

## **2018-2021**

<b>YEAR:-2018-19</b>		
<b>Sr. No.</b>	<b>Event Title &amp; Description</b>	<b>No. of Participants</b>
1.	Guest Lecture	64
2.	Drishiti Online Contest	504
3.	Training-Texas University Program	41
4.	AICTE Short Term Training Program	21
<b>YEAR 2019-20</b>		
1.	Hands On Training	35
2.	Guidance Seminar	77
3.	Student training Program	36

4.	Student Training Program	49
5.	Webinar Series Followed by Online Quiz	225 180 269
YEAR 2020-21		
1.	30 Hrs. Student Development Program	45
2.	32 Hrs. Internship on Embedded System & IoT	108
3.	Use of Microcontroller In Automotive	140

## **TRAINING's:**

Theoretical knowledge is not enough for making a good professional career. Hands-on experience on industrial tools provides students an opportunity to go beyond academics. It provides a comprehensive learning platform to students where they can enhance their practical skills to become industry ready.

- **Training on “Embedded Systems, IOT and Digital Signal Processing”**

**Date:** 18<sup>th</sup>,19<sup>th</sup> August 2019

**Total number Participants:** 35

**Resource Person:** Ms. Shaista Khanam, Assistant Professor, EXTC Department, VCET.

Ms. Trupti Shah, Assistant Professor, EXTC Department, VCET.

Training was organized at Rajiv Gandhi Institute of Technology, Andheri to understand Embedded Systems, DSP processors and its Real time applications. Hands on Training has given students practical exposure to utilize industrial tools and its implementation in IOT applications.

- **Training on “Embedded Systems and IOT”**

**Date:** 18<sup>th</sup> October to 20<sup>th</sup> October 2019

**Total number Participants:** 36

**Resource Person:** Ms. Shaista Khanam, Assistant Professor, EXTC Department, VCET

Ms. Trupti Shah, Assistant Professor, EXTC Department, VCET.

Training provides students exposure to real time applications of embedded systems and IOT and to gain knowledge through hands-on experience. Students get acquainted with MSP430 Launchpad, TIVA C (TMC4C123G) Launchpad, TI Robotics System Learning Kit (TI-RSLK), CC3100 Wi-fi Booster-Pack, BLYNK Application to control Launchpad and Integrating Blynk for IOT applications.



- **Training on “Embedded Systems and IOT”**

**Date:** 2<sup>nd</sup> March to 4<sup>th</sup> March 2020

**Total number Participants:** 49

**Resource Person:** Mr. Jawad, Edgagate Technologies (Texas Instruments University Program),

Ms. Shaista Khanam, Assistant Professor, EXTC Department, VCET.

Ms. Trupti Shah, Assistant Professor, EXTC Department, VCET.

Training has given knowledge of MSP430 Launchpad, CC3100 Wi-fi Booster-Pack, BLYNK Application to control Launchpad and Integrating Blynk with IFTTT and controlling launchpad using voice commands for IOT applications.

- **Guidance Seminar FOR TI India Innovation Challenge Design Contest 2019”**

**Date:** 14<sup>th</sup> October 2019

**Total number Participants:** 77

**Resource Person:** Mr. Swapnil Karwir, HEAD –Business Development, SS Dies.

Ms. Shaista Khanam, Assistant Professor, EXTC Department, VCET.

IICDC, which is “India Innovation Challenge Design contest 2019” is the contest organised by TEXAS Instruments which allows the student to showcase their talent in the technical field to solve the real-world problems using TI components. Prof. Shaista khanam has guided for preparation of a technical proposal for IICDC and procedure to apply for the competition. Mr. Swapnil karwir explained important techniques for preparation of successful business models which are important for any product to survive in a market.

