



**NATIONAL INSTITUTE OF ELECTRONICS AND INFORMATION TECHNOLOGY
(NIELIT), CALICUT**

(Formerly DOEACC CENTRE CALICUT)

CDS/CA/7.5.1/F 40/R1

Name of the Group : CAD/CAM
Name of the Course : CAD/CAM
Course Code : MT100
Starting Date : 13/02//2012
Duration : 7 Weeks

Preamble:

The introduction of computers and digital electronics in the manufacturing industry has revolutionised in automation. With the advances in digital electronics and computer technology, adopting integrated Computer Aided Design and Manufacturing (CAD/CAM) has become relevant in medium scale industries. To start (implementation or study) CAD/CAM one must have basic understanding and knowledge of Computers and Electronics, various CAD tools, CNC Machines, Automated Material handling systems like AGV/RGV, ASRS, Industrial Robots, FMS & CIM.

Objective of the Course:

The course is aimed at giving exposure to and enhancing the knowledge and skills of engineers involved in the operation use of CNC machines, CAD/CAM packages and for those who want to provide training to others in this area. It gives exposure and on hand experience in the field of CAD/CAM, Industrial Robots, CNC machines, FMS & CIM.

Outcome of the Course:

The participants will be able to:

- Understand the concepts of CAD and CAD tools
- Design and draft 2D and 3D models,
- Write AutoLISP programs
- Understand the working of CNC Machines, Robots, Machine Vision
- Design and machine using CAD/CAM packages like MasterCAM
- Surface Desig amd machining using MasterCAM
- Design cell level in FMS and CIM
- Hand-on exposure to real life CIM environment
- Understand advanced features of CAD/CAM

Course Structure:

<i>Code</i>	<i>Module</i>	<i>Duration</i>	<i>Starting Date</i>
<i>MT101</i>	<i>CAD, Drafting and 3D Modeling</i>	<i>3 Weeks</i>	<i>13/02/2012</i>
<i>MT102</i>	<i>CNC Machines and NC Part Programming</i>	<i>3 Weeks</i>	<i>05/03/2012</i>
<i>MT103</i>	<i>FMS & CIM</i>	<i>1 Week</i>	<i>26/03/2012</i>

Other Contents

- a. Course Fees: ₹31,000 plus service tax.
₹662 (includes service tax) for SC/ST candidates subject to terms and conditions



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- b. Eligibility: B.E, B.Tech., Diploma in Mechanical, production Tool & Die, Automobile and Industrial engineering
- c. **Number of Seats : 20**
- d. **How to Apply :**

Students are advised to apply in the prescribed Application Form available with the course brochure/course prospectus or downloaded from our website. Filled in application forms along with a Demand Draft towards advance deposit of ₹1,000/- drawn in favour of Director, DOEACC Centre, Calicut, Payable at State Bank of India, NIT Campus Branch (code: 2207), Chathamangalam should be sent to the **Training Officer, NIELIT (formerly DOEACC Centre), Calicut, P. B. No. 5, NIT Campus Post, CALICUT – 673 601, Kerala. The Name of the Course Applied for should be super scribed on the top of the cover in which the application form is forwarded.**

Mode of Payment:

1	Demand Draft to be drawn in favor of Director, NIELIT, Payable at State Bank of India, Calicut NIT Branch(2207). The DD should reach here before the last date to apply.
2	Through any branch of SBI (where this format is accepted) using the pay in slip available in our web site. The original counterfoil should reach here before the last date to apply.
3	<p>The fees can be paid directly into our account from any bank where core banking facility is available. The details required for direct payment are as given below.</p> <ul style="list-style-type: none">• Savings Account No: 31732177476• Bank Name: SBI, NIT Chathamangalam• Bank Code: 2207• IFSC No: SBIN0002207 <p>The depositor should obtain the UTR Number/Journal No from the branch while depositing cash directly into our account. Depositor should also obtain the counterfoil duly filled up and signed by the staff with seal of the bank through which the amount was deposited. The following details should reach here before the last date to apply. Name of the Depositor</p> <ol style="list-style-type: none">1. Name of the Student2. Date of Payment3. Amount Deposited4. Name of Bank/branch through which amount deposited5. Purpose – Course ID – Advance Deposit/Hostel Rent/Installment Fee etc.6. Proof of Deposit (counterfoil/acknowledgement in original)7. UTR Number

NIELIT will not be responsible for any mistakes done by either the bank concerned or by the depositor while remitting the amount into our account.



