

JANATICS Didactics Initiative

Setting up of Industry linked JANATICS Centre for Innovation in Smart Factory



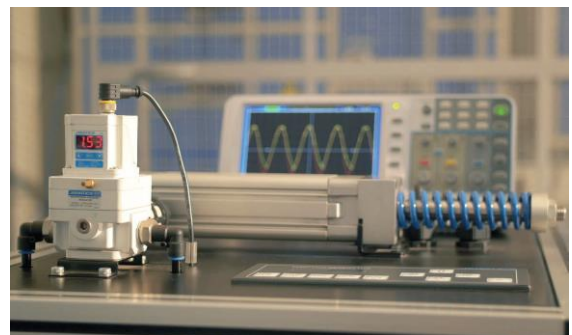
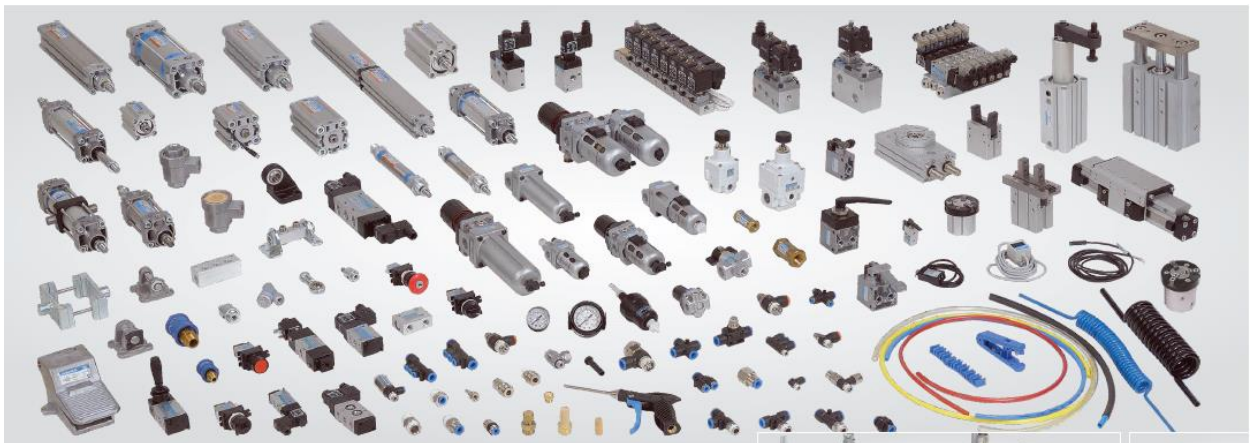
1 Introduction

1.1 About JANATICS

Established in the year 1977 and being successfully positioned as one of the leading world class manufacturers of pneumatic and automation products. The central manufacturing facility in Coimbatore, India is spread across 70,000 square meters and is equipped with technologically advanced machinery.

JANATICS boasts of a state-of-the-art R&D division, recognised by Department of Scientific and Industrial Research, Government of India. Continued research and development using advanced technologies for prototyping, testing, instrumentation, and accelerated life testing results in development of high quality and reliable products. In-house tool design, analysis & tool room capabilities allow us to commercialize a wide array of standard pneumatic products.

Automated and flexible production lines with short lead & set up times for FRLs, Air Cylinders, Directional control valves and One touch fitting facilitate faster response to varied domestic and global customer demands.



