

Greetings from CMTI

We are pleased to inform you that we are conducting a 03 day Non-Residential Training programme on "**Micro Electro mechanical System (MEMS) and its Applications**", course code **0730**

### Highlights / Overview of the Program:

Micro-Electro-Mechanical Systems (MEMS) is the integration of mechanical elements, sensors, actuators and electronics on a common silicon substrate through micro-fabrication technology. The micro-mechanical components are fabricated using compatible "micro-machining" processes that selectively etch away parts of the silicon wafer or add new structural layers to form the mechanical and electro-mechanical devices. This course will provide in-depth knowledge in field of various processes involved in MEMS design, testing, analysis, simulation, fabrication and packaging levels & MEMS applications.

### Target Participants:

Engineers involved in the design and fabrication of MEMS sensors and actuators

### Programme Schedule

It is 03 day Non Residential Training Programme scheduled during **26<sup>th</sup> – 28<sup>th</sup> April 2023**. The Programme will be held at Central Manufacturing Technology Institute, Bangalore

### Participation Fees

**Rs. 11,700/- 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.

### 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 to 17:00 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**

For further enquiries / registration / nominations, please contact:  
**Mrs. Asha R Upadhyaya, Scientist – F & Centre Head – AEAMT,**  
09449842686 / 78 Fax: (080) 2337 0428  
E-mail– training@cmti.res.in

# CENTRAL MANUFACTURING TECHNOLOGY INSTITUTE

Tumkur Road, Bangalore 560 022

**Training Programme**  
On  
**Micro Electro mechanical System (MEMS) and its Applications**

Tentative Programme Schedule

Day	Particulars
Day 1	Introduction to MEMS Technology
	Transduction Principles
	MEMS Electronics
	MEMS Fabrication process and Case Study
	M/s FTD Infocom Pvt Ltd
	Demo on MEMS Sensors
Day 2	MEMS basic Packaging process and Case study
	MEMS Characterization process - Mechanical and Case study (SEM/Nano Indenter /Bond Tester)
	MEMS Characterization process - Electrical and Case study
	MEMS Characterization process - Material and Case study
	MEMS Characterization process - X-ray Inspection
	Nano Characterization Facilities Visit
Day 3	MEMS Design Techniques and design tools
	MEMS + IC Co-simulation: Case Study
	Polymer MEMS
	Introduction to MEMS Advanced Packaging process
	Demo on MEMS Design Tools
	MEMS Applications & Case study
	MEMS Facilities Visit