

DIT UNIVERSITY CENTRE OF EXCELLENCE

INDUSTRIAL AUTOMATION AND ROBOTICS



About CoE – Industrial Automation & Robotics

This Centre at DIT University prepares multidisciplinary engineering graduates to fulfil the IAR workforce requirements of the industry. The Centre has world class infrastructure supported by HYDAC Germany - equipment's, training kits, hardware, software and teaching aids with trained faculty.



The Centre has five laboratories which are listed below:

- Industrial Hydraulics
- Industrial Pneumatics
- Sensor Technology
- PLC with IIoT
- Six Axis Industrial Robot

It supports PhD research and conducts part-time/full-time training for the faculty, students as well as industry personal.

This centre caters to the growing demand from engineering and low-cost automation with hydraulics and pneumatics in India as well as worldwide.

Purpose of Setting up of CoE?

Main intention of establishing “Centre of Excellence” is to facilitate the Internship programs for students, Training for Professional working in maintenance, operations, assembly, planning and all those interested in Industrial Automation and Robotics.

The course is designed for basic understanding to troubleshooting and maintenance. With specific to customer's requirement, the training program can be designed.



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TRAINING CENTRE'S - IN DETAIL



Industrial Hydraulics

This device set is used to study the phenomena of hydraulics using practical exercises. Only industry standard components are used. These have been adapted for one use on the training equipment.

Key Features

- Double Sided Hydraulic Trainer Kit
- Operating voltage options 3 Phase / 1 Phase
- Optional Storage Unit
- Industrial Components
- Rugged Design
- Scalable
- Leak free quick disconnect couplings

Hydraulic Trainer Device Sets

- Manual Hydraulics
- Electro Hydraulics
- Proportional Hydraulics
- Measurement Technology
- Industry 4.0

Industrial Pneumatics



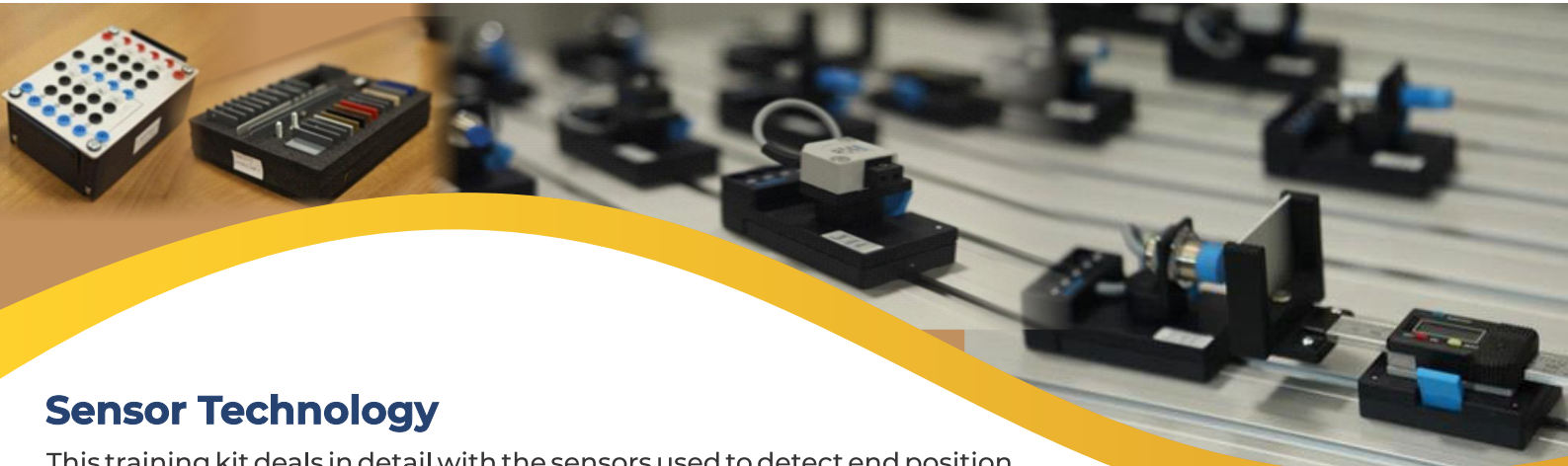
This device set is used for fundamental training in the field of pneumatic control technology. It provides an understanding of basic physical principles of pneumatics, as well as the function and use of pneumatic components. Simple pneumatic control systems and also advanced level can be set up using the equipment set. The equipment set can be used to build extensive combinational circuits with input and output signal connections, as well as control systems with sequencer modules.

