

CENTRAL INSTITUTE OF TOOL DESIGN

(A Government of India Society)

Ministry of Micro, Small and Medium Enterprises

Balanagar, Hyderabad -500 037

Entrepreneurship Skill Development Programme (ESDP)
on

Low Cost Automation-

Design, Maintenance & Safe Troubleshooting Practices

(06th October to 17th November, 2025)

(Sponsored by Development Commissioner MSME, GoI)

Focus Areas

- Introduction to Principles of Fluidics.
- Function & Construction of Hydraulic Components - Pumps, DC Valves, Cylinders, Motors, Reservoirs and Accessories.
- Symbols and Circuit Diagrams.
- Hydraulic Circuits using Elements - DC valves, Check valves, Pressure control and Flow control valves.
- Hydraulic Technology in Machine Tools – Case Studies.
- Energy Saving Measures in Hydraulic Power Packs.
- Maintenance and Troubleshooting of Hydraulic Circuits; Safety Procedures and Practices.
- Hands-on Sessions and Exercises in Hydraulic Trainer Kit.
- Pneumatic Components; Standard ISO Pneumatic Symbols & Schematic Diagrams.
- Maintenance and Troubleshooting of Pneumatic Elements & Circuits; Typical issues with Do's and Don'ts.

Key Takeaways

After undergoing the program, the participants will be able to learn

- Understand Hydraulic and Pneumatic components / circuits
- Adopt preventive maintenance procedure for Hydraulic and Pneumatic systems
- Troubleshoot Hydraulic and Pneumatic circuits in systematic manner
- Innovate the system for superior performance & lower running cost.

Candidate's Profile (Must be 18Years & Above)

- Diploma in Engineering (Mechanical, Electrical, Electronics and equivalent thereof)
- B.E. /B.Tech in Engineering (Mechanical, Electrical, Electronics and equivalent thereof).

For Further
Details Contact
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