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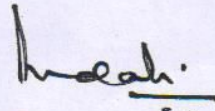
# Certificate

## Embedded System and Embedded VLSI

This certificate is awarded to **Rabi Shankar Mandi** for successfully completing the training course entitled **Embedded System and Embedded VLSI** of 192 hours duration (96 Lecture hours, 96 Lab. hours) conducted from 07th June 2016 to 02nd July 2016.

Certificate # : NIST/ESEV-2016/033  
Grade : 'O'  
Date of Issue : 02nd July 2016

  
Course Coordinator

  
Director

*This certificate can be verified by writing to the above address by mentioning the certificate number and date of issue. The course details are shown on the reverse side of this certificate.*

**NATIONAL INSTITUTE OF SCIENCE AND TECHNOLOGY**

Palur Hills, Berhampur, Ph.: 0680-2492421/422, ODISHA-761008, INDIA



# Embedded System

## Course Goals

To introduce the latest Embedded Technologies and software. Here the students will be introduced to ARM based application, real time operating system, VxWorks, Android Programming etc.

## Course Contents

- ☞ Introduction To Embedded System: Introduction, Features, Current trends and challenges, Hard & Soft Real Time Systems.
- ☞ Programming Concept: Review of C Programming, Embedded C programming, Embedded Systems Design, Implementation and Testing.
- ☞ ARM Based Application Development : ARM Processor Basics, Programmer's Model, ARM Instruction Set, Thumb Instructions, Programming ARM with C
- ☞ Concepts Real Time Operating System: RTOS Programming, Components of RTOS, Task Management, Inter Task synchronization, Inter Task Communication, Interrupt Handling, Pitfalls for Real-Time Software Developers
- ☞ Raspberry Pi: Raspberry Pi is a low cost, credit-card sized computer that plugs into a computer monitor or TV, and uses a standard keyboard and mouse. It is a capable little device that enables people of all ages to explore computing, and to learn how to program in languages like Scratch, Java and Python.
- ☞ Arduino: Arduino is a hardware and software company, project, and user community that designs and manufactures computer open-source software, and microcontroller-based kits for building digital devices and interactive objects that can sense and control physical devices.
- ☞ Wipro ULK: Wipro ULK(Unified Learning Kit) is an ardent facilitator for aiding engineers gain hand-on, learn and understand complex and advance technologies simply. Eventually, it embraces modern technologies to bridge the gap between academia and industry. It increases individual learning towards subjects and supports and motivates students towards building and integrating concepts keeping in mind organizational practices.
- ☞ Android Programming: Android Platform, Architecture Basics, Interface Design, Resources, Database (sqlite), Location tracking, Google Map on Android.Facebook Access from Android.

*Course Coordinator:* Mr. Bhawani Shankar Pattnaik

### About NIST:

The National Institute of Science and Technology established in 1996 is approved by the All India Council for Technical Education (AICTE under MHRD, Govt. of India) and is affiliated to the Biju Patnaik University of Technology (BPUT).

NIST is the only Institute in Eastern India to have implemented full e-governance (online ERP systems) in all aspects of teaching and administration using its internally developed programs by its NIST Technology Consulting Services (NTCS).

### RECENT ACHIEVEMENTS

- NIST Ranked **69<sup>th</sup>** in All-India & **1<sup>st</sup>** among all Engineering Colleges of BPUT by NIRF
- NAAC (UGC) accredited NIST with Grade '**A**' and highest rating of 3.22 among all engineering colleges of Odisha.
- NIST Ranked **64<sup>th</sup>** among all Engineering Colleges in INDIA by OUTLOOK 2015.
- NIST Ranked **2<sup>nd</sup>** in Eastern INDIA and **13<sup>th</sup>** among all Engineering Colleges in INDIA by DATAQUEST 2015
- BPUT Students have ranked NIST as **No. 1**