

ARM Workshop Program

ARM University Program will conduct a faculty workshop around its flagship Lab-in-a-Box on the ARM Cortex-M0+ based Freedom Board. This Lab-in-a-Box targets courses on Microprocessors and Embedded Systems Design. It comprises of Teaching Materials made by academics for academics for a hand-on experience with hardware and software, leading to learning based on concepts. The workshop will take faculty across a variety of concepts, such as interfacing a microcontroller with components, programming using memory-mapped register calls, code re-use to speed up system design, and understanding various power modes.

Agenda:

- Introduction to ARM Cortex-M0+ based KL25Z Microcontroller on the Freedom Board
- Setting up the Board to work with Keil microvision Software Development Platform
- Getting Started Hello World using the on-board RGB LED
- Spirit-level Simulator using the on-board 3-axis accelerometer and a LCD
- Proximity Sensing using an IR LED and an IR Phototransistor
- Making Power and Energy Measurements using an Ultracapacitor