

## About Internet of Things

IoT is an emerging technology. It will connect every physical thing in the environment to one global network, so that we can control, monitor the things from any corner of the world. This definition describes scenario in which network connectivity and computing capability extends to a cluster of objects, devices, sensors, and everyday items. It has huge applications in various domains starting from Agriculture, Educational, Industrial to Home Automation.

## About MSP430 Launch Pad

The benefits of MSP430 over Arduino is that MSP430 can be used for very low powered embedded devices and also can be used for mass production of devices. The current drawn in idle mode can be less than 1  $\mu$ A. The top CPU speed is 25 MHz. It can be throttled back for lower power consumption. The MSP430 also uses six different low-power modes, which can disable unrequired clocks and CPU.

## About Workshop

This workshop is totally hands on for 2 days on 23rd and 24th of September 2016 at Guru Nanak Institute of Technology. This workshop is aims to train 40 students. A batch of 5 students each will be trained during the workshop.

## Important Dates

Last date for the Registration: 16/09/2016.  
Workshop on : 23rd & 24th Sept, 2016.

## About Resource Person

Mr. U. Vinay Babu is the founder of Thingsnet Ltd.. He is currently doing M.S. by research and supported by research assistantship from robotics lab, IIIT Hyderabad. He has conducted workshops on open source electronics Raspberry pi, Arduino in various

## Programme Committee:

### Chief Patrons:

**Sardar Tavinder Singh Kohli,**  
Chairman, GNI

**Sardar Gagandeep Singh Kohli,**  
Vice-Chairman, GNI

### Patron:

**Dr. H. S. Saini,**  
Managing Director, GNI

### Advisory Committee:

**Dr. S. Sreenatha Reddy,**  
Principal, GNIT

**Dr.M.Narendra Kumar,**  
Vice-Principal, GNIT

### Convener:

**Prof. B. Kedarnath,**  
HOD-ECE, GNIT

### Coordinators:

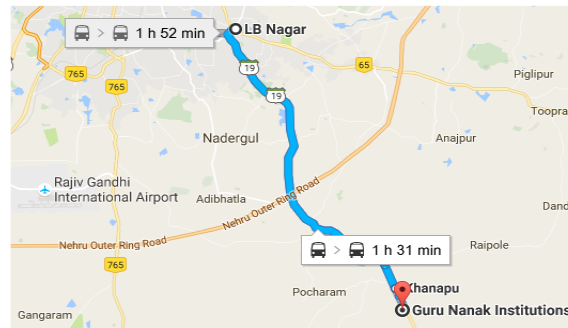
**Mr. Md. Mohiddin**  
Asst. Prof., ECE, GNIT

**Mrs. S. Vasanti**  
Asst. Prof., ECE, GNIT

## For any queries contact :

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**GURU NANAK INSTITUTE  
OF TECHNOLOGY**

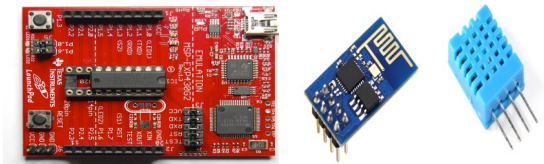
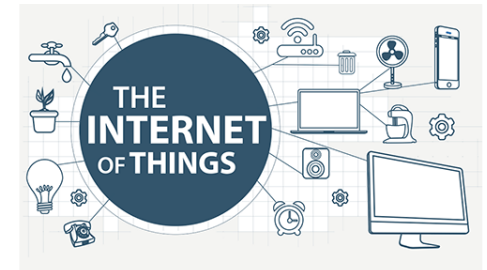
**DEPARTMENT OF ELECTRONICS AND  
COMMUNICATION ENGINEERING**

In collaboration with



**TWO DAY WORKSHOP ON  
"INTERNET OF THINGS"**

**23 - 24 September, 2016**



**Campus:**  
**Ibrahimpattam,**  
**R.R.Dist., Hyderabad-501506.**  
**Mobile: 8096609829**  
**E-mail:**  
**hodece.gnit@gnindia.org**  
**WEB: www.gnithyd.ac.in**

## REGISTRATION FORM

Name:.....

