
ARM University Program Course on Embedded Systems using ARM Mbed

Executive Summary

Eduvance conducts ARM University Program Certificate Course on the ARM mbed platform. The mbed development platform is the fastest way to create products based on ARM microcontrollers. The project is being developed by ARM, its Partners and the contributions of the global mbed Developer Community. Getting trained on the mbed platform and doing projects enables participants to enter the workforce with the skills necessary to be quickly productive in the fast-paced world of electronics engineering disciplines. During the training participants will be introduced to ARM architecture, Programming & mbed platform and also work on advanced interfaces such as ADC and Serial.

The training would include in class training for 4 days. These training programs will be certification courses on ARM Lab that have been set up at the Institute. Features of the training are –

1. 4 Day On Campus training (8 hours/Day)
2. Exposure to latest ARM Platforms
3. 3 Projects with introduction to various interfaces
4. The Development kit will be provided for students for take home in group of 4 students.

Subsidized Fees for these trainings are as follows

1. ARM Training – Rs 2500/- per student (Minimum 40 Students)
 - A. Host college will arrange for food and accommodation of trainers.

Benefits for the College

- COLLEGE would provide its students with training platform to get updated with industry relevant technologies.
- Make students resumes stronger
- Increase in industry-institute interaction
- Opportunity to conduct faculty training workshops for free to keep faculty apprised with industry developments.
- Students at COLLEGE would be provided with the opportunity to go through certification programs that is at par with American Universities with lectures and content created by US based experts.

- Students at COLLEGE will get an opportunity to get certified by **ARM University Program, and Indo US Collaboration for Engineering Education**

Duration

Total Training will be for 4 Days (8 hours per days)

Course Contents

- Day 1 - Session 1– Intro to ARM Mbed
 - Intro to Embedded Systems and System on Chip
 - Intro to the ARM Architecture
 - Intro to mbed platform
- Day 1 - Session 2 –
 - Intro to I/O programming and buses
 - Lab 1 – Led blinking
 - Intro to PWM Component
 - Lab 2 – PWM
 - Project – Breathing LEDs
- Day 2 - Session 1
 - Intro LCD Interface and Connections
 - Lab 3 - LCD Display
 - Project- Rolling Display
- Day 2 - Session 2
 - Intro to Analog Interfaces
 - Lab 4 – Analog
 - Project – Light Intensity Measurement on LCD
- Day 3 – Session 1
 - Intro to Serial Interface
 - Lab 5 – Serial
 - Project – Controlling Data on Board
 - Intro to Accelerometer
 - Project – Surface Level Measurement
- Day 3 – Session 2
 - Project –Making a Data Acquisition System using Serial PC Interface
- Day 4 –
 - Project – Gesture controlled USB Mouse using Accelerometer

Participant Benifits

- Participants will be introduced to exciting world of ARM mbed.
- Participants will be trained on Embedded C, implementation of analog and digital peripherals.
- The training includes hands-on labs resulting in exploration of concepts.
- Eduvance will bring its own kits for participants to work on.
- Participants will work in groups of 2 with each student getting an opportunity to work hands-on.
- **Upon successful completion of course and test, participants will get a verifiable certificate endorsed by Indo-US Collaboration for Engineering Education (IUCEE).**
 - **Certificate for mbed workshop by ARM University Program UK**

About Eduvance

Eduvance is founded by Ph.D. alumni from U.S. universities. We are dedicated towards providing participants with state of the art training in technology. We do this by introducing participants to projects and research topics that are at par with leading universities in the United States. This will make the participants technically sound and prepare them for future challenges. We assist participants write and present technical papers. We are advised by U.S. based researchers, faculty and industry professionals that have a proven track record in their field.