National Distribution Network



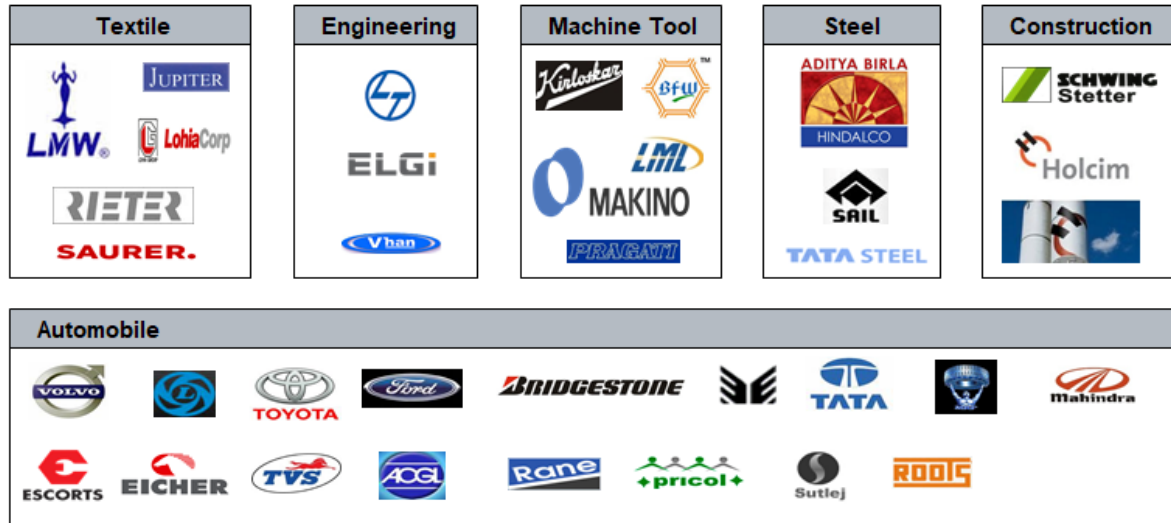
Global Distribution Network



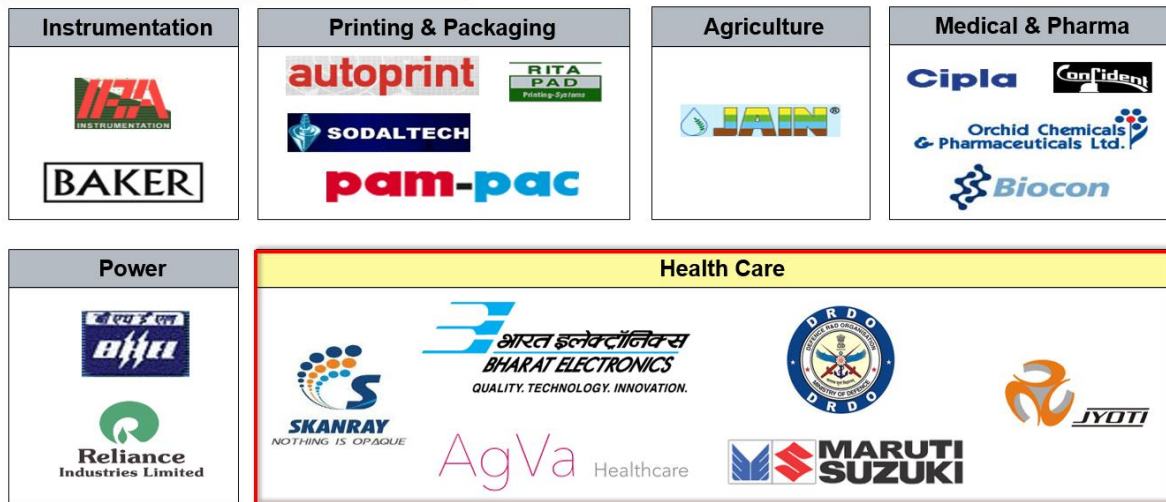
We Cater To



Few of our esteemed customers...



Few of our esteemed customers...



Developed key pneumatic components during lockdown for M/s. BEL (for 35000 ventilators)

In Academic...



1.2 Significance of Automation in Industries

Industries are being modernized more rapidly than ever, both technically and economically, to balance fast changing requirements and demands without compromises on quality in product and service. This dynamic state in Indian subcontinent has a prime concern where the shortage of skilled technical specialists in the field of automation, is considered to be one of the major bottlenecks.

The industrial world is facing many technological changes which increased the urgent demand for the premium quality products and services that can only be supplied by a high level of productivity. This requirement needs process engineering systems, automated manufacturing, and industrial automation. Hence, industrial automation plays a key role in solving the requirements of companies. It is extremely significant to face the tasks of:

Globalization – Global industrial automation market demands superior, practical services

Productivity – Automation companies want to enhance their productivity by producing a higher level of Automation. The key factors include costs, time, and quality.

On the other hand, industrial automation is all about working smarter, faster, and proficiently. This makes automation more powerful and that's why customers are looking for pioneering, end-to-end technologies with open, modern architecture and new data from new connections. As the industrial automation industry comprehends the advantages of the Internet of Things (IoT), it is becoming essential that organizations adopt these technologies.

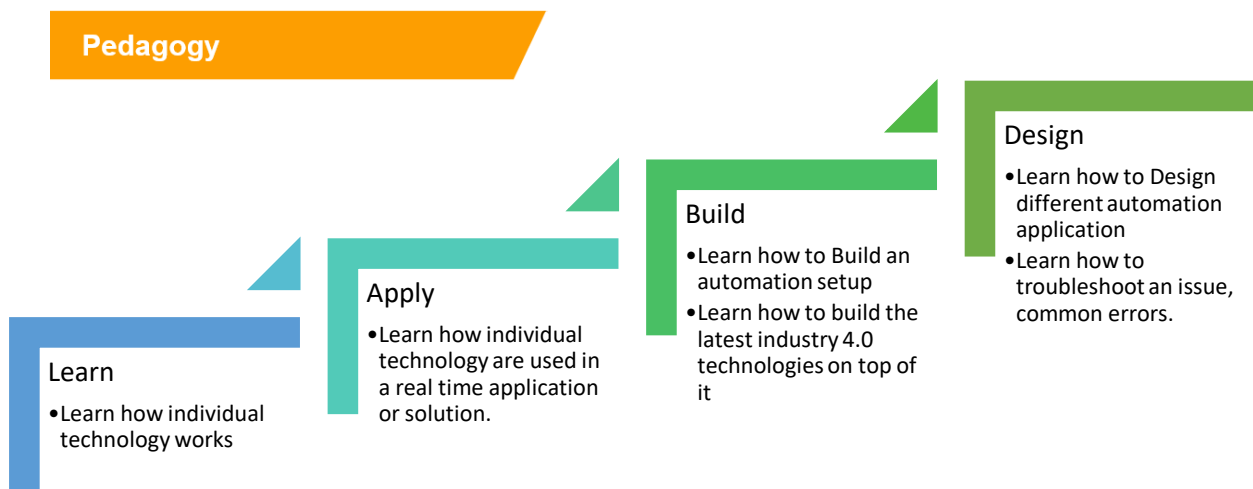
Skill development has been the specific focus for the government through its initiation of National Skills Development Council (NSDC) to make the dream "Make In India" a reality. With over three decades of dedicated service to customers on Quality, fast paced Delivery, and Knowledge sharing, it has enabled JANATICS India Private Limited, head - quartered at Coimbatore, India to provide its service to Country, Society and Customers.

Training programmes conducted at the JANATICS own training center and at the JANATICS authorised training centers in colleges are well planned, structured and organised with a flexibility for participants to Learn the concepts in their understandable way through e-learning, classroom sessions or live projects. These learning methodologies has led to effectiveness in training and thereby helping participants acquire required set of technical competencies. Tailored range of programmes and associated workshops / projects provide participants the recent trends in the field of Pneumatics and Mechatronic systems.

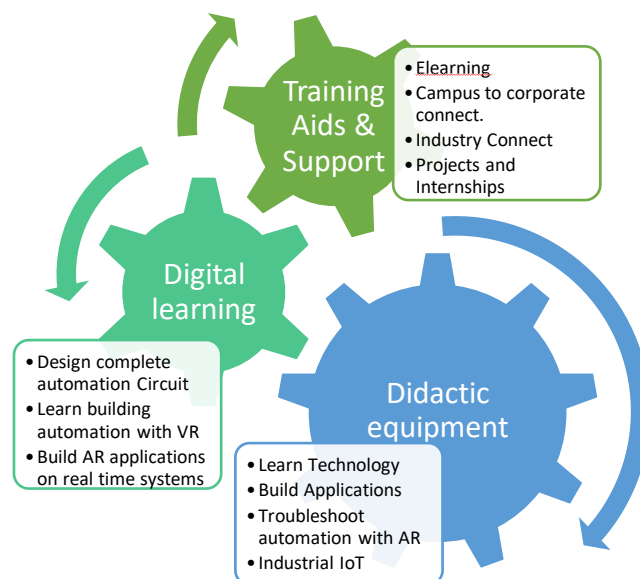
1.3 Centre for Innovation in Automation and Industry 4.0

