD 2010 3D** [Introduction to creation of 3D Solid CAD model & rendering with CAD features by step by step process. Sample modeling & generation of 3D extension file supported by CAM software]		22nd Feb-16
2.	**Solid Works 2012** [Introduction to Solid Works solid & surface modeling) Lesson 1. Parts / Lesson 2: Assembly / Lesson 3: Drawings. 3D sketching & 3D sketching with plane. Mould design, Assembly & Assembly Mates. Toolbox basic knowledge. Photo view 360- Rendering. Exercise of 3D CAD modeling- Step by step guide process. How to import & export the different CAD extension file to different areas and devices.		23-24 Feb., 2016
3.	CNC Turning Programming & pre-process simulation checking with (i) FANUC-G&M Code. (ii) CAD- CAM Software – Win NC EMCO	CNC Turning (Lathe) M/c Operation	25th February, 2016
4.	Creating NC Program for various complex shape 3D Solid Model in rotating X-Y Plane in any direction (0 - 360⁰) using CAM Software – Roland SRP Player	CNC 4-AXIS Milling M/c. Operation	26th Feb,2016
5.	Creating NC Program for various complex shape 3D Solid Model in different planes using Delcam PowerMILL Software. ➢ Selection of workplane ➢ Toolpath Generation ➢ Simulation Checking of part design ➢ Collision checking ➢ Final Machining	5-Axis CNC Milling M/c.	26th Feb., 2016

Note: The course material will helps in advancing the frontiers of the software.

Course Co-Ordinators

Professor A. Roy Choudhury
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Address for Communication

All queries regarding the course may be addressed to the Principal Coordinator or the Coordinator.

Application and Fee

Category-1: : **Rs. 18000.00**
Faculty from AICTE approved Colleges / Institutions / Universities/ Teachers from TEQIP colleges will be waived the course fees.

Category-2:

Course fees for Others **: Rs. 18000.00**

The course is designed to be offered for duration of ***5 days.*** Number of participants for the course will be limited to ***twenty four*** only. The participants will be selected on **'First-Come-First-Served'** basis out of the eligible applicants. First preference will be given to Faculty of TEQIP followed by AICTE.

The course fee is **Rs**. **Eighteen thousand only** per participant. Payment is to be made through bank draft drawn in favour of '**CEP-STC, IIT Kharagpur'** payable at **Kharagpur**. The application should be sent to the mailing address latest by **31st December, 2015**.
The course fee includes course materials, tea/coffee and snacks during lecture schedules only.

To confirm participation please send the scanned copy of the Demand Draft with participant colour photo for identity card to spatraiitkgp@yahoo.in & **sumit4s_iit@yahoo.com**; by **December 31, 2015** positively.

Certificate

A certificate of participants will be issued to all the participants from the Office of "**Dean, Continuing Education, IITKharagpur**".

Accommodation

Outstation participants will be provided Sharing accommodation for male and single accommodation for female participants in the Viswasaraya Guest House of IIT Kharagpur as per availability on prior request.

How to reach campus at IIT Kharagpur

Situated about 120 km west of Kolkata, Kharagpur can be reached in about 2 hrs. by train from the Howrah railway station of Kolkata or 3 hrs. by car from Kolkata airport. Kharagpur is also connected by direct train services to most major cities of the country. The institute is about 10 minutes drive(5 km) from the Kharagpur railway station. Private taxi, auto rickshaw or cycle rickshaw can be hired to reach the Institute.

Important Dates

Last date for receiving application: 31st December, 2015

Intimation to the applicants: 1st January, 2016

Course duration: February 22 to 26, 2016

Note:

1. **Only selected participants would be informed by E-mail.**
2. **You may bring Laptop on your own responsibility for practice study session.**

REGISTRATION FORM

SHORT-TERM COURSE
On
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(February 22 - 26, 2016)

- **Name:**_____
  [Block Letters; Provide as appearing on your Institute or Official]
- **Category [Student/ Academic/Industry]:** _____
- **If Acedemic**
  - **Designation:**
  - **Institute Name:**
  - **AICTE approved Institute [Yes/ No] :**
  - **TEQIP Fund Institute [Yes / No] (compulsory) :**
- **Gender (M/F):**_____
- **Date of Birth :**_____
- **Organisation:**_____
- **Highest academic Qualification:**_____
  _____
- **Address for Correspondence:**_____
  _____
- **Telephone/Fax:**_____
- **Mobile:**_____
- **E-Mail (Compulsory):**_____
- **Accommodation required (Yes/No)**_____
- **Bank Draft Details:**
  - **Draft No.:**
  - **Date:**
  - **Amount Rs.**
  - **Issuing Bank with Branch code:**

_____
Signature of the participant

Approval for AICTE Candidates and TEQIP Sponsorship

We approve the above applicant is a faculty/ Student/Staff of our organization. He/She is recommended for the course during February 22 - 26, 2016 at IIT Kharagpur.

Signature with seal of the
Head of the organisation

Date: