Greetings from CMTI

We are pleased to inform you that we are conducting a 03 days Non-Residential Training programme on **"Industry 4.0 & Smart Manufacturing Systems", course code: 2201**

Highlights / Overview of the Program:

Smart manufacturing is a modern approach to manufacturing that integrates advanced technologies, data analytics, and automation to improve production processes, enhance efficiency, and reduce costs. It is an evolution of traditional manufacturing processes, where smart technologies such as sensors, robotics, artificial intelligence (AI), and the Internet of Things (IoT) are used to create a more responsive and flexible manufacturing environment.

Smart manufacturing focuses on real-time data collection and analysis, allowing manufacturers to monitor and optimize production processes, predict maintenance needs, and improve product quality. It is often associated with the concept of a "connected factory," where machines, devices, and systems communicate with each other, making operations more streamlined and adaptable.

CMTI, under the SAMARTH Udyog Bharat 4.0 Platform of the Ministry of Heavy Industries (MHI), has set up a Smart Manufacturing Demo & Development Cell as a Common Engineering Facility Centre (CEFC) to propagate and support the process of adoption of smart manufacturing practices by the rapidly growing Indian manufacturing industry.

CMTI's training program on Smart Manufacturing and Industry 4.0/5.0 aim to equip participants with the essential skills, knowledge, and tools to implement and optimize Industry 4.0/5.0 technologies within their organizations. These programs combine theoretical learning with practical insights, helping participants understand how to implement automation, data analytics, IoT, robotics/cobots, AI, and other advanced manufacturing technologies in real-world manufacturing settings.

- Introduction to Smart Manufacturing and Industry 4.0/5.0
- IoT (Internet of Things) in Manufacturing(Digitization of Legacy Machines and Machine to Machine connectivity
- Artificial Intelligence (AI) and Machine Learning (ML) for Manufacturing
- Machine Vision and its Applications
- Robotics and Automation:
- Data Acquisition for IoT, Edge Devices in Manufacturing
- Digital Twins and Virtual Simulation
- Smart Sensors and controllers
- Augmented Reality & its Applications
- Condition monitoring of machines for predictive maintenance
- Smart Metrology
- Precision Machine Tool Aggregates and Their Relevance in Smart Manufacturing
- Reverse Engineering Introduction
- Inventory/Asset Management Using RFID Technology
- Hands-on Practical Training
- Demonstrations

Target Participants:

Industry professionals from MSME's, Academia, Government & Private Industries, Faculty / Students.

Programme Schedule

It is 03 days Non Residential Training Programme scheduled during **14th – 16th December 2026.** The Programme will be held at Central Manufacturing Technology Institute, Bengaluru.

Participation Fees

Rs. 15,000/- plus GST @ 18%*, per participant. This includes Course Kit, working veg lunch, midsession tea.**

Course Fee can be paid through **NEFT / RTGS / Demand Draft.** Demand Draft to be drawn in favor of "Central Manufacturing Technology Institute", payable at Bangalore and should reach CMTI one week before the actual date of commencement of the course.

For further enquiries / registration / nominations, please contact:
Mr. Arun Kumar J G, Joint Director & Centre Head – AEAMT,
09449842686 / 78 Fax: (080) 2337 0428
E-mail– training@cmti.res.in

Beneficiary for RTGS/NEFT

a) **Name** : **Central Manufacturing Technology Institute**
b) **GST No: 29AAATC2085K1ZJ**
c) **Account No :10521862015**
d) **Bank Name & Branch: State Bank of India, Yeshwanthpur Branch**
e) **IFSC Code :SBIN0003297**
f) **MICR Code : 560002055**

Additional Information:

1. A 10% rebate on course fee will be given to organizations nominating 3 or more participants for each programme, only if payment is made in advance, ten days before the commencement of the course.
2. Individuals/ Companies interested in participation are requested to fill in the enclosed Enrollment Form and submit at the earliest.
3. Participants are advised to proceed for the programme only after the nominations / Programme confirmed by us (by Fax / Letter / Phone / E-Mail).
4. Participants should report at CMTI on the day of commencement of the course. Participants are advised to reach Bangalore the previous day evening/ night.
5. Course will be conducted from 09:00 to17:00 hrs. Participants may plan their return journey accordingly.
6. Participants will be given Certificate after the completion of the Training Programme
7. Enclosed are the tentative programme contents for ready reference
8. GST No. to be shared while sending your nomination / Registration (If a company is exempted from GST they have to provide GST Exemption certificate).
9. Please note that Course fee once paid will not be refunded. However, change in nomination will be permitted.

Note: * Taxes and other levies will be charged as per the prevailing rates at the time of Billing**

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CENTRAL MANUFACTURING TECHNOLOGY INSTITUTE
Tumkur Road, Bangalore 560 022

Training Programme
On
'Industry 4.0 & Smart Manufacturing Systems'

Tentative Programme Schedule

Days	Topics
Day 1	Introduction to Smart Manufacturing and Industry 4.0 & Industry 4.0 implementation challenges
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	Digital and Smart Factories
	Case studies -2 & Demo -2 (Conversion of Legacy machine tool to smart Machine)
	Demo -3 (Smart Metrology)
	Condition based Monitoring & Machine Health Monitoring
Day 2	Smart Sensors and controls
	Precision & Smart Metrology
	Big Data Analytics
	Data Acquisition for IIoT & Case studies -1 & Demo -1 (Conversion of Legacy Additive machine to smart Machine)
Day 3	Smart Machine tools & Intelligent Machining
	Machine Connectivity and its Applications
	Lab Visits
	Concluding Session

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