

Government of Gujarat Siemens Center of Excellence

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.



Faculty

Prof. N. Ramakrishan was in IIT Bombay, Mechanical Engineering Department for more than thirty years. He has been involved in many projects in companies like L&TMumbai, Godrej & Boyce-Mumbai, Bajaj Auto- Pune, Cadila Labs-Ahmedabad, IFB-Bangalore etc. in Low Cost Automation. He is currently a Visiting Professor at IIT Gandhinagar, Gujarat. He has conducted this course more than 15 times in IIT Bombay.

Dr. Navneet Khanna was with BITS, Pilani, Rajasthan for more than 8 years. His research interest includes metal forming, machining, manufacturing engineering and production techniques.

Correspondence

Dr. Ketan Badgujar

Associate Professor,
Electrical Engineering Department, IITRAM

M: +91 8153941900

E: ketan@iitram.ac.in

Dr. Navneet Khanna

Assistant Professor,
Mechanical Engineering Department, IITRAM

M: +91 7048143803

E: navneetkhanna@iitram.ac.in

SIEMENS



DesignTech
Technology For Designing The Future

**Institute of Infrastructure,
Technology, Research And Management**

Near Khokhra Circle, Maninagar (East),
Ahmedabad-380 026. (Gujarat State)

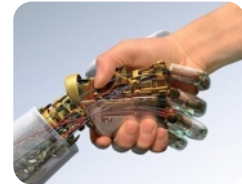


www.iitram.ac.in

A Workshop on

COMPUTER INTEGRATED MANUFACTURING SYSTEMS

18 to 20 December, 2014



Patron : **Dr. N. N. Bhuptani**

Coordinator : **Dr. Ketan Badgujar**
Prof. H. P. Doshi

Faculty : **Prof. N. Ramakrishnan**
Dr. Navneet Khanna

Organized by : **Institute of Infrastructure,
Technology, Research And
Management, Ahmedabad.**

Venue :

**Institute of Infrastructure, Technology,
Research And Management (IITRAM)**

Nr. Khokhra Circle, Maninagar (E),
Ahmedabad-380026.

Introduction



Computer Integrated manufacturing (abbreviated as CIM henceforth) is the latest trend in manufacturing automation. It does not mean a Fully Automated System. Effective integration of all resources (Capital, Human, CNC Technology, Material Handling etc.) can enhance quality, productivity, flexibility, agility, lankness etc.) of a system which may even be distributed across the globe. It is vital for global manufacturing.

Because of the High Level of Investment, its economic viability is a very important angle for success. Thorough preliminary planning and computer simulation with a suitable flexibility matrix is essential. Generally even very technical personal are confused of the normal terminology- FMS, FMC, CAD-CAM, particularly their differences. This course is an attempt to make the understanding very clear. And a reasonable road map to gradual up-gradation of CIM.

Scope

The course is aimed at developing the right perspective and understanding of this attractive aid to competitiveness. Apart from clarifying the basic case studies will be used from different types of industries to highlight the applications potential. It is expected to provide a systematic approach to CIM with gradually increasing sophistication.

Course Structure

4 modules of 1.5 hours per day (Mix of Theory & Hands-On Sessions).
There will be 2 modules pre-lunch and 2 modules post lunch per day.

Eligibility

Persons having a degree in Mechanical, Automobile, Production, Industrial or Mechatronics Engineering.

Details of Modules

| | |
|--------------------|---|
| Modules 1 | Introduction to CIM, CAD-CAM, FMC, FMS, Integration through Computers. |
| Modules 2 | Product Development and Identification. Classification & Coding Data base. |
| Modules 3 | CNC Technology, One axis of a CNC system. P, L, C control of axes. Elements, sensors & controllers, PID control, PLC, Multi-axis control, Interpolation, geometric control of axes, Adaptive control, Mechatronics. |
| Modules 4 | Tooling-Cutting tools, Modular Fixture, Automatic tool Changer (ATC) |
| Modules 5/6 | Programming of CNC machines. Word-address, APT |
| Modules 7/8 | Integrated Material Handling Systems (I.M.H.)-AS/RS, Carousels, AGVs, Flexible Conveyors, Robots – System to store, transport, load/unload, unitize, identify, monitor materials. |
| Modules 9 | Flexible Manufacturing Systems, FMC & FMS. Types & degrees of flexibility. |
| Modules 10 | Communications – Types of communication. Real time data capture & decision making. |

Registration Fees per person

Program fees is Rs. 18,000/- Participants are requested to register by sending duly filled registration form along with prescribed fees as Demand Draft (DD) from any Nationalized bank, in favor of **“Registrar, IITRAM”, Payable at Ahmedabad.** Fees include lunch, snacks, and course material.

Accommodation

Limited accommodations (on payment basis) are available on first come first served basis at IITRAM. Other accommodations are available in private hotels/lodges/guest houses at Ahmedabad. In case of private accommodation, candidates have to make their own arrangements. For more information contact at coe@iitram.ac.in.

APPLICATION FORM

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18 to 20 December, 2014

- Name: Mr./Ms./Dr. _____
- Date of Birth : _____ 3. Sex : [] M / [] F
- Education Qualification: _____
- Designation: _____
- Organization: [] Government / [] Private /
[] Research Organization / [] Industry
- Communication Address: _____

Phone _____ (M) _____
Fax _____
Email _____
- Experience (years) in relevant area
Teaching / Research : _____
Industry: _____
- Subjects Taught: _____

- Fees :

| | W/o. Acco. | Accommo. |
|-----------------|------------|--|
| Per Participant | ₹ 18,000/- | ₹ 300/- per day on twin sharing basis |
- Demand Draft No. _____
Dated _____
Bank: _____

Place : _____ Signature of the Applicant
Date : _____