

भारतीय प्रौद्योगिकी संस्थान खड़गपुर
Indian Institute of Technology
Kharagpur



Short Term Course (14th Batch)

On

**CNC Machining with Advanced CAD-CAM
applications**

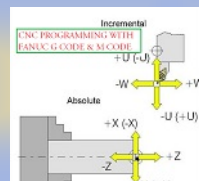
Duration: 5 days

(April 26 – 30, 2019)

Venue: CNC Room, CWISS

Organized by

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



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) Exposing the participants to different types of CNC machines and their uses in the manufacturing field.
- iii) Enhancing the capability of the participants to make models using CAD-CAM application and their supporting software.
- iv) To make them aware of the theory of Solid modelling and cutter path generation.

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

Teachers from Engg. Colleges and Poly Techniques; Diploma/UG engineering students (completed second yr) and higher level; practicing engineers, technical staff of engg. institutes/industries

COURSE CONTENTS

| Sl. No | DESIGN COURSE | TOOL COURSE the design course | ROOM Related | Days Wise |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------|---------------------------------|
| 1 | <p style="text-align: center;">AUTO CAD</p> <p>Introduction to AutoCAD Course: Introductory courses provide students with a basic knowledge of AutoCAD's interface, menu options, toolbars and operational commands; basic skills include drawing, editing, layering and plotting.</p> <p>Intermediate AutoCAD Course: These can include hatching, dimensioning, cross-references, and tables and block attributes. Students also be introduced to 3D designs and related drafting skills in preparation for advanced AutoCAD training.</p> <p>Advanced AutoCAD Course: Advanced AutoCAD courses focus on 3D designs, as well as the required navigation and modeling tools used to create 3D drawings with photo realistic rendering. Courses are also included practice session with step by step guide.</p> | | | 26 th April, 2019 |
| 2. | <p style="text-align: center;">SOLID WORKS</p> <p>Introduction & Advance course: How to build parametric models of Parts and Assemblies, and how to make Drawings of those Parts and Assemblies. 3D sketching & 3D sketching with plane, Special features like Mould design etc, Toolbox basic knowledge. Photo view 360- Rendering.</p> <p>Courses are also included practice session with step by step guide.</p> | | | 27-28 th April, 2019 |
| 3. | Lecture of Prof. A. Roy Choudhury [Senior faculty of Mechanical Engineering, IIT Kharagpur]: Lecture on "Free form surface modeling and CNC machining." | | | 28 th April, 2019 |
| 4. | CNC Turning Programming & pre-process simulation checking with (i) FANUC-G&M Code. (ii) CAD-CAM : WinNC EMCO | CNC (Lathe) Operation | Turning M/c | 29 th April, 2019 |
| 5. | CNC Milling Programming & pre – process simulation checking with CAM Software-Roland SRP Player | CNC Milling operation | 4-AXIS M/c | 29 th April, 2019 |
| 6. | Tool path programming & simulation for CNC Wirecut EDM Machine using ELCAM – CAM software. | CNC EDM operation. | Wire Cut machine | 30 ^h April, 2019 |
| 8. |  Creating NC Program for various complex shapes 3D Solid Model in different planes using Autodesk Power MILL Software . | 5-Axis Milling operation | CNC m/c | 30 th April, 2019 |

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

Principal Co- Ordinators

Professor A. Roy Choudhury

Principal Co-ordinator

Chairman, CWISS

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Persons dealing with

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AWS, CWISS

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Tech. Supdt., CWISS

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Address for Communication

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

Application and Fee

Course fees

: Rs. 12,000.00

The course is designed to be offered for duration of **5 days**. Total number of seats is limited to 30 (**Thirty**) but since the Short Term Course is meant primarily for teachers from AICTE-approved colleges, they will be given first priority for all the seats. The participants will be selected on '**First-Come-First-Served**' basis out of the eligible applicants.

