Manufacturing Technology Training
An IMTMA initiative

Design of Fixtures for Machining Applications - A practical approach
Date : 16 to 18 June, 2026
Venue : IMTMA Technology Centre, Bengaluru

INTRODUCTION

The course is designed with an intent of bringing a greater insight into fixtures and their application across all manufacturing processes. Comprehensive learning on fixtures for machining, welding, inspection and assembly is the main focus in the programme. Machining fixture are most complex in nature due to customer's stringent requirements from the part accuracy (both dimensional and geometrical) and productivity point of view. Basics of fixture design, if not implemented correctly results in poor productivity & quality problems. Set-up time and cycle time reduction, increased accuracy on components, deskilling the job setting operation are the obvious advantages of a good fixture. Competence in right fixture differentiates excellent organizations.

Complete fundamentals and the process of fixture design is described from concept to final design in the programme. Pre-design activities like design input, conceptualization, process planning, accuracy consideration, cycle time estimation, POKAYOKE, 3D modelling of parts and assembly are demonstrated systematically with case studies. It will be highly interactive and covers entire 360° view on all fixtures.

FOCUS AREAS

- Fundamentals of fixtures
- Fixtures for various manufacturing processes
- Design considerations for machining fixture
- Systematic study on component drawing for part accuracy, cycle time, location, clamping for machining process
- Design exercise for simple fixtures – case study
- Introduction to hydraulic and pneumatic fixtures with case study
- A demo project on fixture for an auto component – case study
- Basics of Assembly, Welding and Inspection fixtures
- Case studies on all types of fixtures will be reviewed for better understanding

KEY TAKE AWAYS

- Comprehensive knowledge fixtures
- Systematic approach for designing a simple to complex fixture
- What to be considered from Machine tool to design a machining fixture
- An experience in fixture design
- Knowledge on pneumatic and hydraulics
- Comprehensive learning on assembly, welding and inspection fixtures

PARTICIPATION FEE

Rs. 6999/-	Rs. 3500/-	Rs. 999/-	USD 280/-
+18% GST	+18% GST	+18% GST	
IMTMA Members/ Micro Companies/ Individuals/ IMTMA Non Members/ Others	**Professors**	**Student**	**Overseas Participants**

Group Concession : 10% for 3 to 5 and 20% for 6 and more delegates being nominated from the same company

FACULTY

This programme will be conducted by - **Mr. BL Patil. and Mr. Maqsood A Khallaq**

BL Patil, Senior Executive Officer at IMTMA, is Mechanical engineering graduate, has a professional experience over 28 years in manufacturing domain as designer of machines and fixtures. He worked in Kinetic and Avasarala Automation, Bangalore.

Maqsood A Khallaq - Industrialist

With over 3 decades of expertise in Machine Design and Fixturing. An ex-HMT as Dy. General Manager served the R & D dept. He now runs his own Industry "XL CNC Machine" at Peenya.

For Registration Contact

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REGISTRATION : Prior registration for participation is necessary. Number of participants is limited and will be accepted on 'First Come First Serve' basis. A Certificate of participation will be issued to participants.
Important Information : Participation fee includes, course material, working lunch and tea / coffee. Interested companies are requested to register online by clicking on 'REGISTER' button and by filling up the nomination authority and participant's details in specified form.