The Centre will constitute of high-end equipment and tools in the latest technologies like Automation (Pneumatics, hydraulics Sensors, PLC) both as in individual technologies and as integrated application. The centre will focus on the industry 4.0 topics related to automation like Robotics, Industrial IoT, Augmented Reality, Design and Simulation of automation application.

The Centre will be equipped with different levels of hardware including learning basic technology, understanding the applications of it, integration of different automation components as mechatronics system, building & configuring automation systems and understanding troubleshooting in automation.



What does COE deliver?

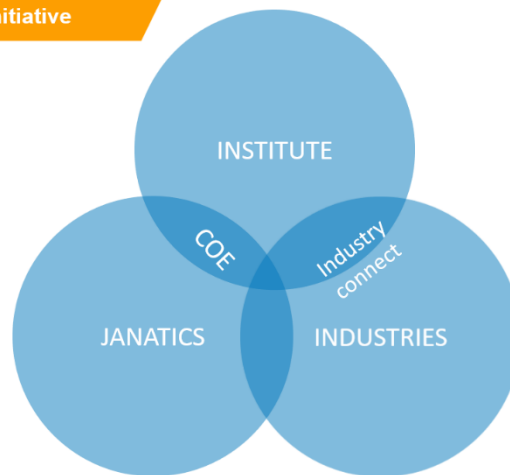


1.3.1 Objective

The broad objectives of the Program are as follows:

1. Promote Industry – Academia partnership. JANATICS along with its industrial customers will work towards connecting with the institution, so that institution can create cloud of industrial activities.
2. Qualitative improvements in Technical Education
 - a. Improvements in Labs infrastructure by adopting latest technologies in Automation and Smart Factory to serve the needs of targeted industries
 - b. Skill Up-gradation of faculty
 - c. Update Course curriculum to align with modern industrial practices
 - d. Promote Innovation
 - e. Train students to improve employability
3. Create skilled manpower pool to cater to current and future industrial landscape of the region
 - a. Availability of trained workforce to attract industries to set up units in the State

JANATICS COE Initiative



Objective

JANATICS

- Sharing of knowledge back to the academic community (ESR)
- Facilitates joint **RESEARCH**, resource exchange and training
- Dissemination of knowledge to users at right time and on a systematic way
- Identification of potential **CANDIDATES, be it for employment (or) entrepreneur**