Mode of Payment:

Payment is to be made by electronic fund transfer (details given below) or through bank draft drawn in favour of '**CEP-STC, IIT Kharagpur**' payable at **Kharagpur**. The application and registration amount should reach the mailing address latest by **20th April, 2019**.

For electronic fund transfer, the bank details are as follows:

Account Name : CEP-STC, IIT Kharagpur
Account Number : 95562200002955
Bank Name : SYNDICATE BANK
Bank Branch Name : SRIC, IIT KHARAGPUR
Branch Code : 9556
IFSC Code : SYNB0009556
Swift Code : SYN BIN BB 120
Bank Address : IIT Kharagpur-721302

Note: In case of electronic money transfer, please submit a copy of money transfer record with details of bank, amount, transaction number and date. The bank proof must be attached with registration form.

The course fee includes course materials, tea/coffee and snacks during lecture schedules only.

To confirm participation please send the scanned copy and hard copy of the Demand Draft with participant colour photo for identity card to spatraitkgp@yahoo.in & santdas@rediffmail.com; sumit4s_iit@yahoo.com; by April 22, 2019 positively.

In case of failure on the part of a registered candidate to attend the short term course, a sum of Rs 1000/- may be deducted from the submitted

registration fees and rest will be returned to the candidate, after the completion of the short term course

Certificate

A certificate of participants will be issued to all the participants from the Office of “Dean, Continuing Education, IIT Kharagpur” after completion of course.

Accommodation Facility

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

Food & Accommodation Charge

Inclusive in course fee

Valedictory Function

Tentative schedule of Valedictory function is on 30th April, 2019 at 3:30 pm followed by a grand Lunch at 1:00 pm on 30th April, 2019.

TA for Participants

No TA will be provided to the candidates

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.

Till today Participants Institute

| Organisation Name | Location |
|------------------------------------------------|-------------|
| JNTUH College of Engineering, Hyderabad | Telengana |
| University of Calcutta | West Bengal |
| N.I.T. Rourkela | Odisha |
| NIT, Durgapur | West Bengal |
| NIT, Raipur | Chatisgarh |
| NIT, Jamshedpur | Jharkhand |
| KNIT, Sultanpur | UP |
| NIT Agartala | Tripura |
| GITAM University, Hyderabad | Telengana |
| Cambridge Institute of Technology, Ranchi | Jharkhand |
| Birbhum Institute of Engineering & Technology | West Bengal |
| JIS College of Engineering, Kalyani | West Bengal |
| Malnad College of Engineering | Karnataka |
| College of Engineering, Cherthala | Kerla |
| MCKV Inst. Of Engg. | West Bengal |
| SHIATS, Allahabad | UP |
| MSME Tool Room, Kolkata | West Bengal |
| Dumkal Inst. Of Engg. & Tech. | West Bengal |
| MCE, Hassan, Karnataka | Karnataka |
| Govt. Polytechnic | Telengana |
| College of Engg. & Technology, Bhubaneswar | Odisha |
| Haldia Institute of Technology, Haldia | West Bengal |
| Heritage Institute of Technology | West Bengal |
| NIFFT, Ranchi | Jharkhand |
| PVP Siddhartha Inst. Of Tech., Vijayawada | AP |
| Hindustan Pressing Pvt. Ltd., Pune | Mumbai |
| Ideal Institute of Engineering, Kalyani | West Bengal |
| Swami vivekananda Institute of Science & Tech. | West Bengal |
| The Rajaas Engineering College | Tamilnadu |
| YIT-Jaipur | Rajasthan |
| Bankura Unnayani Inst. Of Engg. | West Bengal |
| BRCM-CET, Bahal, Bhiwani | Haryana |
| Institute of Engg. & MGNT. | West Bengal |
| College of Engg. & Management, Kolaghat | West Bengal |
| ISM, Dhanbad | West Bengal |
| STC, KGP | West Bengal |
| NHIT, Durgapur | West Bengal |
| IIT Kharagpur | West Bengal |
| SATI, Vidisha | MP |
| Univ. College of Engg., Osmania, Hyderabad | Telengana |
| Murshidabad College of Engg. & Technology | West Bengal |

