

Greetings from CMTI

We are pleased to inform you that we are conducting a 03 days Non-Residential Training programme on "**Materials & Metallurgy for Non-Metallurgists**", **course code 0905**

Highlights / Overview of the Program:

The first step in the manufacture of any engineering component is material selection. The selection of materials is generally made considering the design aspects & physical properties of material. The physical properties of material depend on the chemical ingredients and type of heat treatment carried out. Hence, the science of metals and materials is of significance for selection of suitable materials during design and development of components for engineering applications. This necessitates the requirement of knowledge know how of metals and materials to those scientist and engineers involved in manufacturing especially non-metallurgists.

The course is aimed to improvise essential knowledge on metallurgical and material aspects for non-metallurgists working in the field of manufacturing.

The objective of the course is to:

- Help the designers in selection of materials keeping in view the functional requirement.
- Enable the non-metallurgists to learn the art of heat treatment in order to achieve the desired physical properties for the materials.

Topics

- Selection of materials for various applications
- Classification of alloys
- Deterministic role of individual elements in alloys
- Concept of heat treatment
- Problems encountered during heat treatment
- Role of composites, polymers and ceramic materials in manufacturing
- Typical case studies involving heat treatment and failure analysis

Target Participants:

Non-metallurgists involved in selection, design and manufacturing of engineering components

Programme Schedule

It is 03 days Non Residential Training Programme scheduled during **13th –15th June 2023**. The Programme will be held at Central Manufacturing Technology Institute, Bangalore

Participation Fees

Rs. 7,800/- 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
Materials & Metallurgy for Non-Metallurgists

Tentative Programme Schedule

Days	Topic
Day 01	Introduction on Materials & Metallurgy
	Selection of Materials for Various Applications
	Significance of Materials Testing
	Brief Introduction to Analytical tools (metallic materials)
	Materials Testing Demo (metallic materials)
Day 02	Brief Introduction to Analytical tools (non-metallic materials)
	Classification of Steel
	Deterministic role of individual elements in Fe based alloys
	Materials Testing Demo (non-metallic materials)
Day 03	Concept of heat treatment
	Problems encountered during heat treatment
	Inspection of components – Non Destructive Testing
	Demo on metallurgical testing
	Concluding session