VTU TEQIP 1.3 Sponsored
Faculty Development Programme on
"IoT Industrial Applications
- Frontend and Backend Co-design"

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Tentative Program Schedule

Day 1: Monday 29-04-2019; Industry Experts from Hydac

Time	Session
09:00 - 10:45 am	Inauguration and Keynote Address on IoT Ecosystem
11:00 - 12:00 pm	Java Basics and Programming
12:00 - 12:30 pm	Hands-on Programming
01:30 - 03:00 pm	Beacon Sensors and Android Studio IDE – Introduction and programming
03:15 - 05:30 pm	IoT App Development based on Beacon Sensors, Java and Android IDE

Day 2: Tuesday 30-04-2019; Industry Experts from Fiabilte

Time	Session
09:00 - 10:45 am	Talk on Python, ARM Processors & IoT – State of the Art
11:00 - 12:30 pm	OS – Introduction and deployment on ARM Processors; Python Programming Introduction specific to ARM processors – Raspberry Pi
	Demo/Hands-on Programming
01:30 - 03:00 pm	Demo of Scheduler Creation and IoT – backend Programming
03:15 - 05:30 pm	Hands-on Programming in IoT Applications using Python, Cloud & Raspberry Pi

Vision of RNSIT
Building RNSIT into a world-class institution.

Mission of RNSIT

To impart quality education in Engineering, Technology and Management with a difference, enabling students to excel in their career by

+ Attracting quality Students and preparing them with a strong fundamentals so as to achieve distinctions in various walks of life leading to outstanding contributions

+ Imparting value based, need based, choice based and skill based professional education to the aspiring youth and carving them into disciplined, World class Professionals with social responsibility

+ Promoting excellence in Teaching, Research and Consultancy that galvanizes academic consciousness among Faculty and Students

+ Exposing Students to emerging frontiers of knowledge in various domains and make them suitable for Industry, Entrepreneurship, Higher studies, and Research and Development

+ Providing freedom of action and choice for all the Stake holders with better visibility

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VTU TEQIP 1.3 Sponsored
Faculty Development Programme
on

IoT Industrial Applications
- Frontend and Backend Co-design
April 29 - 30, 2019

in Association with

Visvesvaraya Technological University
Belagavi, Karnataka

Aryabhatta Knowledge University
Patna, Bihar

Biju Patnaik University of Technology
Rourkela, Orissa

Jointly organized by Departments of
Electronics & Communication Engineering
Electronics & Instrumentation Engineering
and
Electrical & Electronics Engineering

RNS Institute of Technology

(AICTE Approved, VTU Affiliated and NAAC 'A' Grade Accredited)
(UG Programs - CSE, ECE, ISE, EIE and EEE have been
Accredited by NBA for the Academic years 2018-19, 2019-20 and 2020-2021)

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VTU TEQIP 1.3 Sponsored Faculty Development Programme on "IoT Industrial Applications - Frontend and Backend Co-design"

April 29 - 30, 2019

Registration Form

Name : _____

Designation : _____

Department : _____

Qualification : _____

Address for Communication : _____

_____

Phone : _____

Email : _____

Signature of the Principal

+ Faculty from VTU affiliated Engineering colleges in the Departments of CSE, ECE, EEE, EIE, ISE and TCE are eligible. Outstation participants are expected to make their own lodging arrangements. Lunch and snacks will be provided to all participants.

+ Last date for Registration: **25th April 2019.**

+ **Registration fee :** ₹ **600**.

+ **Mode of payment:** Online Payment

+ Beneficiary: **Principal, RNSIT**
  A/c no. : **8574 1010 50101**   IFSC : **CNRB0008574**
  Bank: **Canara Bank, RNSIT Campus Branch**

+ Number of participants is limited to 40 on a first come first serve basis. Participants are requested to confirm seat availability before making payment.

Please send the scanned copy of registration form by E-mail to

rnsit.fdp.iot@gmail.com

Visvesvaraya Technological University

Visvesvaraya Technological University (VTU) is one of the largest Technological Universities in India with 21 years of tradition of excellence in Engineering & Technical Education, Research and Innovations. VTU came into existence in the year 1998 to cater to the needs of Indian industries for trained technical manpower with practical experience and sound theoretical knowledge. University has very successfully achieved the tremendous task of bringing together various colleges affiliated earlier to different Universities. The University having 218 affiliated colleges, 1 constituent college and 17 Autonomous colleges with undergraduate courses in 35 disciplines, PG programmes in 94 disciplines and Ph. D & M.Sc(Engg.) by Research programmes in 592 departments, has over 4 lakhs Engineering Students studying in various institutes affiliated to the University. The University has 13 Quality Improvement Programme (QIP) centers in various affiliated colleges and 16 extension centers for offering PG programs. VTU has four regional centers across the State of Karnataka in Bengaluru, Belagavi, Kalaburagi and Mysuru. University is a multi-disciplinary and multi-level institution offering wide ranging programmes in Engineering, Technology and Management.

The TEQIP Project focuses on the following objectives:

- Improving quality and equity in engineering institutions in focus states viz., Seven Low Income States (LIS), eight states in the North-East of India, three Hill states viz., Himachal Pradesh, Jammu & Kashmir, Uttarakhand and Andaman and Nicobar Islands.

- System-level initiatives to strengthen sector governance and performance which include widening the scope of Affiliating Technical Universities (ATUs) to improve their policy, academic and management practices towards affiliated institutions.

- Twinning Arrangements to Build Capacity and Improve Performance of institutions and ATUs participating in focus states.

As a twinning partner VTU is conducting various activities to improve quality of education in affiliated colleges and mentee university partners namely Aryabhatta Knowledge University, Patna and Biju Patnaik University of Technology, Rourkela.

RNS Institute of Technology

RNS Institute of Technology (RNSIT) is serving the cause of Technical Education since two decades. The institution is **AICTE Approved, VTU Affiliated and NAAC 'A' Grade Accredited. UG Programs** - CSE, ECE, ISE, EIE and EEE have been **Accredited by NBA** for the Academic years 2018-21.

The College offers B.E. Degree, Post Graduation in M.Tech/MBA/MCA and Ph. D. Research Programmes. Six of the Departments are recognized to carry out Research. Strong and disciplined work culture is our pride. Quality Teaching, happy and conducive environment is our strength. Placement is our Unique Selling Proposition. RNSIT has academic MOUs with various leading corporates for innovation, incubation, internships, research, projects and hands on experience.

About FDP

This FDP covers the broad areas of IoT and embedded programming. The participants will gain an understanding of IoT concepts involved in both Frontend and Backend Design of applications. They will be exposed to advanced embedded programming using Python and deployment of OS on ARM processors. This FDP will enhance their fundamental knowledge in building Custom-specific IoT Applications using Android Studio, Java and Beacon sensors.

Objectives of FDP

- To cover basic concepts and programming in Java and Python (Top two programming Languages in the world).

- To present the concepts involved in the IoT Ecosystem.

- To enhance the embedded programming skills (from present day embedded C and ALP) to hands-on Python Programming of ARM processors.

- To build customized motes by exposure to deployment of chosen Operating System (OS) on ARM processors and developing a simple scheduler.

- To expose participants to present-day industry expectations by:
  - Introduction to IoT sensors – Estimote Beacon Sensors.
  - Development of Java based Apps using Android Studio IDE.
  - Creating IoT solutions for specified applications.