LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING
(AUTONOMOUS)
Accredited by NAAC & NBA (CSE, IT, ECE, EEE & ME)
Approved by AICTE, New Delhi and Affiliated to JNTUK, Kakinada
L.B.Reddy Nagar, Mylavaram-521230, Krishna Dist, Andhra Pradesh, India

DEPARTMENT OF ELECTRONICS& COMMUNICATION ENGINEERING

Date : 27-01-2025

REPORT ON 45-Day work shop on Introduction & Programming on ARM Processors

EventType	:	Workshop
Date/Duration	:	02-12-2024 to 18-01-2025
ResourcePerson	:	1. Mr.K.V.Ashok-Sr.Assistant Professor 2. Mr.N.Dharmachari-Sr-Assistant Professor
NameofCoordinator(s):		Dr.M.V.Sudhakar & Mr.Ch.Mallikharjuna Rao
TargetAudience	:	VI Semester B.Tech Students
Total no of Participants:		21
Objective of the event:		To help B.Tech students to learn ARM processor architecture and programming. To focus on hands-on coding, interfacing peripherals, and developing real-time applications. To provide required skills for debugging, optimizing, and developing project.
Outcome of event	:	By the end of this 45-day training, students will understand ARM architecture, write and debug embedded C programs, and interface peripherals. They will gain hands-on experience in developing real-time embedded applications and optimizing code.

Description/ Report on Event:

Electronics and Communication Engineering (ECE) department, Lakireddy Bali Reddy College of Engineering, Mylavaram, and Reconfigurable Computing Club (RC Club) organized the 45- days work shop on "**Introduction & Programming of ARM Processors.**" The purpose of this workshop was to introduce ARM processor architecture, programming techniques and real-time applications. The 45-days workshop commenced with an inaugural address delivered by Dr. G.Srinivasulu, the Head of the Department of ECE. In his speech, he emphasized the importance of the ARM controllers in robotics, engine control units(ECUs) and IoT. Dr. M.V. Sudhakar, the coordinator of the RC club, highlighted the importance of protocol for embedded system design.

During the workshop resource person, Mr.K.V.Ashok , explained C-programming concepts like arrays, structures and pointers. He had given introduction to ARM family of processors (Cortex-A,Cortex-M,Cortex-R). Another resource person, Mr.N.Dharmachari, explained some special features of ARM family of processors like clock configuration, register set and RISC architecture. Both the resource persons had provided deep insights into ARM controllers like LPC2148 and LPC1769. They used the keil uVision IDE for writing, compiling, and debugging. During the workshop they also used the LPC1769 based development boards and J-link hardware debuggers for hands-on sessions. They carried-out hands-on sessions on each peripheral of LPC1769 including PLL for clock configuration, GPIOs, Timers, PWM, Interrupts, ADC, UART and I2C.They demonstrated the purpose of hardware debugger to control code execution in real time on the actual hardware.

Feedback/Suggestions:

1. More time for practice session
2. More hardware components are to be given as each can practice effectively.

Photos:

Introductory session by Head of the Department Dr.G.Srinivasulu

Kits used for training Program

Practice session with LPC 1769 ARM boards

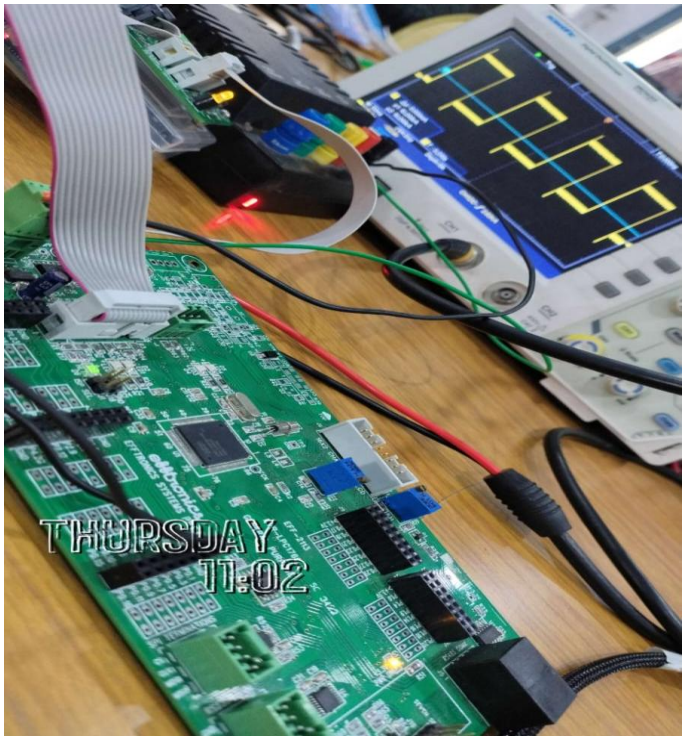

Photo from Hands-on session with students

RC Club coordinator

Head of the Department