



## INTRODUCTION

Mechatronics is an interdisciplinary branch of engineering that focuses on mechanical, electrical and electronics engineering and also includes a combination of robotics, computer, and telecommunications systems. As we aware any and every product in these days, is built with these interdisciplinary engineering science and built more intelligence to performing their output without or with minimum intervention of human.

This interdisciplinary concept brings up the importance of mechatronics, to prepare the engineers for these jobs, where they need to deal with mechanical, electrical, electronics and computers in product development of every domain.

Mechatronics is a step beyond mechanization, which makes use of high control capability devices used largely for efficient manufacturing or production processes. In order to understand the development, integration and functioning of such systems, an engineer needs to have focussed skills in working with mechanical & electrical systems, programming industrial controllers, working with sensors, actuators, and industrial communication systems.

Keeping this in view, Indian Machine Tool Manufacturers' Association (IMTMA) is organizing a 5 day training programme on “Mechatronics - Fundamentals & Core concepts”.

**\*Participants can register for the complete course OR individual modules -**

**18.01.2021: Day 1: Introduction to Industrial Electrical System - Switchgear, Circuits and Sensors** ([Read More / Register](#))

**19.01.2021: Day 2: Fundamentals of Mechanical systems - Kinematics and Selection of Mechanical Elements** ([Read More / Register](#))

**20.01.2021: Day 3: Introduction to PLC - Hardware and Programming** ([Read More / Register](#))

**21.01.2021: Day 4: Introduction to Basics Of CNC System - Architecture, Motors, Drives, Encoders And Troubleshooting** ([Read More / Register](#))

**22.01.2021: Day 5: Hydraulics & Pneumatics - Introduction and Troubleshooting** ([Read More / Register](#))

## FOCUS AREAS

- Fundamentals of Mechatronics
- Mechanical Kinematics, elements and assembly techniques
- CNC system and PLC
- Ball screws and Guideways
- Pneumatics and Hydraulics
- Importance of Mechanical elements and assembly
- Industrial Sensors and its Connections to Controller
- PLC & HMI programming
- Servo Technology

## KEY TAKE AWAYS

After undergoing the programme, the participants will be able to -

- Understand fundamentals of Mechatronics system
- Knowledge on Mechatronics elements
- CNC controller, PLC and communication
- Know how on mechanical systems and their selection
- Will Understand Standard Practices used to Plan/Build/Commission
- Assembly techniques of mechanical and electrical systems

## FEE PER PARTICIPANT (PER LOGIN)

**Rs. 9000/-**

+18% GST

**IMTMA Members/ Micro Companies/ Individuals/  
Educational Institutions / Students/ IMTMA Non  
Members/ Others**

**USD 270/-**

**Overseas Participants**

## FACULTY

This Program will be conducted by **Mr.Anil Kumar Meti, Mr. Rajashekara HV, Mr. Avinash Khare, Mr. TK Venkatesh and Mr. Swaminathan.**

**Mr. Anil Kumar Meti** is working with IMTMA as Executive officer – Training, taking care of Industrial automation training. He comes with 8 years of professional experience and prior to IMTMA worked in industries such as RR Steels and Hunet technology.

**Mr. Rajashekara HV**, Advisor IMTMA has 28 years’ experience on Design and Development of Metal cutting machines from various industry like M/s HMT Machine Tools, M/s Johnson Electric International Limited, HongKong and 7 years as Senior Director, IMTMA Design Institute. He has overall experience of 35 Years from both shop floor and training.

**Mr. Avinash Khare** is presently working as a Consultant Head for IMTMA Pune Technology Centre for last 5 years; he has been designing, developing content and delivering wide range of Training Courses as a Faculty. He is Electrical Engineer by Qualification and he has worked for over 33 years at Tata Motors Pune in various capacities ranging from R&D in Industrial Electronics, Machine Maintenance, Technology Procurement, Head of Machine Shops, Tool Room Shop Head, Head of Die Design and Champion in Business Excellence. He has taught Instrumentation and Bio Medical Instrumentation at Pune University as part time faculty.

**Mr. TK Venkatesh** comes with 4 decades of rich experience in the CNC Machine Tools domain. After his graduation in Electronics & Communication Engineering, he had served HMT for 24 years in Design & Development of CNC Machine Tools of different types as well as Automation systems. He was General Manager – Servicing at AMS for 15 plus years supporting all the customers in India as well as overseas. He had played a lead role in Reliability Improvement program of CNC Machine Tools at AMS and IMTMA - ACMA Task force for bench marking of electrical systems of CNC Machine Tools.

**Mr. N Swaminathan** is a Mechanical engineer with over 40 years of professional experience. He joined BFW Ltd as R&D engineer and was involved in developing a vertical machining centre. He co-founded Leonardo Automation in 1986 as Technical Director looking after design to customer service. He was involved in design of Hydraulic powerpacks, expanded to Electro- hydraulic systems with CE marking, developed special test rigs, Actuators, lab systems and jack oil systems. The powerpacks built by him have the capacity to handle a maximum pressure of 2500 kg /cm<sup>2</sup> and a flow of 1200 Litres per min. He has served customers like GE (Austria) / Nuclear power corporation / Siemens / ARAI.

### For Registration Contact

**Shashank Kumar Singh**  
**Programme Coordinator**

7571081726

[gurgaontraining-sks@imtma.in](mailto:gurgaontraining-sks@imtma.in)

**Nishant Singh**

9823174010

[nishant@imtma.in](mailto:nishant@imtma.in)

### Contact Address

**INDIAN MACHINE TOOL MANUFACTURERS' ASSOCIATION**

Plot 249F, Phase IV, Udyog vihar, Sector - 18,

Gurgaon - 122015

Tata no- +91-124-6463101

Tel : 0124 4014101 - 04

Fax : +91-124-4014108



imtmatraining.67038796@hdfcbank