



# Faculty Development Programme (FDP) On Real Time Embedded Systems & IoT It's Applications



Organized by

**Electronics & ICT Academy, NITW and  
Department of Electronics and Communication Engineering  
Institute of Aeronautical Engineering, Dundigal, Hyderabad  
(27<sup>th</sup> November – 2<sup>nd</sup> December 2017)**

### Preamble:

"Electronics & ICT Academy" was set up at NIT Warangal with financial assistance from MeitY, GoI. The jurisdiction of this academy is Telangana, Andhra Pradesh, Karnataka, Goa, Puducherry and Andaman & Nicobar Islands. This academy role is to offer faculty development programmes in standardized courses and emerging areas of Electronics, Information Communication Technologies, training & consultancy services for Industry, Curriculum development for Industry, CEP for working professionals, Advice and support for technical incubation and entrepreneurial activities.

The "Embedded Systems" and "Internet of Things (IoT)" is becoming an increasingly growing topic of conversation both in the workplace and outside of it. There are so many complexities around the "Internet of Things" which we are going to discuss the "Things" in the session of Internet of Things.

The course focus on Raspberry Pi 3 upgrades, which is a next generation Quodcore Broadcom BCM 2837, 64-bit ARMv8 processor with Wi-Fi chip built in to Raspberry Pi. The course also focuses on Python Scripting Language and Basic Linux commands with applications of Embedded Systems and IoT.

### Major Course Contents:

1. Overview of Embedded systems in practical world
2. Embedded system design using 8051 microcontroller
3. Programming 8051 microcontroller
4. Introduction to Sensors and Actuators
5. Arduino and its Programming
6. Interfacing sensors and actuators to Arduino
7. Introduction to Internet of Things (IoT)
8. Wireless communication technologies and protocols for IoT
9. Implementing IoT with Arduino
10. Introduction to Raspberry Pi
11. Programming RaspberryPi with Python
12. Implementing IoT with RaspberryPi.

### Faculty conducting this programme:

The programme will be conducted by the faculty members from **NIT Warangal**. Academicians in the concerned field from **IITs/NITs/IIITs** are invited to deliver lectures in the programme. Speakers from **industries** are also expected to deliver as part of the course.

### Registration Fee Particulars:

Faculty and Research Scholars from Telangana, Andhra Pradesh, Karnataka, Puducherry, Andaman and Nicobar Islands, Goa	Rs. 2500/-
Faculty of SC/ST Category from Telangana, Andhra Pradesh, Karnataka, Puducherry, Andaman and Nicobar Islands, Goa	Rs. 1250/- (SC/ ST participants should submit the copy of their caste certificate to claim the concession along with application form)
Industry Participants	Rs. 7500/-
Participants from other states	Rs. 8500/-

SC/ST concession is only for faculty of mentioned states. Research Scholars are not eligible for SC/ST concession.

The participants need to send a crossed demand draft (DD) drawn in favor of "Director, NIT Warangal" and payable at SBH, NIT Warangal branch

### Accommodation:

All the selected participants will be provided FREE boarding & lodging in the institute College Hostel. No TA will be paid for the participants.

### How to apply:

A filled in form of application in the prescribed format duly signed and sponsored by appropriate authorities (along with demand draft) should reach the coordinator by speed-post. It is also mandatory to send scanned application form and demand draft through e-mail to [ravikumar@nitw.ac.in](mailto:ravikumar@nitw.ac.in) as selection will be intimated only through mail.

**Eligibility:** The programme is open to the *faculty of engineering colleges, MCA colleges and other allied disciplines* in Telangana, Andhra Pradesh, Karnataka states and Pudicherry, Andaman and Nicobar islands, Lakshdweep UTs. Industry personnel working in the concerned/allied discipline can also attend.