**Out of 18k+ Projects “Artificial Intelligence Based Predictive Maintenance” from Instrumentation Department got selected for IICDC 2019 Semi-Finals.**

Team -

1)Kamlesh Lohar(Leader)

2)Gaurav Pawar

3)Jinisha Gangadharan

4)Ruth George

5)Akanksha Kulkarni

6)Ankit Dubey

- **FUNDAMENTALS OF EMBEDDED C WITH JOURNEY OF MICROCONTROLLER**

**Date:** 28th January 2021

**Total number Participants:** 51

**Resource Person:** Ms. Kavita Deshpande designated as Associate Projects CBP CPP Product Engineer at Cognizant

Ms. Shaista Khanam, Assistant Professor, EXTC Department, VCET.

Ms. Trupti Shah, Assistant Professor, EXTC Department, VCET.

The guest lecturer taught the basics starting from Comparison of Normal C and

Embedded C then later covering different topics such as Data Type, Variable, Arrays, Strings,

union, Structure, Storage Classes, Classifier, OOPs concepts, etc. She also explained precisely the steps included in program execution. Each step was explained with hands-on live practicals. In further sessions, she covered all basics of C programming including functions, various kinds of loops, local variables, global variables, static variables, and the difference between. Later on, she explained pointers, the concept of macros, call by value and call by reference concept for calling functions. While explaining call functions she mainly focused on how pointers are used in a call-by-reference concept. Then she told about 'enum' data type which was something new for the attendees. She covered ARM Microcontroller (LPC 2148) and then hands-on sessions were conducted on Keil compiler and Flash Magic. Flash Magic is a PC tool for programming flash-based microcontrollers. Popular Communication Protocols in embedded systems I2C, SPI, and CAN which are used in Automobiles were explained. Throughout the course, guest speakers covered all fundamentals required for normal C as well as embedded C and were also briefed about the software required for the coding of embedded C.

## FUNDAMENTALS OF EMBEDDED C WITH JOURNEY OF MICROCONTROLLER (2021-01-28 at 20:52 GMT-8)

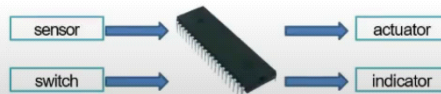
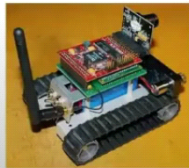
An embedded system is one that has computer hardware with software embedded in it as one of its component.

OR

“A microprocessor based system that does not look like a computer”.

OR

“A combination of computer hardware and software, and perhaps additional mechanical or other parts, designed to perform a dedicated function. In some cases, embedded systems are part of a larger system or product, as is the case of an antilock braking system in a car”.

