



## Institute of Infrastructure, Technology, Research And Management



It has been felt that Gujarat is going to need skilled manpower in huge number to sustain the industrial growth. The skill development has been a key focus area of Government of Gujarat. The emphasis is on developing skills through the partnership with industry so that the skill development program becomes more industry relevant, self-sustainable and creating employment opportunities for youth.

Therefore, in order to address the issue of skill development, the Government of Gujarat has established five CoEs (Center of Excellence). MoUs are signed between Industries Commissionerate, Siemens Industry Software (India) Pvt Ltd., Designtech Systems Ltd. and five different institutes of Gujarat for the same.

The broad objectives of these CoEs are: to acquire qualitative improvements in Technical Education, to promote Industry-Academia interfacing, to give training to improve employability, to create a pool of skilled manpower catering the industry need etc. One of the Institutes selected under this is - **Institute of Infrastructure, Technology, Research And Management (IITRAM), Ahmedabad.**

Institute of Infrastructure, Technology, Research and Management (IITRAM) is established by Government of Gujarat as an Autonomous University and it is instrumental in bringing about a profound change in Engineering Education with specialization in Infrastructure and Management of Infrastructure to create center of excellence, to organize advanced studies and to promote research in Infrastructure and Management of Infrastructure.

At IITRAM, CoE has established relevant laboratories by having Siemens products and Siemens Industry software applications. The equipments which have been given by Siemens are of latest technology. The laboratories which have been established at IITRAM under CoE, are as follows: CIMS Lab, CNC Programming Lab, Rapid Prototyping Lab, Mechatronics Lab, Automation Lab, Electrical Lab, Process Instrumentation Lab, Product Design and Validation Lab and Advanced Manufacturing Lab.

**Kindly see the overleaf for the details of the program offered by IITRAM at Center of Excellence.**

# A Short Term Training Program on RAPID PROTOTYPING

**Date:** 06 to 10, April 2015

**Duration:** 05 Days

## Rapid Prototyping:

Rapid prototyping is a class of technologies used to quickly fabricate a scale model of a physical part or assembly using three-dimensional computer aided design (CAD) data. Construction of the part or assembly is usually done using 3D printing or "additive layer manufacturing" technology. It shows that Rapid Prototyping is an additive manufacturing process, which builds object layer by layer. The input to machine is 3D CAD model of part to be produced in stl format. The facility has a provision to create stl files from CAD models prepared in any CAD software.

## Intended Audience:

This program is suited for students studying CAD/CAM courses of mechanical engineering or executing projects/research in areas related to CAD/CAM and Rapid Prototyping.

## Prerequisites:

Diploma/Degree in Mechanical, Manufacturing, Automobile, CAD/CAM, Industrial, Mechatronics, Production, and Aeronautical Engineering. Final year students of these streams are also eligible.

## Program Objective :

Objective of the program is to expose the students to the advanced tools used by industries worldwide. The aim is to elucidate the seamless mixing of concept, design and engineering aspects in development of the very important interdisciplinary domain of mechanical/manufacturing engineering. This will stage young minds to seed ideas/concepts for industry opportunities, towards growing national and global technology demands in mechanical/ manufacturing engineering.

## Schedule:

Day 1 [Dt. 06/04/2015, Monday]	
10.00 AM to 11.00 AM	INTRODUCTION TO NX CAD
11.00 AM to 1.00 PM	GETTING TO KNOW NX INTERFACE
1.00 PM to 2.00PM	LUNCH
2.00 PM to 4.00 PM	2D SKETCHING
4.00 PM to 5.00 PM	HANDS ON PRACTICE
Day 2 [Dt. 07/04/2015, Tuesday]	
10.00 AM TO 1PM	SWEEPING GEOMETRY
1.00 PM TO 2.00PM	LUNCH
2.00 PM TO 4.00 PM	PART MODELING & LAYERS
4.00 PM TO 5.00 PM	HANDS ON PRACTICE
Day 3 [Dt. 08/04/2015, Wednesday]	
10.00 AM TO 1.00 PM	MODIFY GEOMETRY FOR IMPORTED PARTS
1.00 PM TO 2.00 PM	LUNCH
2.00 PM TO 4.00 PM	NX CAM INTRODUCTION
4.00 PM TO 5.00 PM	HANDS ON PRACTICE
Day 4 [Dt. 09/04/2015, Thursday]	
10.00 AM TO 1.00 PM	CREATING 3D MODELS AND CONVERT INTO .STL FILE
1.00 PM TO 2.00 PM	LUNCH
2.00 PM TO 5.00 PM	RPT MACHINE INTERFACE
Day 5 [Dt. 10/04/2015, Friday]	
10.00 AM TO 1.00PM	IMPORTING CAD MODEL & GENERATE THE PROTOTYPE ON RPT MACHINE
1.00 PM TO 2.00 PM	LUNCH
2.00 PM TO 5.00PM	IMPORTING CAD MODEL & GENERATE THE PROTOTYPE ON RPT MACHINE



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