

Sl. No.	Indicator	Metric No.
3.	Indicator-07	7.2.1 (Q1)

**1. Title of the Practice (This title should capture the keywords that describe the practice.)**

Imparting latest technology training/solutions to the students of IKGPTU and other technical institutions and to strengthen their technical skills through industry faculty (subject matter expert) at Center of Invention, Innovation, Incubation and Training (CIIT).

**2. Objectives of the Practice (What are the objectives / intended outcomes of this "best practice" and what are the underlying principles or concepts of this practice (in about 100 words))**

- To provide and arrange hardware, Technology Tools, Equipment & Machinery with required configuration needed for running the technology solutions in the CIIT Centers (Hub and Spoke).
- To provide technology solutions and deploy industry faculty (Subject matter expert) along with the specialist trainer resources to provide an edge to CIIT.
- To educate and train students for practicing professionalism, ethical approach, leadership and entrepreneurship ability.
- To build a skilled workforce pool to cater to the current and future industrial landscape.
- To develop proficient technocrats catering to the needs of industry, society and environment.
- To develop competency to analyze a problem, identify, articulate and use the appropriate computing and engineering requirements for obtaining its solution.
- To provide all required assistance with respect to installation, maintenance and up gradation of technology solution.
- To provide learning tools i-GET-IT as the teaching platform hosted by Tata Technologies Limited (TTL).
- To provide a certificate of completion to the students who successfully complete the examination conducted by Tata Technologies Limited (TTL). The course will be joint certificate by TATA Technologies and I.K Gujral Punjab Technical University after a student completes a course.

**3. The Context (What were the contextual features or challenging issues that needed to be addressed in designing and implementing this practice (in about 150 words))?**

The vision of the CIIT is to bring changes and empowerment of youth through technical education. It is here where young innocent minds are groomed, nurtured and given a shape that lasts throughout the end of an individual's life. The institute focus of industry-institute linkage and entrepreneurship culture for better placement of pass out students. The center consists of high-end industrial

workstations, which are loaded with advanced tools used for Product Design and Engineering. This Center facilitates industry environment with the latest technology tools (such as PTC CREO etc.) used by major industries for product design & engineering.

**4. The Practice** [Describe the practice and its uniqueness in the context of India higher education. What were the constraints / limitations, if any, faced (in about 400 words)?]

This center consists of simulation software technology that enables engineers to validate and optimize their designs using virtual prototypes. These technologies help companies to improve quality, save time, and reduce costs associated with design and test of manufactured products. These Software (such as Ansys, FEAST etc) are used by leading manufacturers for linear and nonlinear finite element analysis (FEA), computational fluid dynamics (CFD), advanced material modelling, acoustics, fluid structure interaction, multi-physics, optimization, fatigue and durability, multi- body dynamics, controls, and manufacturing process simulation. The training is very useful for the students to get placements or becoming entrepreneurs.

The center was completely closed for few months due to pandemic Covid-19; a total of 388 students/ staff members had been trained at this center since September 2019. These centers are meant for skill development which can be possible only if the students turned up physically but due to Covid-19 guidelines, the students are not available physically. In addition to that, the parents are not willing to send their wards in pandemic time.

**5. Evidence of Success** [Provide evidence of success such as performance against targets and benchmarks, review/results. What do these results indicate? Describe in about 200 words.]

Following trainings are provided to the students

**1. TRAININGS TO THE STUDENTS & FDPs**

CIIT IKGPTU MAIN CAMPUS, KAPURTHALA					
S.No.	Type of Training	Branch	Batch	Duration of Training	No. of Participants
1.	B.Tech 8 <sup>th</sup> Semester Industrial Training	Mechanical, Electrical	JAN 2020	6 Months	15
2.	B.Tech 8 <sup>th</sup> Semester Industrial Training	Mechanical	JAN 2021	6 Months	37
3.	B.Tech 8 <sup>th</sup> Semester Industrial Training	Electronics & Communication	AUG 2021	6 Months	18
4.	B.Tech 8 <sup>th</sup> Semester Industrial Training	Mechanical, Electrical, Computer Science	JAN 2022	6 Months	26
5.	B.Tech 4 <sup>th</sup> Semester Industrial Training	Mechanical	2020	4 Weeks	41
6.	B.Tech 4 <sup>th</sup> Semester Industrial Training	Mechanical	2021	4 Weeks	42


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7.	B.Tech 4 <sup>th</sup> Semester Industrial Training	Mechanical, Electrical, Computer Sciences, Electronics & Communications	2022	4 Weeks	98
8.	B.Tech 2 <sup>nd</sup> Semester Industrial Training	Mechanical	2021	2 Weeks	23
9.	Faculty Development Program	Mechanical	2021	1 Month	11
10.	Faculty Development Program	TAs (Mechanical & CIITs)	2022	2 Weeks	05

**CIIT, IKGPTU SULTANPUR LODHI CAMPUS**

S.No.	Type of Training	Branch	Batch	Duration of Training	No. of Participants
1.	ITI Passout Industrial Training	Welder, Fitter, Machinist	15 June to 15 July 2022	1 Month	61
2.	ITI Industrial Training	Welder, Fitter, Machinist	15 July to 15 Aug 2022	1 Month	47
3.	ITI Passout Industrial Training	Welder, Fitter, DMM, Machinist	15 Aug to 15 Sept 2022	1 Month	49
4.	ITI Industrial Training	Welder, Fitter, Machinist	15 Sept to 15 oct 2022	1 Month	40
5.	ITI Passout Industrial Training	Fitter, Machinist	15 Oct to 15 Nov 2022	1 Month	19
6.	ITI Industrial Training	Welder, Fitter, Machinist	15 Nov to 15 Dec 2022	1 Month	33
7.	ITI Continue Industrial Training	Welder, Fitter, Machinist	15 Dec to 15 Jan 2022	1 Month	32
8.	Faculty Development Program	ITI	15 June to 15 July 2022	1 Month	08
9.	Faculty Development Program	ITI	15 July to 15 Aug 2022	1 Month	08
10.	Faculty Development Program	ITI	15 Aug to 15 Sept 2022	1 Month	04
11.	Faculty Development Program	ITI	15 Sept to 15 oct 2022	1 Month	04
12.	Faculty Development Program	ITI	15 Oct to 15 Nov 2022	1 Month	01
13.	Faculty Development Program	ITI	15 Nov to 15 Dec 2022	1 Month	01
14.	Faculty Development Program	ITI	15 Dec to 15 Jan 2022	1 Month	02

  
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**2. WEBINARS CONDUCTED BY CIIT DEPARTMENT**

S.No.	Date	Time	Topic	Description/Key Concepts about Topic	No. of Participants
1.	15.10.2020	2.00 pm - 3.00pm	Industrial Robotics	Working and General Information about 6 Axis KUKA robots and 5 axis TAL robot.	25
2.	22.10.2020	2.00 pm - 3.00pm	Latest Trends in the Automobile Industry	Latest advancements in technology of automobiles like HMI, Sensors etc.	28
3.	29.10.2020	2.00 pm - 3.00pm	Additive Manufacturing	3D Printing processes and general information about AHA and Ultimaker 3D Printer.	37
4.	12.11.2020	2.00 pm - 3.00pm	Innovations and Design Thinking for startups (Part-I)	Knowledge is provided for various Design initiatives & Innovations in various aspects of Engineering.	33
5.	19.11.2020	2.00 pm - 3.00pm	Innovations and Design Thinking for startups (Part-II)	Various startup techniques in the field of robotics and automobile are discussed.	29
6.	26.11.2020	2.00 pm - 3.00pm	CAE and its applications in various Industries	Information is given about software's of computer aided engineering like CAD, Creo etc. and their applications in various industries.	32
7.	03.12.2020	2.00 pm - 3.00pm	Digital Manufacturing	Processes like Designing, System Analysis & crash analysis are briefed in this webinar.	25

S.No.	Date	Time	Topic	Description/Key Concepts about Topic	No. of Participants
8.	10.12.2020	2.00 pm - 3.00pm	Industry 4.0	The use of modern industrial control systems and software embedded systems.	25
9.	17.12.2020	2.00 pm - 3.00pm	Advancements in Manufacturing Technologies	Information is given about CNC, VMC, Use of Robotics, Laser cutting and engraving Machines.	26
10.	24.12.2020	2.00 pm - 3.00pm	Product Design and Development	The whole process from designing in Computer to manufacturing by machines is explained.	20
11.	07.12.2020	2.00 pm - 3.00pm	Electric Vehicle	Information is provided about the parts, working principle, running operation is provided.	16
12.	21.01.2021	2.00 pm - 3.00pm	Reissuance of CAD	Latest versions of computer aided designing and modifications in their applications are discussed.	160
13.	18.02.2021	2.00 pm - 3.00pm	Digital Thread for Product Development	Information is given about how the designing, analysis & final manufacturing is interconnected with each other.	134
14.	26.03.2021	3.00pm - 4.00pm	Potential of IOT & AR	Internet of things & Aurdino, their working, softwares used are discussed.	112

Moreover, during the time of COVID-19 pandemic, to support the medical staff & doctors, who are fighting daily to save the lives of humans from COVID 19, the center developed and manufactured a very unique product, i.e., Face shields. This initiative was supportive to fulfil the urgent need of Indian Medical Research Association (IMRA) for

Doctors and Nurses who were treating COVID-19 patients. This initiative was taken by these CIITs. The target of university was to manufacture 2000 face shields for Kapurthala, Jalandhar and other nearby districts and the team had handled it successfully.

**6. Problems Encountered and Resources Required** [Please identify the problems encountered and resources required to implement the practice (in about 150 words)].

CIIT, Sultanpur Lodhi, the spoke of the center is located in the remote area and it has other challenges like no provision of mess/canteen, hostel etc. The center is away for the city and there is no availability of public-transport. Apart from this, the center was completely closed for few months due to pandemic Covid-19; a total of 388 students/ staff members had been trained at this center since September 2019. These centers are meant for skill development which can be possible only if the students turned up physically but due to Covid-19 guidelines, the students are not available physically. In addition to that, the parents are not willing to send their wards.

**7. Notes** (Optional) [Please add any other information that may be relevant for adopting/ implementing the Best Practice in other Institutions (in about 150 words).]

NIL.

Any other information regarding Institutional Values and Best Practices which the university would like to include: NIL.

Provide web link to: <https://ptu.ac.in/ciit/ciit-kapurthala/>

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