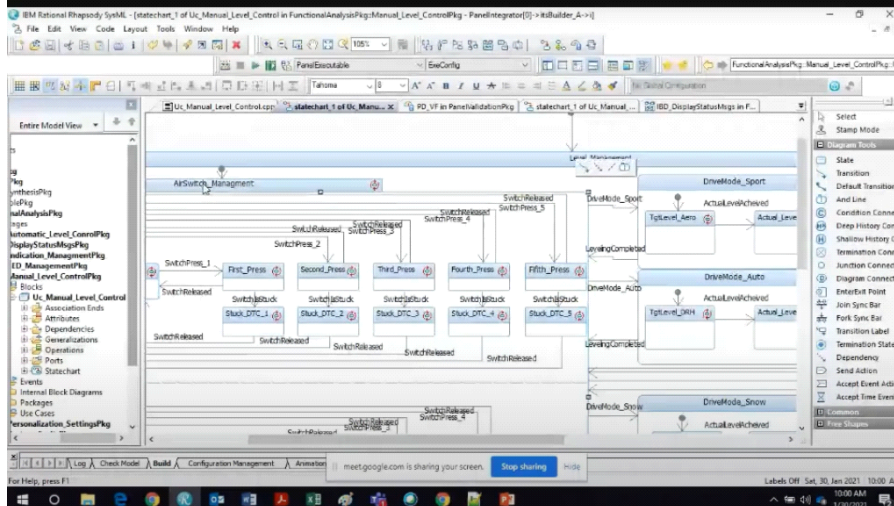


shaista khan

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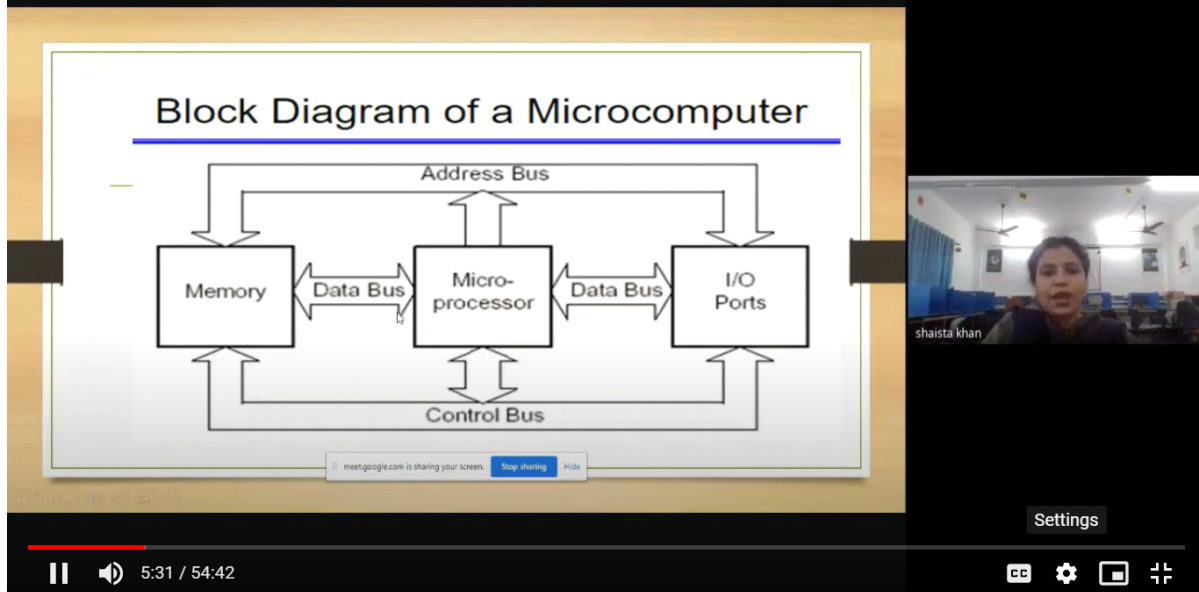
## FUNDAMENTALS OF EMBEDDED C WITH JOURNEY OF MICROCONTROLLER (2021-01-29 at 20:13 GMT-8)



Kavitaveera Vinayak Deshpande

17:03 / 1:18:20





- **Internship – Embedded System and IoT (overview to development)**

**Date:** 28th June – 11th July

**Total number of Participants:** 108

**Resource Person:**

**Mr. B.A.Damahe - Head – CTEA Madh, Corporate Technical Training, Larsen and Toubro, Mumbai**

**Mr. Asim Sinha, CEO IIoT expert, Industry 4.0 Solution Provider, India Partner of Vorna Industries Inc. USA, Bangalore**