Students

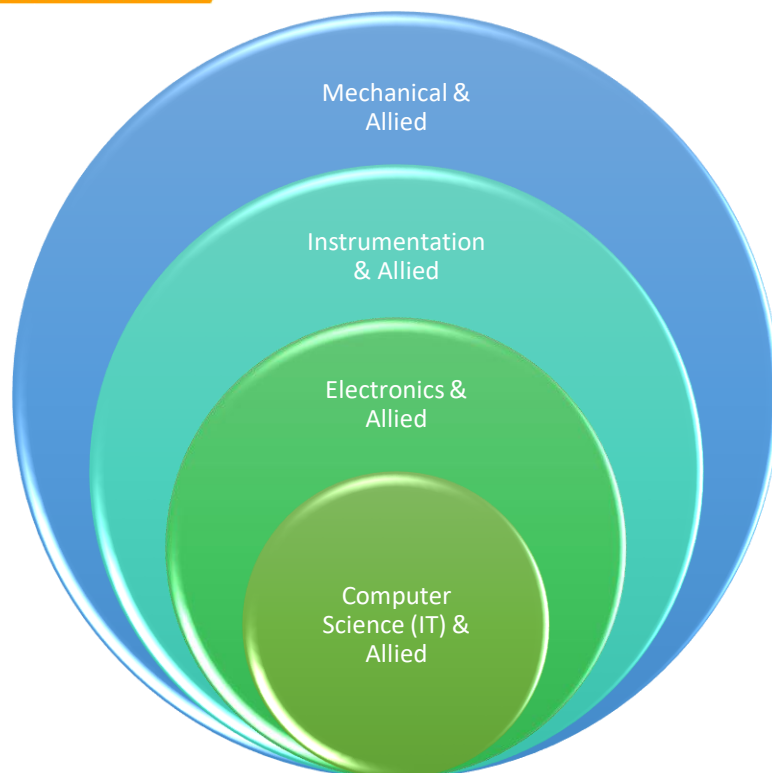
- Smooth transition from academics to Industry
- Enhances **Interpersonal skills, leadership qualities**
- Identified core interests and potential **ENTREPRENEURS**
- Provides an opportunity to apply ideas/skill sets that student learnt during academic programme
- Increases the confidence level of students
- Increases opportunities for students
- Provides link with potential future employers

Institute

- Enriches the educational program that results from a strong Interaction
- Helps to **bridge the gap** between industrial requirement and academic curriculum
- Aids the Institute in getting live projects
- Enables the Institute to identify need-based executive training programmes

The Centre will be an interdisciplinary, industry backed centre focused on developing skill excellence in the field of automation, mechatronics, and Industry 4.0. Through the training and implementation of industry-relevant technology and processes, the centre aims to facilitate a multi-disciplinary learning environment across Technology, Engineering, and Science and Management faculties. It should meet the demands of the industries' ever-changing processes and help build skills around collaboration and innovation. The centre will leverage the JANATICS capability to draw upon the expertise from various areas of automotive, automotive suppliers, process industries, general engineering, and their suppliers, etc and provide its partners with knowledge and tools.

Caters to



1.3.2 Outcomes and Benefits

1. Updated curriculum aligned with Industry requirements.
2. To be a flagship training centre for industry and other educational institutions
3. Build a world-class integrated skill development infrastructure at the Institute.
4. Industrial Exposure via Internships and Project
5. Industry-Institution partnership – Usually the OEM Connects with the Institution for knowledge transfer, however it doesn't connect back to different industries for a replicate effect. JANATICS initiates the connectivity to its customers thereby from the institution the knowledge transfer via of training, projects, internships, etc to different industries & institutions can happen.

2 Scope of Engagement

An MOU should be signed between JANATICS and the respective institute which has a validity and it should be renewed every year after that.

2.1 CUSTOMER

- 1 All required infra structure defined by JANATICS including the equipment/tools mentioned below and utilities for the equipment like Stabilized Power supply, Computers, Compressed Air supply near the equipment.
- 2 Allocating dedicated faculty in charge for operation the lab
- 3 Regular operative maintenance of the equipment as Suggested by JANATICS

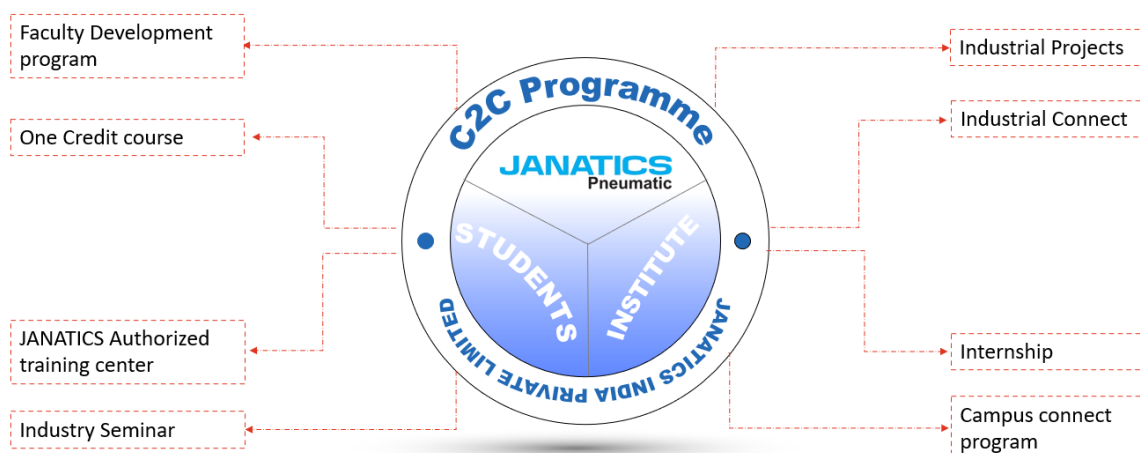
2.2 JANATICS

S. No	Category	Description
1	Didactics Equipment	Pneumatic Trainer kit with an option of integrating with Electrical controls, PLC and IOT for remote operations.
2		Hydraulic Trainer kit with an option of integrating with Electrical controls, PLC and IOT for remote operations.
3		Sensor Trainer kit
4		Vacuum Trainer kit
5		Automated Piano
6		Handling System
7		Cylinder Mounting Kit
8		Do It Yourself (DIY) Kit Kit includes Air preparation module, Dispensing Module, Rotary Pick & Place Module, Control console module, PLC board assembly, IO interface module, Directional control valve module, Horizontal profile tabletop Mounting accessories, sample work pieces, PLC software with cable accessories, Tubes & Tool Kit.
9		SPN Components – Enabling trainees to build different automation application system
10		Modular Manufacturing System A mechatronics system with 9 stations integrated together to automate a function and to teach how integrated automation system works. 1. Feeder station

		2. Inspection station 3. Buffer station 4. Processing station 5. Sorting station 6. Robot station 7. Assembly station
11		Modular Manufacturing System with Industry 4.0 Solution. It is built with different Industry 4.0 solutions on top of it to enable trainees to learn those technologies with real time application. <ul style="list-style-type: none"> • Modular System • Energy Management • Manufacturing Execution System • Overall Equipment Effectiveness (OEE) • Management Information System • Intelligent Maintenance system • IIoT • RFID Technology • AR / MR
12	Digital learning Solutions	Automation Studio – Premium Package
13		Virtual Mechatronics Automation Lab – A virtual reality package from JANATICS
14		Industrial IoT developer Platform
15		AR / VR development Software
16		JANATICS Animation Software for Pneumatics (JASP)
17		JANATICS eLearning solution
18	Training Aids	Cut Sections of different Hardware equipment
19		Technical Posters
20		Magnetic Symbols *Magnetic Board is under Customer Scope
21		Corporate to Campus Connect

Corporate to Campus Connect Initiatives

Training Aids & Support



Details

Details of C2C and its applicability are mentioned below.

Sl. No	Details	Frequency as per MoU Term	
		ATC	COE
1.	Technical support for student projects & concession	√	√
2.	Transfer of Knowledge & “know How’s” by Conducting “Train the Trainer Programme”, and Authorisation to conduct JANATICS Certified Pneumatic Professional (JCPP) course	√	√
3.	Faculty development Programme, Guest Lectures, Seminars, Workshops etc.,	√	√
4.	Onsite support & monitoring of COE function	√	√
5.	Internship / Projects at JANATICS	√	√
6.	Conducting Three One credit course to students annually (3 courses x 20 students / batch)	NA	√
7.	Projects at Institute (project topic by JANATICS / institute)	NA	√
8.	Opportunity for 2 best students (annually) # from the institute to work at JANATICS on “Live Projects” under IAP Programme	NA	√
9.	Possibility for research and knowledge enhancement	NA	√
10.	Technical support to students and faculty for national / international skill competitions	NA	√
11.	Recruitment Support	√	√

1. Technical support for student projects & concession

Students from the associated institute are entitled to approach JANATICS Subject Matter Experts for technical support / guidance on Automation Product selection and as well as to get concession on the selected products for projects by filling the “SPN Questionnaire / Concession form”

2. Conducting “Train the Trainer” programme & Authorisation

The T3 module is a complete knowledge transfer programme, which is designed to empower and equip the centre incharge / center trainer to conduct JANATICS certified courses for the students, academicians, and industries with certificate from JANATICS.

The training programme will be scheduled based on the type of products offered. T3 Training can be held at Institute or at JIPL Training Centre, Coimbatore. The trained centre incharge / center trainers will be continuously and systematically assessed by JANATICS training cell authority on a monthly basis as per ISO procedures, for ensuring the level of quality required to be maintained at the centre.

3. Faculty development programme, Guest lectures, Seminars & Workshops

The Faculty Development Programme (FDP) intends to facilitate up-gradation of knowledge, skill and intends to provide opportunities for induction training to faculties. JANATICS will take participation in the FDP programme organised by Institute in coordination with AICTE or CSIR. Similarly, JANATICS will closely work with Institute and jointly make effort to organise a FDP programme for the faculties of the institute and Inter college faculties.

Guest lectures enable the students in enriching the latest updates regarding Technologies and the need of the industry. We conduct guest lectures, seminars, and workshops to lend valuable information from industry first-hand experience which serve as an ideal platform for the students.

4. Onsite support & monitoring of COE function

JANATICS will appoint a MR for monitoring, measurement, and audit Checks to ensure effective functioning of the COE and submission of annual reports on the performance and feedback for necessary improvement.

5. Internship / Projects at JANATICS

Internship / Projects opportunity will be provided for a maximum of 4 students per year for a period of 1 to 6 months at JANATICS. Students will be exposed to understand the process and function of various departments in the organization and will work on live projects as a Project Assistant / Project Associate, which will give a complete exposure of industry process, structure, and product / project development experience and eventually give confidence to work in any such industries.

6. One credit course / Value added programme support

One credit course on the topic of Pneumatics, Electro-pneumatics & Electro-pneumatics with PLC for a maximum of 16 students. These three courses will be conducted in 4th, 5th & 6th semesters respectively (or) as required by Institute, jointly with Institute faculty.

7. Projects at Institute (project topic by JANATICS / institute)

Student projects – Will be assigned to students on topics selected by the institute or by JANATICS based on the capability / facility available at the institute, from design until complete successful implementation of the same, which will give a complete exposure of product / project development experience and eventually give confidence to handle industry related problems.

8. Opportunity for 2 best students (annually) # from the institute to work at JANATICS on “Live Projects” under IAP Programme

Industry Attachment program & Internship: JIPL Envisages a select batch of students to undergo one week training during winter vacation and an Industry Attachment program for 2 weeks, 4 weeks and 12 weeks during their summer vacation of II, III and IV years respectively. JIPL shall define a selection procedure to identify eligible candidates according to the policy decision for training at JIPL. The candidates will have the privilege to work with any live project at JIPL head office at Coimbatore. Also, they get trained practically on application of products and will be provided certificates for the same. Boarding and other expenses have to be borne by the students.

9. Possibility for research and knowledge enhancement

Based on the growth and demand arises from the industry, JANATICS and institute will jointly do research and exchange the knowledge bi directionally in existing products / process or upcoming trends in technologies. For eg. Process improvements in existing products, New product development, Cyber Physical System, AR etc.

Funded projects – Short term or long term govt funded projects or funded by the institutes on industry related problems or topics selected by the associated institute which shall be agreed upon on case to case basis.

10. Technical support to students and faculty for national / international skill competitions

Students from the associated institute are entitled to approach JANATICS Subject Matter Experts for technical support / guidance on national / international skill competitions

11. Recruitment

Recruitment opportunity will be provided for a maximum of 2 students as per MoU term under trainee category for a period of 1 year at JANATICS or its Partner as per company policy and standards, depending on the resource requirement / vacancy available. Deployment shall be for any location across India & for any department (like design, development, manufacturing, operations, marketing etc.,). Confirmation of the trainees after 1 year will be solely dependent based on performance of the individual.