

## 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 are aware any and every product these days is built with this interdisciplinary engineering science and built more intelligence to performing their output without or with minimum intervention of humans.

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”.

## 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 program, the participants will be able to -

- Understand fundamentals of Mechatronics system
- Knowledge of 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. 12000/-**  
+18% GST  
**IMTMA Members/ Micro Companies/ Individuals/  
Educational Institutions / Students/ IMTMA Non  
Members/ Others**

**USD 480/-**  
**Overseas Participants**

**Group Concession : 10% for 3 to 5 and 30% for 6 and more delegates being nominated from the same company**

## FACULTY

This program will be conducted by **Mr. Rajashekara HV, Mr.Balakrishna Deshpande, Mr. S H Upadhya, Mr. RAMDAS R. NAMBI ,Mrs. LAKSHMI KUMARI**

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

**Mr. Balkrishna H. Deshpande** and Industry Experts from Festo India and Yuken India. Mr. Deshpande is a Domain expert with more than 38 years of hands-on experience in the field of M/C controls Designing, Assembly, & commissioning. He is an expert in Hydraulics, Pneumatics, Bearings Lubrication & Mechatronics (Factory Automation) with vast experience in circuit building, system designing, commissioning & fault finding. He has delivered extensive hands-on training in hydraulics and pneumatics to more than 2000 industry professionals across India. He represented India as a Mechatronics trainer & expert of Mechatronics World Skills international Competition 2013 & Jury for the Russian hi-tech World Skill competition 2014.

**Mr. S H Upadhya** is a graduate in Electrical Engineering from Karnataka Regional Engineering College, Surathkal, now known as NIT-K. He has over 35 years of experience in the field of Plant Engineering in a large public sector undertaking. He has worked in taking care of manufacturing facilities, captive generation facilities, HT and LT power transmission, distribution systems, and all other utilities associated with townships. Besides maintenance, he has worked in Material engineering, Projects, after-sales service, and assembly.

He has undergone training in Germany on plant engineering, machine tools, and diesel-operated HT generators. He has wide-ranging experience in conducting various technical training programs for Engineering Industries, Process Industries, and Service Industries.

**Mr. Ramadas R Nambi** is an industry expert with over 30 years of experience in the area of CNC control systems, CNC machines, Industrial robots & Unmanned operations. Presentations will be accompanied by practical demonstrations and case studies. The workshop will be highly interactive where participants will be able to discuss specific problems in maintenance and solicit feedback from the expert faculty.

**Ms. K. LAKSHMI KUMARI** has done her BE in electronics and communication and Worked in HMT Machine Tools Limited, Bangalore for 36 years, in various levels from Engineer Trainee to DGM (D & D). She has involved in Design & Development of various SPMs, Conventional machines, CNC Turning machines, CNC Grinding machines, Horizontal and Vertical Machining centers, Flow Forming Lathe etc. Also Experienced in Reconditioning-Upgradation of Conventional Machines to CNC Machines. She has trained many New Engineers, Graduate Apprentice Trainees and Customers on Relay Logic design, Introduction to CNC system and drives and PLC programming

### For Registration Contact

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