**Mr. Jeetendra Shenoy, Architect, L&T Infotech, Mumbai**

**Mr. Manoj Mulay, Associate Manager - Design, Crompton Greaves Consumer Electrical Limited, Mumbai**

**Dr. Rita Jain, Co-founder of AVRN labs, Bhopal**

**Mr. Vinay Sharma, Director Technical Ni logic Pvt Ltd, Pune**

**Mr. Arpit Shrivastava, Technical Head, Infil IOT, Pune.**



**Dr. Saurabh Mehta, Chief academic officer, and professor in VIT Mumbai.**

**Mr. Vineet Jaruhar, Director at AVRN Intellitech Private Limited, Bhopal.**

**Dr. Anand Kakade, Founder of Anand Techno creations, Satara.**

**Dr. Prashant Bhopale, Assistant professor at VJTI Mumbai**

**Mr. Chandan Kolvankar, Assistant Professor, Dept. of IT, VCET-Vasai**

**Mr. Sainath Patil, Assistant Professor, Dept. of IT, VCET-Vasai**

**Mr. Yogesh Pingle, Assistant Professor, Dept. of IT, VCET-Vasai**

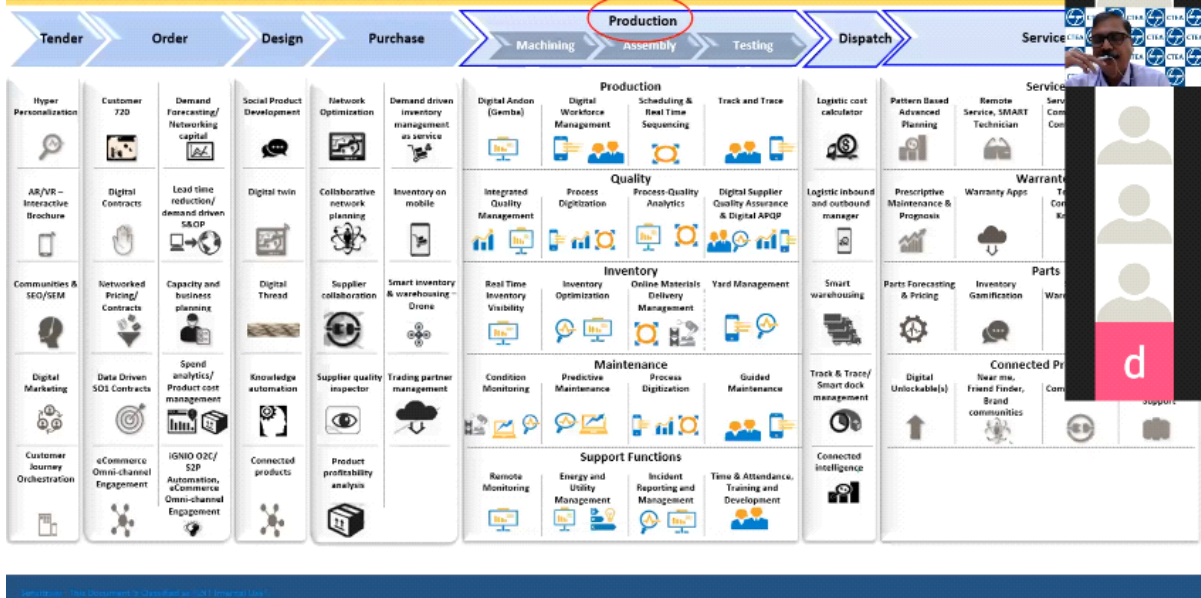
**Mrs. Shaista Khanam, Assistant Professor, Coordinator VCET Texas Instrument Innovation Lab, Vasai**

**Mrs. Trupti Shah, Assistant Professor, Member VCET Texas Instrument Innovation Lab, Vasai**

**Mrs. Ekta Naik, Assistant Professor, Member VCET Texas Instrument Innovation Lab, Vasai**

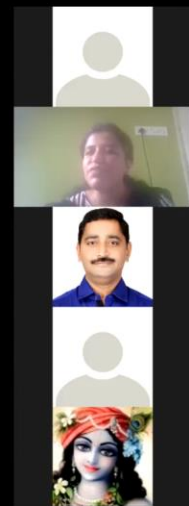
It was a 13 day's long internship program for students which covered topics like Industry 4.0, HARNESSING THE POWER OF IOT, HANDS-ON SESSION WITH SIMULATION SOFTWARE (ARDUINO), IOT CONSIDERATIONS AND APPLICATION, Reinforcement Learning for IoT, Product Development using IoT, How to teach employability skills through IOT/WSN, INDUSTRIAL IoT, CLOUD COMPUTING, HANDS-ON SESSION WITH SIMULATION SOFTWARE (MATLAB), Automation and Product Management in IoT, CHALLENGES AND RESEARCH TRENDS IN IoT, Embedded System & IOT (overview to development), A brief overview on MSP430 microcontroller. EMBEDDED SYSTEM AND IOT., Hands-on Session on Proteus – Raspberry Pi. Students gained a deeper understanding of the fields of machine learning and IoT.

