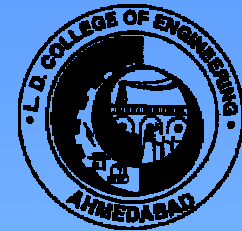# Center of Excellence
(Aerospace and Defense)
L. D. College of Engineering, A'Bad

Training Courses

(January 2015 to May 2015)

- Essentials for NX Designers

- Basics of CNC Machines

- Basics of PLC

- Basic Mechatronics

- Basics of Induction Motors

- Basic Power Systems

- Process Instrumentation

DesignTech

Technology For Designing The Future

Contact:- Mr. Ratnakar Eda &
Mr. Radha Kishore Kommu
No:- 8469842090,7600648459

Departmental

Coordinator:_____

Mobile:_____

Center of Excellence
Aerospace and Defense
Product Design & Validation Lab

L.D.C.E

NX CAD : Delivering Real Value -Full Range of CAD Functions

Product Design
- 3D modeling
- Assemblies
- Sheet Metal
- Templates

Industrial Design & Styling
- Freeform modeling
- Reverse engineering

Drafting and Documentation
- 2D layout
- Drafting
- Product and Manufacturing Information

Electromechanical Design
- PCB design
- Wire routing/harness design

Visual Analytics and Validation
- Visual reporting
- Requirements validation
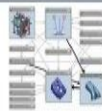- Simulation

Process-Specific Applications
- Welding
- Mechanical routing
- Composites

Productivity Tools
- Collaboration
- Visualization
- Programming
- Data exchange
- Content migration

Knowledge Re-use
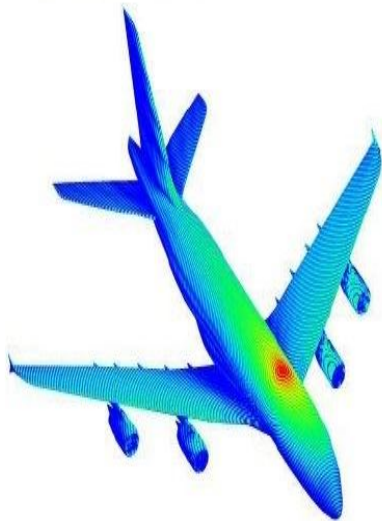- Re-use library
- Shape search

Center of Excellence
Aerospace and Defense
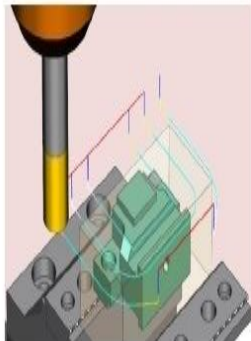# Advance Manufacturing Lab

L.D.C.E

NX CAM: NX includes a full set of capabilities to drive manufacturing activity that helps make better products.

A Complete Manufacturing Process Plan

| Preparation | Programming | Production |

Center of Excellence
Aerospace and Defense
CNC Programming MCMT Lab

L.D.C.E

DIFFERENT CONTROLLERS:
1. SINUMERIC 808D
2. SINUMERIC 828D
3. SINUMERIC 840D SL

SINUMERIC 808D

SINUMERIC 840D SL

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Rapid Prototyping (RPT) Lab

L.D.C.E

Rapid prototyping or 3d printing refers to physical objects that are automatically constructed with the aid of additive manufacturing technology. Rapid prototyping in its earlier days was applied to production of models and prototype parts.

RPT MACHINE

Center of Excellence
Aerospace and Defense
Computer Integrated Manufacturing (CIM) Lab

L.D.C.E

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Computer Integrated Manufacturing (CIM) Lab

L.D.C.E

Computer-integrated manufacturing is the manufacturing approach of using computers to control the entire production process.

CIM ENVIRONMENT

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Aerospace and Defense
Process Instrumentation Lab
L.D.C.E
L.D.C.E

Center of Excellence
Aerospace and Defense
Automation Lab

L.D.C.E

Understand the role of programmable logic controllers in complex mechatronic systems, modules and subsystems.

Understand the flow of information in the system.

Hardware::

PLCs : Siemens S7-1214C CPU, AC/DC/RLY

HMI : Siemens KTP 600 Basic and TP 700 Comfort Panel

Inputs/Outputs : 14DI, 10DO, 2AI, 1AO and
42DI, 42DO, 5AI, 2AO

Software::

Siemens TIA Portal V12 / Step 7 5.6

Siemens WinCC V12 / WinCC Professional

Siemens PLCSIM V12 / PLCSIM 5.4

S7 300 TEST KIT

S7 1200 TEST KIT

Center of Excellence
Aerospace and Defense
Electrical Lab

L.D.C.E

SINAMICS DC MASTER DRIVE KIT

SINAMICS G120 AC DRIVE KIT

The basic functions and physical properties of all electrical components and understand the roles in the system.

Motor control circuits

Function and properties of all LT Switchgear Components

Hardware::

DC Shunt Motor : 1.5KW, 1500 RPM : 2 Nos

AC Induction Motor : 5.5KW, 1449 RPM : 2 Nos.

Fuse, MCB, MCCB, MPCB, ACB, MFM

Software::

Drive ES – Starter V4.3

Center of Excellence

Aerospace and Defense

Mechatronics Lab

L.D.C.E