| | |
|-----------------------------------------------------|-------------|
| Shir Vishnu Engineering College for Women | AP |
| Govt. Engineering College, Palakkad | Kerla |
| BIT, Mesra, Ranchi | Jharkhand |
| RCC IIT | West Bengal |
| BIT Durg | Chatisgarh |
| Techno India | West Bengal |
| College of Engg., Guindy | Chennai |
| Madanapalle Institute of Tech. and Science | AP |
| UIET, Kurukshetra University | Haryana |
| Univ. College of Engg. | AP |
| Jhargram Polytechnic | West Bengal |
| Sathyabama Univ. | Jharkhand |
| R.V.R.&J.C. College of Engineering | Guntur |
| S.T.C., SERT, Khamgaon | Mumbai |
| S.T.C., SERT, Shegaon | Mumbai |
| Balasore College of Engineering & Tech. | Odisha |
| DYPCOE&I, Varale, Pune | Mumbai |
| Sanjivani College of Engineering | Mumbai |
| K.K. Wagh Instt. Of Engg. Edu. & Research | Mumbai |
| International centre of excellance in engg. & MGMT. | Mumbai |
| Shriram Institute of Tech. | MP |
| TKIET, Waranagar | Mumbai |
| Sir C.R.R. College of Engineering | Eluru |
| Jalpaiguri Govt. Engg. College | West Bengal |
| KIIT | Odisha |
| Bapurao Deshmukh college of Engg. | Mumbai |
| Regency Institute of Technology | Puducherry |
| PES Institute of Technology | Karnataka |
| P.A. College of Engineering | Karnataka |
| MPSTME, NMIMS Univ. | Mumbai |
| ASBESCO India (Pvt.) Ltd. | West Bengal |
| Salboni Govt. ITI | West Bengal |
| R.V.College of Engineering | Karnataka |
| Guru Jambheshwar Univ. of Sci.&Tech., Hisar | Haryana |
| J.S.S. Academy of Technical Education | Karnataka |
| MIT&S, Gwalior | MP |
| Institution of Engineers | Mumbai |
| Rajiv Gandhi Institute of Tech. | Mumbai |

About CWISS

The Central Workshop and Instruments Service Section (CWISS), a unique service center at IIT, Kharagpur, was established in 1965 to cater to the fabrication of custom made instrument to sustain the Post Graduate and Research activity in the Institute. It is one of the major service sections of the Institute having Mechanical Fabrication Section, Carpentry Section, Electronic Repair Section, Glass Blowing Section and Audio Visual Units. Apart from executing work orders from various Department/Centers/Sections of the Institute, CWISS also undertakes work orders from outside on cost basis.

Important Dates

Last date for receiving application: April 20, 2019

Intimation to the applicants: 22th April, 2019

Course duration: April 26-30, 2019

Note:

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

Contact Us : About Short Term Course

Mr. Sumit Rajan : 9933792374 [E-Mail: sumit4s_iit@yahoo.com]

REGISTRATION FORM

SHORT-TERM COURSE

On

CNC Machining with Advanced CAD-CAM applications

(April 26 – 30 2019)

- Name: _____
[Block Letters: Provide as appearing on your Institute or Official]
- Category [Student/ Academic staff/Industry]: _____
 - Designation:
 - Institute Name::
- Gender (M/F) : _____
- Date of Birth : _____
- Highest academic Qualification: _____
- Address for Correspondence: _____

- Mobile: _____
- E-Mail (Compulsory): _____
- Accommodation required (Yes/No) _____
- Bank Draft/Fund transfer Details:
 - Draft No./Reference No.: _____ Date: _____
 - Amount Rs. :
 - Issuing Bank with Branch code:

Signature of the participant

Approval for Sponsorship participant

We approve the above applicant is a faculty/Student of our organization. He/She is recommended for the course during April 26-30, 2019 at IIT Kharagpur.

Signature with seal of the
Head of the organisation

Date: