

RCOEM-TATA-CIIT Activities July- Sept 2021 by Dr. Vishal Shukla

Faculty Development Trainings organized at RCOEM-TATA-CIIT delivered by Industry Experts:

1) 3 days' Training sessions on Internet of Things (using Raspberry Pi & Arduino Nano) was organized on 1, 2 & 3 July 2021. Mr. Shreyash Gajlekar, SME TATA Technologies, at CIIT Center in Jalandhar, was the expert speaker. About 17 faculty members supporting staff and students of M. Tech. Robotics & Automation of RCOEM have attended the hands-on sessions. Use of Thingspeak and Mobile Application using the MIT APP Inventor was demonstrated.



Participants attending 3 day's training on Internet of things



Expert Speaker Mr. Shreyas Gajlekar and the participants of training on IoT

2) Two Days Training Program on “Machine Learning” was organized at Machine Learning Lab RCOEM-TATA CIIT by Department of Computer Science Engineering on 21 & 22 Sept 2021 throughout the days. Mr. Anil Dhole SME, TATA Technologies was the expert speaker. Dr. Ramchand Hablani, Dr. Shubhangi Neware and Prof. Sweta Jain were the faculty coordinators. About 22 faculty and students have attended the program in both offline and online mode, respecting Covid-19 restrictions and protocols



Participants of 2 days' training program on Machine Learning

Visit of Eminent persons to RCOEM-TATA-CIIT:

In response to request from Dr. Rajiv Khaire, dean III cell about Confederation of Indian Industry (CII) team visit to CIIT facility, Mr. Swapnil Kadadekar, Deputy Director CII, Worli, Mumbai, Mr. Ranjit Singh, Chairman CII, Vidarbha Zone and director syslogix has visited CIIT on 24 Sept 2021. Action items on stronger association between RCOEM & CII, facility utilization etc was discussed.



Dr. Vishal Shukla explaining the functioning of Mechanical Execution System (MES) to Mr. Ranjit Singh, Chairman Vidarbha zone, CII (24 Sept 2021)



Prof. P. A. Dwaramwar briefing about IoT & Machine Learning Center of Excellence to Mr. Ranjit Singh, Chairman Vidarbha zone, Confederation of Indian Industries

Students Engagements and Participation in activities at CIIT:

Students committee for facility & project demonstration during NAAC committee visit was constituted. The student members included were: Abhishek Shahu, Parag Sardey, Umang Chandarana, Animesh Hedao, Syed Hamza Ali, Aditya Chavhan, Vaibhav Anasane, Saud Baig. Students demonstrate some projects like In-pipe inspection robot, 6DOF robot manipulator BIPED Robot stand, Voice control of 3 phase induction motor using voice command etc and demonstrated functioning of VMC, MES, Robots, 3D printer & scanner.

Following committee of students was constituted to demonstrate functioning of various machines to NAAC committee visited on 6th & 7th August 2021, between 11 to 3 pm.

Sr. No.	Name of the student	UG/PG-Yea-Sem	Name of Machine to operate
1	Abhishek Shahu	BE Mech Sem-VII	3-D Printer
2	Harsh Sharma	BE Mech Sem-VII	3-D Scanner
3	Parag Sardey	M. Tech. Robo & Automation	Internet of Things (IOTIF)
4	Animesh Hedao and Syed Hamza Ali	M. Tech. Robo & Automation Sem-II	Yaskawa Arc Welding Robot
5	Md. Saud	M. Tech. Robo & Automation Sem-II	Pick N Place Robot
6	Vaibhav Anasane	M. Tech. Robo & Automation Sem-II	Manufacturing Execution System

Competency development and up-skilling Trainings delivered by RCOEM Faculty & Training Instructors:

Competency development and up-skilling training batches for 3 value adding courses have started at CIIT, which includes Additive Manufacturing & 3-D Printing, CNC programming & VMC operations and Geometric modeling on Catia v6. The students benefitted from the trainings are Mr. Akshay Kolhe (NIT, Nagpur), Ms. Pragati Gajbhiye (NIT, Nagpur) Om kailaswar, Vedang Joshi and Divesh Kothari (All RCOEM) attended Catia v6 training during 16 August – 30 Sept. 2021. Dr. Vishal Shukla delivered Additive Manufacturing & 3-D Printing training, Dr. A. D. Urade and Dr. P.S. Deole are the trainers for VMC operations and CNC Programming respectively. Mr. Mayur Patle demonstrated and engaged Hands-on VMC operations. Dr. Vishal Shukla provided learnings on Manufacturing simulation and Generation of G-Codes for CNC & VMC. Mr. Sumit Ramteke, provided training on Geometric modeling through professional and commercial software Catia v6.

Completion of Research Project and Consultancy:

A consultancy project on Mold design, 3-D printing and manufacturing of Padma Kund, Shree Yantra, Diya etc. for an organization, operating in saunsar, has been completed. Also, Hand press machines (12 Nos) was designed fabricated and delivered. Mr. Anil Dhole, SME TATA Technologies, Harsh Sharma of Sem-VII (Mechanical Engg) & Dr. Vishal Shukla contributed their knowledge, skills and efforts for the first ever consultancy project at CIIT. The project final stage is completed on 30 Sept 2021.

Dr. Vishal Shukla has successfully completed a challenging 3-D printed project for one of the local Industries requiring assembly of multiple thin shell parts made from Fused Filament Fabrication on Ultimaker 3 extended 3-D printer available at CIIT.

Projects being explored at CIIT:

1. Measurement of Biting force of restored through PVDF sensor & related instrumentation
2. Thermo-forming of Half-hemisphere of clear acrylic sheet for Robot casing
3. Manufacturing of bamboo composites