Roll No.:.....

Branch:.....

College:.....

Mobile:.....

Email:.....

Date:

### Declaration

The information provided by me is true to the best of my knowledge. If selected, I agree to abide by the rules and regulations of the institution and shall attend the Workshop for the entire duration. I also undertake the responsibility to inform the coordinator in case I am unable to attend the workshop.

Signature of the participant

### REGISTRATION FEE

Rs.400/- per student. (Non Refundable)  
Participants are limited to 40 and the registration will be on the basis of first come first serve .

### TOOLS PROVIDED

Students can work with the following Tools for the 2 day workshop:

- MSP 430 Launch pad
- IR Proximity Sensor
- LED's (Pack of 5)
- Seven Segment Display
- Liquid Crystal Display
- DHT11 Sensor
- ESP8266 Wi-Fi Module

### NOTE:

- **Each Group of five students must bring a laptop with windows OS in it.**

## About GNIT

The Guru Nanak Institute of Technology (GNIT), Ibrahimpatnam was established in 1999, is NBA Accredited, approved by AICTE, New Delhi, and Affiliated to Jawaharlal Nehru Technological University, Hyderabad.

The Guru Nanak Institute of Technology (GNIT) offers B. Tech degree in Electronics and Communication Engineering, Computer Science and Engineering, Electrical & Electronics Engineering, Information Technology, Mechanical Engineering and Civil Engineering. It was established for imparting engineering education and for promoting technological research to produce technical manpower in various areas of engineering and technology. Since its inception, the college is committed to the cause of technical upgradation. There is a great sense of belongingness to this institution among the faculty members and students.

## About department

The Department of Electronics and Communication Engineering was established in the year 1999. The Department is headed by the Professor B. Kedarnath who is expert in the discipline of Wireless Communication. The department has got every facility to groom the students as per the demands of the industries, Research laboratories, public & private sectors and MNCs. The Department has highly modernized laboratories with sophisticated equipment, which improves the practical working competency in the students and confidence. The Department aims at educating, training students with sound knowledge and awareness in the latest trends in Electronics and Communication Engineering.

The Vision of the Electronics and Communication Engineering department is:

To be recognized as a leading Electronics & Communication Engineering department in the region by students and to be known for leadership as well as commitment to foster quality teaching, learning, research and innovation.

## Programme Schedule DAY -1

S. No	TIME	TOPIC TO BE COVERED
1.	10:00AM	Inauguration
2.	10:30AM	Introduction to Embedded system , MSP430, & IoT.
3.	10:50AM	Basic Programming MSP430
4.	11:15AM	LED interfacing and its programming
5.	11:40AM	IR sensor interfacing and its programming
6.	12:05PM	Higher level programming on MSP430 with LEDs & IR Sensors
7.	12:45PM	LUNCH BREAK
8.	1:30AM	SSD interfacing with MSP430 and its programming
9.	2:15PM	Interfacing SSD and IR Sensors with MSP430
10.	3:00PM	Introduction to serial communication , Controlling LEDs, SSD from PC using MSP430's serial communication

## DAY -2

11.	9:30AM	Clarifications of doubt
12.	10:00AM	LCD interfacing with MSP430
13.	11:00AM	Interfacing DHT11 sensor with MSP430
14.	12:00AM	Introduction to Thingspeak., creating IDs
15.	12:45PM	LUNCH
16.	1:30PM	Interfacing ESP8266 sensor with MSP430
17.	2:15PM	Interfacing ESP8266 & DHT11 sensor with MSP430, sending and Temp. & Humidity into cloud
18.	3:30PM	Vote of thanks & Certificate distribution