# iIOT – Art of Possibility



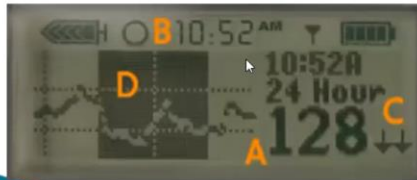
## IoT Applications:

- an Air Conditioner's sensor can gather the data regarding the outside temperatures, and accordingly adjust its temperature to increase or decrease it with respect to the outside climate.
- Similarly, your refrigerators can also adjust their temperature accordingly.
- Fuel Indication Smart Car



## Example – Implanted Glucose Meter

- A - Insulin Pump
- B - Insulin Delivery Canula
- C - Glucose Sensor
- D - Wireless transmitter to Insulin Pump



Inbox (7,940) - shawta.khan@... x (63) WhatsApp x Post Attendee - Zoom x Circuit design Temperature sens x +

tinkercad.com/things/8hdTSkgND01-temperature-sensor/editel

### Temperature sensor

Simulator time: 00:04:03

Code Stop Simulation Export Share

Temperature Sensor [TMP36]  
Name [ ]

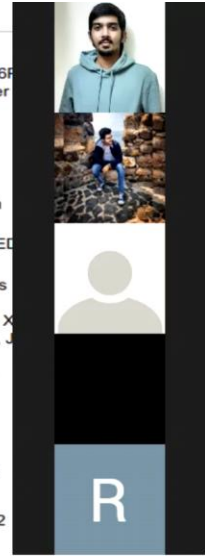
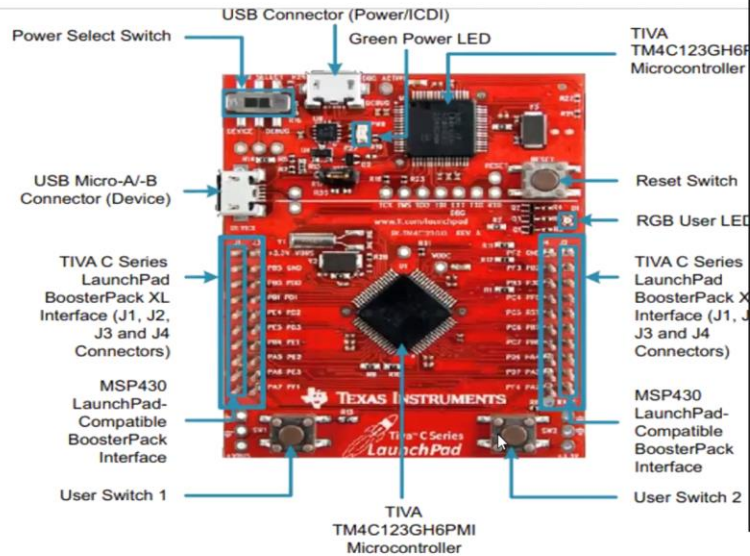
```
11 // Temperature sensor (TMP36)
12
13
14 vout1=analogRead(sensoc2);
15 Serial.print(vout1);
16
17 vout=(vout1*500)/1023; // To convert in C (1000/10)=100*5/1023
18 temp=vout; // Storing value in Degree Celsius
19 tempf[(vout*1.8)+32]; // Converting to Fahrenheit
20 Serial.print("in DegreeC");
21 Serial.print("\n");
22 Serial.print(temp);
23
24 Serial.print(" ");
25 Serial.print("in Fahrenheit=");
26 Serial.print("\n");
27 Serial.print(tempf);
28 Serial.println();
29 delay(1000); //Delay of 1 second for ease of viewing
30
```