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- e. **Selection of candidates:** The candidates passed in the qualifying examination will be based on their marks obtained, subject to eligibility and availability of seats.
- f. Test/Interview (if applicable) : *Not Applicable*
- g. **Counseling/Admission : 13/02/2012**
- h. **Admission Procedure :**
Students who have been selected for test/interview/counseling/admission are required to report to the Centre on the prescribed day by 9:30 hrs along with the following
 1. Attested Copies of Proof of Age, Qualifications, etc
 2. Original Certificate of the above
 3. Two copies of photograph and one stamp size photograph for identity card.
 4. SC/ST Certificate (if applicable)
 5. Income Certificate (if applicable)

The students on reaching the Centre are required to meet the Front Office Councilor (FOC). The FOC then directs the student to the Course Coordinator. The student gets the enrollment form verified by the Course Coordinator and then meets the FOC who shall direct the student to the Accounts for payment of fees. A student is thus admitted.

- i. **Discontinuing the course:** No fees under any circumstances shall be refunded in the event of a student discontinuing the course. A student can however, be eligible for module certificates (applicable only for courses which provide for modular admission) which he/she has successfully completed provided he/she has paid the entire course fees.

- j. **Course Timings :** 9:30 to 17:00 PM

- k. **Location and How to reach :**

NIELIT (formerly DOEACC Centre), Calicut is about 22Kms from the Calicut (Kozhikode) city and close to NIT (REC) campus. A number of buses [Buses to NIT via Kunnammangalam] are available from "Palayam Bus Stand or KSRTC Bus Stand". Our stop is called "Panthrand" & is one stop before NIT. The bus fare is around ₹.13/- from Calicut City to NIELIT.

Calicut city is well connected by Rail, Road and Air from different parts of the country. The climatic conditions in Calicut are perhaps one of the best in India throughout the year. The maximum and minimum temperatures range between 35 and 20°C. The cool breeze further adds the comfort.

- l. **Course enquiries :**

Students can enquire about the various courses either on telephone or by personal contact between office hours.



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- m. **Important Dates:** Starting date: 13th February 2012 (dates are given in the above table for independent modules)

Last date to submit application form:	08/02/2012
Selection intimation in website:	10/02/2012
Counseling/Admission:	13/02/2012
Commencement of classwork:	13/02/2012
Payment of Fee:	13/02/2012

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- n. **Placement** : Support shall be provided

- o. **Hostel facilities** :

Hostel accommodation is available for boys and girls on daily or monthly chargeable basis. *The hostel fee varies from ₹ 650/- to ₹ 1,050/- (for boys) per month and ₹ 650/- to ₹ 750/- (for Girls) per month depending on the location of accomodation.* However, students are required to pay the hostel fees for the duration of the course for which they are seeking admission at the time of joining the course.

- p. **Canteen facilities** :

The Centre has a canteen functioning at the main campus and food at reasonable rates is available for breakfast, lunch, and dinner

- q. **Lab Facilities:**

Fully Air-conditioned lab consists of CNC Machines Tools (Lathe and Milling), Industrial Robots, Image Inspection System, latest versions of Mastercam X2, AutoCAD 2010, Autodesk Inventor Professional, CIM software, PCs with higher RAM and Graphics cards

- r. **Faculty**

The centre has a team of enthusiastic and competent engineers with postgraduate qualifications who have undergone specialized training in various International Universities and Industries.

- s. **Course Contents** :

MT101 CAD, Drafting and 3D Modelling

Fundamentals of CAD, 2D Modelling , Concepts of 3D Design, 3D Modelling: Concepts, Wireframe, Surface, and Solid Modeling, Rendering Methods, AutoLISP: Basics and Programming

MT102 CNC Machine Tools and NC Part Programming

Fundamentals of NC/CNC, NC Part Programming, Devices & Feed Back Device for Motion Controls in CNC, Control Systems for CNC, Sensors and Motors that are used for Intelligent Manufacturing, Conventional versus CNC Machine, NC Programming through CAD/CAM, MasterCAM Design, Lathe and Mill, Tooling for NC/CNC, Chucking and Turning Centres, Machining Centres, Industrial



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Applications of NC/CNC Machines, Maintenance and Trouble Shooting of CNC Machine Tools, CAD/CAM

MT103 FMS & CIM

Fundamentals of CIM, Group Technology and Computer Aided Process Planning, Automated Storage and Retrieval Systems (ASRS) , Computer Aided Inspection, Introduction to Machine Vision, Industrial Robotics, Robot Task Programming, Modelling and Simulation, Design of a Manufacturing cell using the CIM software, Management Information system and MRP

This approval is valid for uploading on Centre's website

The following texts do not form part of the prospectus:

Signature of the Course Coordinator:

Signature of Training Officer:

Approved/Not Approved
Director

Guidelines:

1. All Text in Italics are to entered by the course coordinator
2. The Course Prospectus to be put to Director for approval through Training Officer before issue.