### Selection Criteria:

Selection will be done based on *first-cum-first-serve basis* and the confirmed candidates will be notified immediately. The maximum number of participants will be **50 (fifty)**. Additionally 10 participants from industry are allowed to participate. The list of selected participants will be notified in the institute web site [www.nitw.ac.in](http://www.nitw.ac.in) and also will be sent to their personal *e-mail* ids. In case a candidate is not selected, the demand draft will be sent back. A test will be conducted at the end of the course. Candidates will be issued certificates on successful completion of the course along with grade. Reservations are followed for selecting candidates as per GOI norms.

### Important dates:

**Last date for submission of application: 21.11.2017**

**Selection-list intimation/display before: 24.11.2017**

### About the Institutes:

**Institute of Aeronautical Engineering (IARE)**, Hyderabad was established in 2000, by devoted group of eminent professionals and industrialists, having a long and outstanding experience in educational system with a mission 'Education for Liberation. It is the First institute to start with Aeronautical Engineering with an intake of 60 and gradually transformed itself into a premier integrated interdisciplinary technological institute. Since its inception, it has transformed itself into a truly integrated interdisciplinary technological institute spread in an area of three lakh square feet, accommodating well ventilated classrooms, state-of-the art labs, well maintained outdoor & indoor sports and games facilities.

**National Institute of Technology (formerly Regional Engineering College), Warangal** is the first among 17 RECs setup as joint venture of the Government of India and the state government. Over the years the college has established itself as a premier Institution imparting technical education of a very high standard leading to the B.Tech degrees in various branches of engineering and M.Tech. and Ph.D. programs in various specializations. All B. Tech and M. Tech programmes of NIT Warangal are NBA accredited.

# Institute of Aeronautical Engineering & NIT Warangal

Electronics and ICT Academy  
Faculty Development Programme  
on

## Real Time Embedded Systems & IoT It's Applications

(27<sup>th</sup> November – 2<sup>nd</sup> December 2017)

1. Name:
2. Designation:
3. Institution:
4. Email:
5. DD No:                      Bank:                      Date:
6. Address for Correspondence
7. Educational Qualifications with specialization:
8. Subjects taught so far:
9. No. of refresher courses/workshops attended:
10. Experience (in years)  
Teaching:  
Research:  
Industry:

11. Accommodation required: YES / NO
12. Are you belong to SC/ST: YES/NO

**(If yes, please specify and attach a copy of caste certificate to claim the concession)**

### Declaration

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

Place:  
Date:

Signature of the applicant

### SPONSORSHIP CERTIFICATE

Dr/Mr/Ms. ....  
..... is an employee of our Institute/Organization and is hereby sponsored to participate in the FDP on **Real Time Embedded Systems & IoT It's Applications** sponsored by **Electronics & ICT Academy** during 27<sup>th</sup> November – 2<sup>nd</sup> December 2017 at Institute of Aeronautical Engineering, Hyderabad, *Electronics & ICT Academy*, National Institute of Technology, Warangal.

Place:

Date:

Signature of Head of Institution  
(with seal)

### Address for correspondence

*Post your application form with DD to*

**Dr. M. Ramesh Babu**

Professor & Head, ECE

Institute of Aeronautical Engineering, Dundigal,  
Hyderabad.-500043, Telangana State, India.

*Mail the scanned copies* of filled-in and duly signed application form with DD to

[hod-ece@iare.ac.in](mailto:hod-ece@iare.ac.in)

For more information visit: <http://nitw.ac.in/eict/>

For any enquiry contact:

Mobile: +91-8332969363, +91-8008663897

Land line: 0870-2462444

### Coordinator

**Dr. J.Ravi Kumar**

Organized by

**Electronics & ICT Academy and**

**Department of E&CE**

**NATIONAL INSTITUTE OF TECHNOLOGY**

**WARANGAL – 506 004 (Telangana State)**

### Coordinator

**Dr. M. Ramesh Babu**

**Professor & Head, ECE**

**Institute of Aeronautical Engineering, Dundigal,**

**Hyderabad – 500043, Telangana State, India.**