



**FACULTY DEVELOPMENT PROGRAMME (FDP) ON**  
**Real Time Embedded Systems and IoT, Its Applications (RESIoT)**  
**17<sup>th</sup> – 22<sup>nd</sup> December 2018**



**Organised by**

**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS), HYDERABAD**

**in association with NIT, Warangal. Under the scheme of Electronics & ICT Academy**  
**(Sponsored by Department of Electronics and Information Technology (DeitY), GOI)**

**Preamble:**

"Electronics & ICT Academy" is being set up at NIT Warangal with financial assistance from DeitY, MCIT, Govt. of India (GoI). The jurisdiction of this academy is Telangana, Andhra Pradesh, Karnataka, Goa and Puducherry states and UT of 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.

This faculty development programme (FDP) is devoted to Academicians and Practitioners working in the fields of Reconfigurable Low-Power ARM Soft IP-core based FPGA to build hardware blocks and analyze software architectures for Internet-of-Things framework.

**Major Course Contents:**

- Introduction to Embedded Systems
- Real Time Operating Systems
- FPGA & SoC Based Embedded Systems Designs
- Demo on Programmable SoC (Zynq – SoC)
- Raspberry Pi Architecture
- Sensors and IoT Cloud
- Socket Programming, MQTT Protocol
- E-mail Controlled Home Automation
- Node Red over IBM Bluemix
- Hardware and Software Co-design

**Structure of the Course:**

- **Theory - 20 hours:** The theory for the topics specified in the 'Course Contents' will be covered in 20 hours duration of classroom sessions.
- **Lab - 16 hours:** The participants will be applying the topics learnt by doing exercises.

**Course Evaluation:**

- Continuous assessments of MCQs at logical intervals.
- Using the target FPGA, tools available, participants will have to submit a System Design proposal at the end of the 3<sup>rd</sup> day of the course and macro-level design by the end of the course.

**Faculty conducting this programme:**

Academicians in the concerned field from **Reputed Institutes** from IITs, and NITs will be dealing the theory sessions and industry experts will handle the hands-on lab sessions.

**Eligibility:** The programme is open to the **teachers of engineering colleges**, working in the above-mentioned states. Industry personnel working in the concerned/allied discipline can also attend.

**Registration Fee Particulars:**

- Faculty members or Research Scholars : Rs. 2,500/-
- SC/ST faculty : Rs. 1,875/-  
(Should submit the caste certificate to claim the concession)
- Industry participants : Rs. 7,500/-

SC/ST concession is only for faculty of mentioned states.

Research Scholars are NOT eligible for SC/ST concession.

The FDP fee may be sent either in the form of Demand Draft or can be paid online as given below:

DD Details	Online Transfer Details
Demand Draft (DD) drawn in favor of "Director, NIT Warangal" and payable at SBI, NIT Warangal branch.	Account Name: Electronics & ICT Academy NITW Account No: 62423775910 IFSC: SBIN0020149

**Travel and Accommodation:**

All the selected participants will have to make their own arrangements for their travel and accommodation. No TA will be paid for the participants. Lunch and snacks will be provided.

**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 Head-Dept. of ECE, Vasavi College of Engineering (Autonomous), Hyderabad** by speed-post. It is also mandatory to send scanned application form and demand draft through e-mail to [hodece@staff.vce.ac.in](mailto:hodece@staff.vce.ac.in) as selection will be intimated ONLY through mail.

**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 can 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. The 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 allowed for selecting candidates as per GOI norms.

**Important dates:**

Last date for submission of application	: 30/11/2018
Selection-list intimation/display before	: 07/12/2018
Duration of Program	: 17/12/2018 to 22/12/2018

**About the Institute:**

Founded in 1981 by Vasavi Academy of Education, Vasavi College of Engineering represents a rich tradition of excellence in technology-based education. A premier-league institution among the affiliates of Osmania University, Vasavi College of Engineering owes its vision to Sri Pendakanti Venkata Subbaiah, a veteran statesman of Independent India. Vasavi College of Engineering has been conferred with Autonomous Status by the University Grants Commission (UGC), New Delhi and Osmania University, Hyderabad for a period of six years with effect from the Academic Year 2014-15, for all the UG and PG Programmes. The College is implementing Choice Based Credit System (CBCS).