Serial Monitor

231.00in DegreeC=	112.90 in Fahrenheit=	235.23
231.00		
231.00in DegreeC=	112.90 in Fahrenheit=	235.23
231.00		
231.00in DegreeC=	112.90 in Fahrenheit=	235.23
231.00		
231.00in DegreeC=	112.90 in Fahrenheit=	235.23
231.00		

Send Clear





## Seminar and Webinars:

Seminars /webinars give an insight on various Latest technologies and their applications in real life.

- **Webinar Series on “Vogue of Embedded Systems”**

**Date:** 27<sup>th</sup> May to 29<sup>th</sup> May 2020

**Total number Participants:** 225

**Resource Person:**

1. Mr. B.A.Damahe, Head - CTEA Madh, Corporate Technical Training, Larsen &Toubro.
2. Mr. Dilip Balasubramanian (Senior Training Manager, Eduvance)

Topics covered are

- Smart Manufacturing

<https://youtu.be/5Rv44sNkXgg>

- Advent, Applications and Future of Robotics

[https://youtu.be/\\_XeMPBilWWs](https://youtu.be/_XeMPBilWWs)

The Webinar series was followed by an online **quiz on “Journey of Microcontroller “.**

**Total Number of Participants for Quiz: 269**

**Quiz Winners list:**

**1. Jatin Jayesh Vira**

Mechanical department,

Vidyavardhini's college of Engineering and Technology, Vasai Road.

**2. Tejas Shekahr Nagotkar**

Electrical Engineering

Lokmanya Tilak college of Engineering, Kopar khairne

**3. Saurabh Mane**

EXTC,

St. Francis Institute of Technology, Borivali.

**2. Webinar on “Use of Microcontroller in Automotive”**

**Date:** 16th May 2021

**Total number Participants:** 60

**Resource Person:**

Mr. Sanchit Sudhir Gharat from Sasken Technologies Limited.

Mr. Sanchit Sudhir Gharat started the workshop by explaining ECU(Electronic Control Unit) and its types. He explained in detail each block along with the components of ECU.

The whole session was very interactive. All the questions were answered in detail with examples which helped students to relate their subject Industrial Electronics. The expert lecture had extended till 2 hours. The lecture was a big success. Students came to know applications of microcontrollers and its importance.

Topics covered are

- Glimpse on Application of Microcontroller in Automotive.
- Introduction about Electronic Control Unit.
- **Webinar on “Fundamentals in Product Research & Development”**

**Date:** 4th September 2021

**Total number Participants:** 109

**Resource Person:**

Mr. Sikander Manihar - Technical Director of FOX DOMOTICS PVT LTD.

Mr. Sikandar Manihar started the session by giving a piece of detailed information about the R&D industry. He gave us various insights and shared his great knowledge about Product development. He gave a glimpse of all the processes required to start a career in the product development industry. He had also guided the students on how to approach themselves to develop a product idea. The webinar was an interactive one with lots of Q&A sessions from the audience. The webinar was a great success with splendid interactions.

Topics covered are

- Steps required in Product Development.
- Importance of Research and Development in Product Designing.

REC

21\_Bhavesh Gosavi

Jayant Kudav

shafi pathan

Comps\_63\_Vidit Sheth

Sikander Manihar

hod extc

shaista khan

71 others

You

11:48 AM | Lights Camera Startup! EP-1

meet.google.com/bxx-npdz-ztn

Apps Gmail YouTube Maps News Translate

Reading list

REC

01\_Naveen Arora\_G\_AI vcot

65\_TEJAS Wani

03\_Shubhankar Bhattacharya CSE

28\_Manav Mangesh Kawale

Sikander Manihar

34\_Arshdeep Singh

Kabir

75 others

You

12:12 PM | Lights Camera Startup! EP-1