Key Features

- Double Sided Pneumatic Trainer Kit
- Operating voltage 1 Phase
- Optional Storage Unit
- Industrial Components
- Rugged Design
- Scalable
- Silent Compressor

Pneumatic Trainer Device Sets

- Manual Hydraulics
- Electro Hydraulics
- Industry 4.0



Sensor Technology

This training kit deals in detail with the sensors used to detect end position on cylinders and with pressure and flow sensors in pneumatic systems. Based on a complex example from industrial practice, trainees are taught to select suitable sensors.

Key Features

- Portable
- Industrial Components
- Rugged Design
- Scalable
- Interfacable to Hydraulic / Pneumatic training kits
- Industry 4.0 upgradable

PLC with IIOT

The device set is ideal for conducting courses on the subject of control. Focal point: Programming with the universal simulator. It contains the XLC L25 control system with a bracket for the grooved plate, universal board with 24 exercise templates and PLC connecting cable.

Key Features

- Portable
- Industrial Components
- Rugged Design
- Scalable
- Interfacable to Hydraulic / Pneumatic training kits
- Industry 4.0 upgradable



Six Axis Industrial Robot



The robot station includes the new 6-axis articulated arm robot by ABB. This industrial robot combines a sturdy engineering design and construction with a large working range and a high movement speed. In this segment of design, the station is equipped with a robot controller, Teach box, safety housing, service unit and pneumatic multifunction gripper.

Key Features

- 6 Axis Articulated Robot
- Operating voltage 3 Phase
- Stabilizer for tackle voltage fluctuation / protection
- Industrial Robot
- Teach Pendant
- Robot Simulation software 50 licenses *
- Rugged Design
- Palletizing and Welding simulation
- Silent Compressor for gripping function
- 4 kg payload
- 1500mm reach



Different Activities

Workshops

- Industrial Automation
- PLC & HMI
- Mechatronics

Student Training Programs

- Industrial Automation
- Basic and Advanced Hydraulics & Pneumatics
- IIoT-PLC
- Mechatronics

R & D / Projects

- Student Projects
- Industrial Projects
- Sponsored Projects

Module Courses

- Industrial Automation
- Industrial Hydraulics
- Industrial Pneumatics
- IIoT-PLC
- Sensor Technology

Objectives

- HYDAC India CoE will create a rich library of Block sets, Components and Patterns.
- The Centre will train the future workforce as per industrial aspects in a cost-effective way.
- The Centre will be a platform for creating interns for HYDAC India and for other MNCs.
- The Centre will focus on knowledge transfer, research and innovations.
- The Centre will provide training and consultancy to Research scholars and Engineers of different industries on library developed by the Centre at low cost.
- Leverage academic environment to provide meaningful R&D and product development support to Research Scholars, Engineers and National Level Industries (MNCs)
- Several Skill Development & Certificate Programs for Polytechnic, ITI and B. Tech students.

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Commendations

Dr. Vinod Kumar
(Nodal Officer, H.E
Govt. of Uttarakhand)

A very innovative idea & imagination
for future course & action.

G. Venkateswaran
(Head- IDT, ONGC)

Visited COE & really well maintained
with latest technology equipment and certainly, the students will
be well trained & handle when they enter the industry.

Onkar Singh
(2019 batch Mech. Engg.)
Alumni

Shaping students according to industry demand. It's a best level
lab according to academic standard.

Manish Gupta
(2019 batch Mech. Engg.)
Alumni

Amazed with such a Hi-tech lab in our university. All the best to
entire IAR-COE Faculties.

Narender Singh
HR-Manager
DIT University

Excellent piece of work and demo shown. Great work and keep
doing better.





Get In Touch

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