Vasavi College of Engineering, in its 37 years of existence, is a reputed institution in the State of Telangana. The college in its pursuit for quality in technical education has earned 3<sup>rd</sup> ranking in the State and 32<sup>nd</sup> in the country (source: Hindustan Times on 24th June 2009). The college offers six UG (Civil, Mechanical, ECE, CSE, EEE and IT) with total sanctioned intake of 600 and 6 PG programmes (ME (ES&VLSI); ME (ADM); ME (CE&SP); ME (PSPE); M.Tech (CSE) and MCA with total sanctioned intake of 156]. The College is most preferred by the CET qualified high-ranking students. Located in the sylvan suburbs of Ibrahimbagh in Hyderabad, Vasavi College of Engineering presents a picturesque view flanked by the glorious Golconda Fort. Situated over a sprawling 13.6-acre campus with lush lawns, a beautiful landscape, aesthetic architecture and avant-garde infrastructure, the College epitomizes an exemplary setting for higher learning. With dedicated efforts of over three decades, Vasavi College of Engineering has emerged into a centre of excellence in engineering education. Building purposeful partnerships with the industry, bolstering its technological growth continually and evolving innovative programmes to meet the changing times, Vasavi College of Engineering strives to maintain its pre-eminent position.



**FORMAT OF APPLICATION**  
**Electronics and ICT Academy, NIT Warangal and**  
**VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS), HYDERABAD**  
**Faculty Development Programme on**  
**Real Time Embedded Systems and IoT, Its Applications (RESIoT)**  
**(17<sup>th</sup> -22<sup>nd</sup> December 2018)**

1. Name : \_\_\_\_\_
2. Designation : \_\_\_\_\_
3. Institution : \_\_\_\_\_
4. E-mail : \_\_\_\_\_
5. Mobile No. : \_\_\_\_\_
6. DD No. : \_\_\_\_\_
- Bank : \_\_\_\_\_ Date: \_\_\_\_\_

7. Address for Correspondence:

8. Educational Qualifications with specialization:

9. Subjects taught so far:

10. No. of refresher courses/workshops attended:

11. Experience (in years)

Teaching : \_\_\_\_\_

Research : \_\_\_\_\_

Industry : \_\_\_\_\_

12. Do you belong to SC/ST: YES/NO

**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

**Coordinators**

**Dr. J Ravi Kumar (Coordinator)**  
**Associate Dean (Student Welfare)**  
Associate Professor, Dept. of ECE  
NIT Warangal -506004. Ph: 8332969363

**Prof. N S Murthy**  
**(Coordinator)**  
Professor - ECE, VCE(A)  
Ph: 9441029775

**Mr. N. Abid Ali Khan**  
**(Coordinator)**  
Asst. Prof.(ECE), VCE(A)  
Ph: 8897727547

**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 and IoT, Its Applications (RESIoT)** sponsored by Electronics & ICT Academy during 17<sup>th</sup>-22<sup>nd</sup> December 2018 at Vasavi College of Engineering (Autonomous), Ibrahimbagh, Hyderabad-500031.

Place:

Date:

Signature of Head of Institution  
(with seal)

**Address for correspondence:**

*Post your application form with DD to*

**The Head of The Department**  
**Electronics & Communication Engineering**  
Vasavi College of Engineering (Autonomous)  
Ibrahimbagh, Hyderabad - 500031, Telangana, India.

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

[hodece@staff.vce.ac.in](mailto:hodece@staff.vce.ac.in)

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

**For any enquiry contact:**

**Mobile : 9441029775 / 8897727547**

**Land line : 040-23146120 / 23146041**

**Organized by**

**Electronics and ICT Academy, NIT Warangal and Vasavi College of Engineering (A), Hyderabad.**



**G.NARAYANAMMA INSTITUTE OF TECHNOLOGY &  
SCIENCE (For Women)  
(AUTONOMOUS)**

**Shaikpet, Hyderabad – 500104**

**Electronics and Telematics Engineering**

**2018-19**

**FDP on “Real Time Embedded Systems and IOT, Its Applications  
(RESIOT)”**

**REPORT**

Date: 22-12-2018

**Resource persons:**

1. Ms. Wendy Fong, Director, Lehigh University, USA.
2. Mr. Vinayak Hungund, Senior Director, Xtrans Solutions, Bangalore, India.
3. Prof. N.S Murthy, Dept. of ECE, VCE (A) – Hyderabad.
4. Mr. N. Venkatesh, Vice President, Redpine Signals, Hyderabad.
5. Dr. Ravi Kumar J, ECE Dept, NIT-Warangal.

**About the Program:**

This FDP is scheduled from 17-12-2018 to 22-12-2018, aims to enhance knowledge in various domains. The diverse range of topics covered within this FDP includes: Introduction to Embedded Systems, Real Time Operating Systems, FPGA & SoC Based Embedded Systems Designs, Demo on Programmable SoC (Zynq – SoC), Raspberry Pi Architecture, Sensors and IoT Cloud, Socket Programming, MQTT Protocol, E-mail Controlled Home Automation, Node Red over IBM Bluemix, Hardware and Software Co-design.

Signature of the Faculty member

**PRINCIPAL**  
G. Narayanamma Institute of  
Technology & Science (for women)  
(AUTONOMOUS)  
Shaikpet, Hyderabad - 500 104